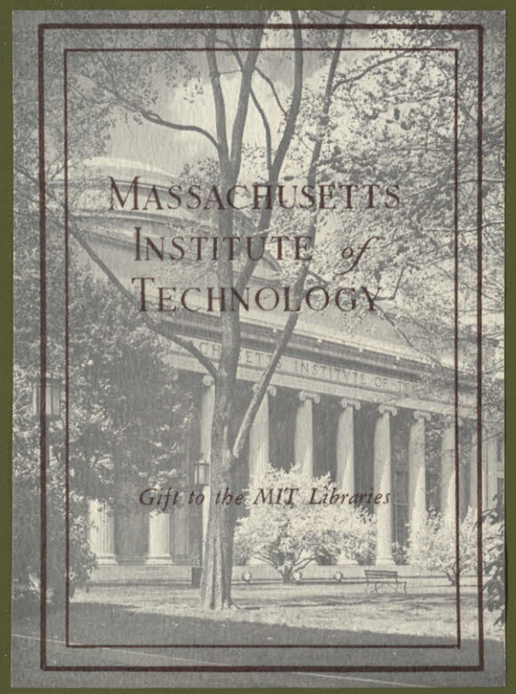
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NORTHERN WATERFRONT PLAN

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NORTHERN WATERFRONT PLAN

San Francisco
1968
John S. Bolles Associates

For John S. Bolles, a California corporation

Prepared for

City and County of San Francisco

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City Planning Commission
City and County of San Francisco

The Northern Waterfront Plan represents the culmination of our work for your Commission as Planning and Design Consultants for the Northern Waterfront Study. This study was authorized after the San Francisco City Planning Commission and the San Francisco Port Authority together agreed on the pressing need to study the future of the City's Northern Waterfront.

The overall purpose of the study has been to prepare a master plan to guide development in all areas on and contiguous to the harbor in a manner consistent with the interests of San Francisco. Every effort has been made to see that the Northern Waterfront Plan will be in fact a reflection of the social, economic, and physical needs of the community.

We have worked closely throughout all phases of the study with the staffs of the Department of City Planning, the San Francisco Port Authority, and Arthur D. Little, Inc., the Economic Consultant.

We have aided in the formation of the Citizens Advisory Committee and have met with it continuously during the study under the auspices of the Northern Waterfront Committee of your Commission. This advisory committee is composed of representatives of governmental agencies, civic and neighborhood groups, private property owners, business and labor. The views of this committee have been a key element in the shaping of the plan.

We have been involved in an implementation role during the course of the study. As major projects in the Northern Waterfront have been initiated we have examined and evaluated several of them for the Department of City Planning and the San Francisco Port Authority. This experience has presented us with opportunities to test some of the plan proposals in relation to the goals and objectives for the Northern Waterfront.

The Northern Waterfront is now in a period of transition as developing trends in both shipping needs and market potentials cause changes in the nature of port facilities and waterfront activities. Realization of the Northern Waterfront Plan will ensure that the development of this area can be imaginative, dramatic, and in harmony with San Francisco's prime setting by the Bay.

John S. Bolles Associates
November, 1968

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Introduction

The Problem and the Challenge

The City of San Francisco and the San Francisco Port Authority have determined that it is essential at this time to ensure full use of its waterfront in a manner consistent with the waterfront's position as a unique and irreplaceable resource of not only the City but the entire Bay Area.

The purpose of the Northern Waterfront Plan is to guide future development in all areas on and contiguous to the harbor in a manner consistent with the interests of San Francisco. The plan must provide mechanisms and guidelines whereby public and private interests can work together to fulfill the social, economic, and physical objectives with maximum benefit for all.

The Port Authority currently is proceeding to build modern harbor facilities in the Southern Waterfront which will result in the release of some obsolete pier areas in the Northern Waterfront. These modifications to the harbor are consistent with, and in response to, some fundamental developments in shipping technology and the continuing growth of the Pacific basin. The Port Authority must develop new revenue sources in the Northern Waterfront to finance this new construction program. These decisions and changes have occurred at a time when present development trends in the waterfront area suggest a great potential for the future growth of a wide variety of different economic activities.

The challenges posed by this study have been to integrate an authentic maritime atmosphere into the character and fabric of the City, and to capture in a strong and positive manner the unique opportunities for imaginative and dramatic development of San Francisco's waterfront.



Planning Method

A significant feature of this study is that a number of public agencies and consulting firms having varying kinds of skills were brought together into a coordinated study team. The Department of City Planning was the coordinating mechanism between the study team and other public groups and agencies. Further, the Department and the Port made valuable substantive inputs during the entire project, especially concerning implementation problems. John S. Bolles Associates, the planning and design consultant, was engaged to prepare a master plan to guide development on both port lands and adjacent properties. Arthur D. Little, Inc., was retained to investigate the economic demand for various land use activities in the waterfront area and to review the relative economic feasibility of alternative plans and proposals. An unusual dimension of this study was that John S. Bolles Associates, during the course of their work, became directly involved in the examination of many development programs proposed within the Study Area. Examples included providing detailed design criteria to the Department of City Planning which were used to evaluate the International Market Center proposal, and to the Port Authority for evaluation of the BARTD platform at the rear of the Ferry Building.

Public Participation

An important concern of this study was the development of extensive public participation in the planning process. To this end, the City Planning Commission, and its Northern Waterfront Subcommittee, provided excellent vehicles for determining general public objectives regarding future waterfront development. Two additional advisory committees were formed in order to represent the more specific interests affected by waterfront changes.

The Citizens Advisory Committee was composed of representatives of the San Francisco Port Authority, the Bay Conservation and Development Commission, the State Division of Beaches and Parks, neighborhood associations, civic groups, business associations, and major property owners. The Technical Advisory Committee was composed of representatives of public agencies from all levels of government concerned with the Study Area. These two committees participated throughout the study, and were extremely useful in helping shape plan proposals which reflect all the needs and desires of local residents, businessmen, and public agencies providing services to the area.

The Study Area

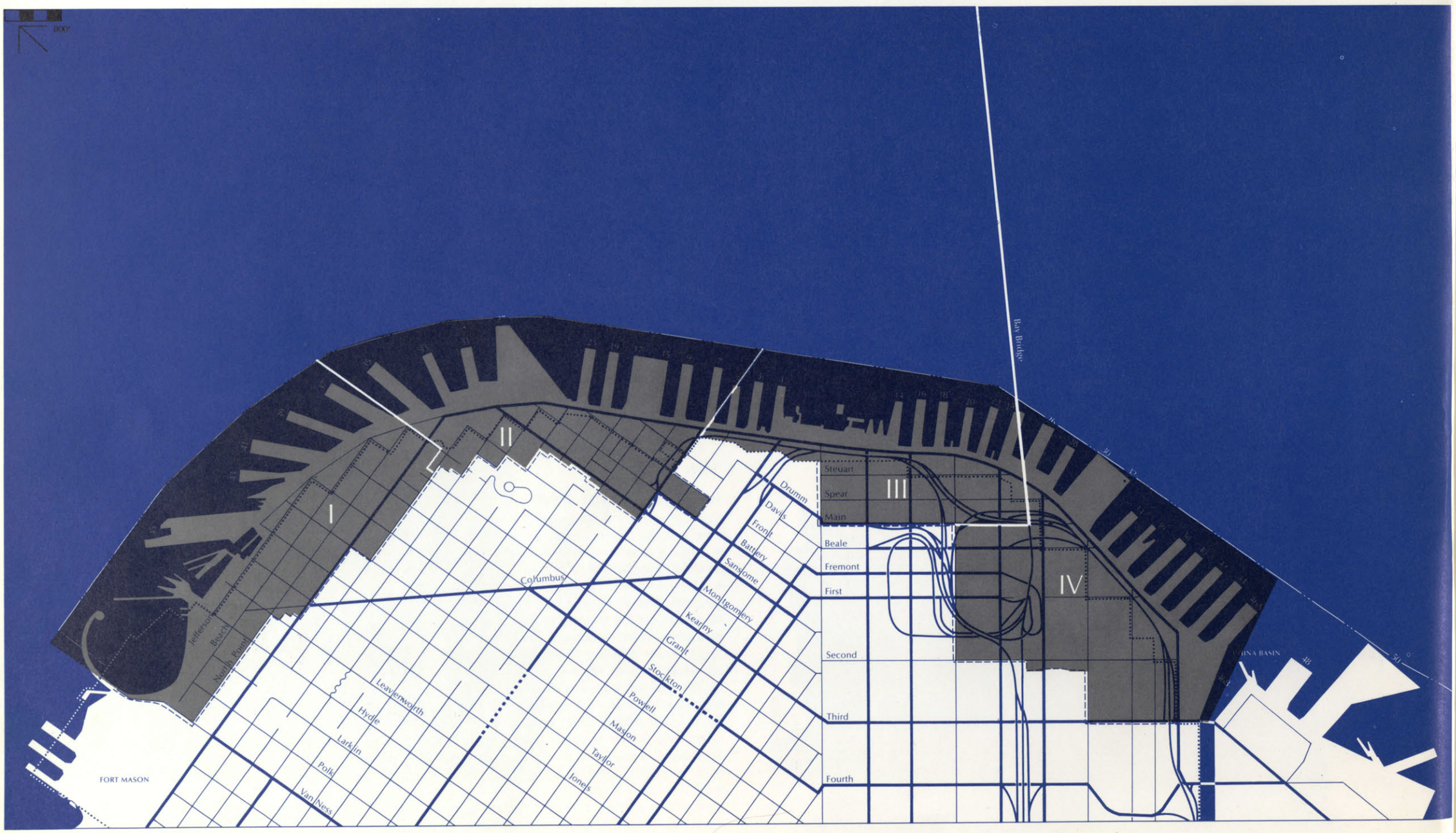
The Study Area is approximately 3.5 miles long and extends along the San Francisco waterfront from Fort Mason to China Basin; in breadth, it includes water areas which lie between the pierhead line and the seawall, and land areas which extend from several hundred to several thousand feet from the seawall into the City.

The total Study Area was divided into four sub-areas, each of which exhibits distinct characteristics: (a) the Fisherman's Wharf area, which extends from Fort Mason eastward to Pier 35 and the North Point Sewage Treatment Plant; (b) the maritime area which lies at the base of Telegraph Hill between the Treatment Plant and Broadway; (c) the Ferry Building area which is centered upon Market Street and the Ferry Building and is between Broadway and the San Francisco-Oakland Bay Bridge; and (d) the China Basin area between the Bay Bridge and China Basin. The following criteria were used in delineating the above sub-areas: homogeneity of physical character and land use; the nature of physical form and land use in districts adjacent to the Study Area; the relationship of inland uses to shoreline development; anticipated trends in harbor development; and economic development and market trends.

Plan Formulation

The first phase in the plan-making process was to survey existing conditions in order to provide an informational base for the preparation of the plan. Two reports contributed substantially to the content of this background data. In a report entitled *Northern Waterfront Study; Land Use Survey,* the Department of City Planning assembled a great amount of data on the existing land use, population, economy, and transportation. A study of harbor facility needs prepared by Arthur D. Little, Inc., was published in a report entitled *The Port of San Francisco: An In-Depth Study of Its Impact on the City, Its Economic Future, the Potential of Its Northern Waterfront.* This study was done for the Port Authority and provided an extensive inventory of existing harbor facilities as

10


800'
I
II
III
IV
Bay Bridge
Steuart
Spear
Main
Beale
Fremont
First
Second
Third
Fourth
Drumm
Davis
Front
Battery
Sansome
Montgomery
Kearny
Grant
Stockton
Powell
Mason
Taylor
Jones
Columbus
Leavenworth
Hyde
Larkin
Polk
Van Ness
Jefferson
Beach
North Point
FORT MASON
CHINA BASIN
Bay
Francisco
Chestnut
Lombard
Greenwich
Filbert
Union
Green
Vallejo
Broadway
Pacific
Jackson
Washington
Clay
Sacramento
California
Pine
Bush
Sutter
Post
Geary
O'Farrell
Ellis
Market
Mission
Howard
Folsom
Harrison
Freeway
Bryant
Brannan
Townsend
King
Berry
Channel

well as projections of short-term and long-run port needs. In order to complete the data base for plan making, the planning consultant undertook urban design and physical form studies, and investigated the historical growth patterns of the harbor and City waterfront area.

The second phase involved formulating goals and objectives for the Northern Waterfront. Once these were presented, discussed, and generally agreed upon, they established the direction and criteria for proposal preparation and evaluation as well as the means for identifying development problems and opportunities. However, it should be noted that objectives are not independent of implementation proposals; and hence, discussion of goals inevitably encompassed some of the means by which these objectives might be attained.

The final phase involved the preparation of preliminary plans and the testing and review of alternatives and proposals with the various advisory groups. During this phase, regular meetings with the economic consultants were held, and Arthur D. Little, Inc., prepared four working memoranda which described the economic feasibility of alternative plans and proposals. Through this interactive process of design and evaluation a final General Development Plan was formulated which included recommendations covering land use, transportation, open space, and urban design for the entire Study Area. Within this context detailed sub-area plans were subsequently developed. During this phase of the work, and interlocked with proposal development and evaluation, careful and continuous consideration was given to the various ways in which proposals could be implemented. Consequently, an implementation program has been designed as an integral part of proposed plans and recommendations.

Goals and Objectives

The following statements of goals and objectives for the Northern Waterfront represent the distillation and incorporation of many views of the people of San Francisco and the Bay Area as to what the Northern Waterfront should become. The goals are general, and yet they pertain explicitly to San Francisco's Northern Waterfront. They are the aspirations that this plan seeks to realize.

General Goal

Develop the full potential of the Northern Waterfront in accord with the unusual opportunities presented by its relation to the Bay and to the port and Downtown, and its unique aesthetic qualities offered by water, topography, views of the City and Bay, and its maritime character.

Specific Goals

Develop living, working, and leisure activities and supporting facilities in the Northern Waterfront which will serve all persons in the immediate area, the City and the Bay Region, and tourists, and which complement or supplement the maritime character of the area.
Develop the activities in the Northern Waterfront that will contribute significantly to the City's economic vitality.
Develop a physical environment which is both ordered and diversified and which integrates water and shipping activities with the structure of the City.

Objectives

Strengthen existing residential areas and provide for new housing in a manner that preserves the beauty of the area's topography and utilizes to utmost advantage the waterfront location.
Provide office and commercial space in the Northern Waterfront both to serve the local needs of the area and to complement Downtown San Francisco.
Eliminate non-maritime industrial activities in that portion of the Northern Waterfront north of the Bay Bridge.
Provide for efficient operation of port activities while also enhancing the harbor as a unique amenity in the Northern Waterfront.
Strengthen and expand the leisure-recreation character of the Northern Waterfront and develop a system of public open spaces and recreation areas that recognizes the recreation potential of the waterfront, that provides unity and identity to the urban area, and that establishes an overall waterfront character of openness of water and sky and accessibility to the water's edge.
Develop a system for the safe and easy movement of people and goods, based upon the needs of local activities and through traffic, and upon the transportation systems of the City and Bay Region, emphasizing facilities for pedestrian and transit circulation.

Background for Planning

History

San Francisco's harbor has played a significant role in the major events which highlighted the City's past, for the growth of San Francisco has been largely dependent upon its progress as a port and trading center. It is useful, therefore, to explore briefly the history of the port in order to create a setting for this plan and to provide a view of the present within the context of the past. The following discussion especially focuses upon the role of the harbor in San Francisco's development and the resultant evolution of the waterfront's physical form.

The Origins of the Port

Initial settlement of San Francisco occurred in 1776 when the Spanish constructed Mission Dolores and the Presidio. Early commercial activity consisted chiefly of exporting hides for the New England leather industry and importing supplies for the settlers. In 1834 a trading post was established on Yerba Buena Cove as one segment of a three-part plan that included the secularization of Mission Dolores, the shifting of the Presidio garrison to the Sonoma Valley, and the recognition of the Presidio as a town. In 1835, William Richardson became the first permanent settler in Yerba Buena and operated a small retail business serving ships' crews and Indians. Thus, the first step was taken which eventually led to San Francisco becoming a great port and urban center.

Factors Influencing the Growth of Shipping and the Port

The periods of significant growth of San Francisco and its port resulted from two general kinds of activity—treasure-seeking and military action. The California Gold Rush of 1849 was the first event that sparked a mass immigration and rapid growth of the City, and it served to establish San Francisco firmly as a major trading center and port. Gold was the primary export, while supplies and luxuries for the miners were significant imports. Population and economic growth continued after the Gold Rush activities declined as disappointed miners turned to farming and began development of California's agricultural resources, and grains soon became San Francisco's principal export commodity.

Discovery of silver in Nevada in 1859 and discovery of gold in Alaska in 1897 both had impacts on San Francisco comparable with those of the 1849 Gold Rush. Although imports were less significant, San Francisco did attract thousands of treasure-seekers, many of whom eventually made San Francisco their home.

The treasure-seekers clearly were important to the growth of the City and the economic development of the port, but it was war generally, and specifically war in the Pacific, that correlated with the other periods of Bay Area port expansion. The most significant was World War II. Both industry and shipping were greatly expanded to meet wartime needs, generating simultaneously vast new employment and service opportunities. This situation resulted in a great increase in port activity to service both the war effort and the needs of the expanding population. The Spanish-American War and World War I were of less importance, but nevertheless did contribute to and influence port growth.

Growth of the Port and the City

The locations of early port and city activities were virtually synonymous. The original Yerba Buena townsite in the vicinity of Portsmouth Square was soon filled as the Gold Rush generated much more development than had been anticipated. Growth of the City occurred in the vicinity of the waterfront and pier structures were extended out into the water from the ends of east-west streets. This physical expansion was directly related to the increase in maritime activity.

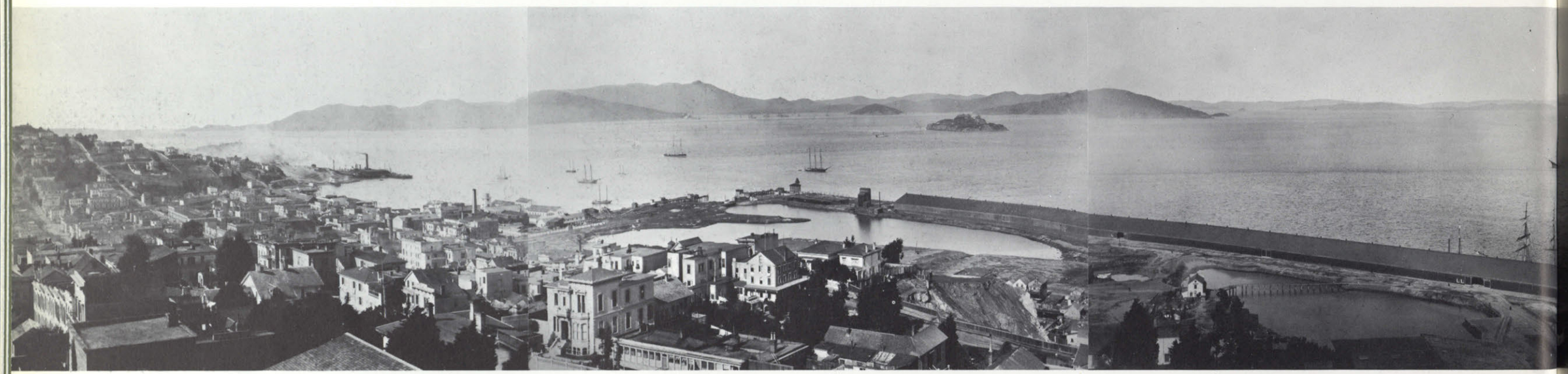
During the first years of the Gold Rush, most ships entering the bay were deserted by their crews as soon as the anchors were dropped, and the vessels were then either beached or allowed to remain at anchor indefinitely. Wharves were extended to these ships and cross-streets were built on piles; these piers and streets enclosed blocks of water lots and the abandoned ships. Many of the ships were used as stores, warehouses, churches, and residences; it is estimated that in 1850 more than 1,000 people were living over the water either in buildings built on piles or in abandoned ships. Eventually, the water lots were filled in with earth (much of it obtained from Telegraph Hill) and developed for commercial activities. Gradually, a separation of activities began to occur—stores, houses, and churches began moving inland out of the port area as port activities expanded and

3 Waterfront Panorama from Telegraph Hill, about 1885

3a Golden Gate

3b Sausalito, Alcatraz Island and Mt. Tamalpais

3c Angel Island and Red Rock



3

3a

3b

3c

required more space. As shipping grew in importance, it could outbid other activities for the valuable harbor frontage. Furthermore, as shipping intensified it generated needs and opportunities for a number of ancillary and supporting activities such as bars, bawdy houses and boardinghouses, and the waterfront became a rough, tough and brutal district. The maritime jungle atmosphere prevailed and repelled those activities not directly related to the port.

Although residential, consumer, and business activities moved away from the port, they maintained their accessibility to the port because it was the primary place of employment and business. Improved public transit, beginning in 1852 with establishment of the first horse-drawn omnibus, and additional street development, codified the travel patterns to the port and permitted further dispersion of activities and expansion of the City to the south and west.

Today the port is still of major economic importance to the City, though it is no longer the primary determinant of San Francisco's economic base. Competing ports in the Bay Area have tended to specialize in bulk commodities, while the San Francisco port has emphasized general cargo. The world-wide reputation of the San Francisco port is based upon the value, rather than total tonnage, of cargo traded. Although 35 other ports in the nation export more tonnage than San Francisco, and 38 import more tonnage, San Francisco ranks sixth among the nation's ports in total value of cargo handled and ranks first in average value per ton of foreign imports.

Physical Development of the Port

The history of physical development of San Francisco's waterfront is largely one of filling in the shallow Yerba Buena Cove and extending buildings and wharves out to deep water over the large expanse of tidal flats.

The first pier was built in 1847, at what is today the corner of Broadway and Battery Street, and enabled ships to tie up and unload directly to shore rather than transport goods to and from shore by small craft. The town council then constructed several municipal wharves to provide additional docking space. However, the Gold Rush created needs for piers that the City could not meet, and wharf construction was taken over by private groups which could raise money more easily than the local government.

It was soon apparent that something had to be done to prevent fill material from washing into the Bay. In 1856, the City Surveyor recommended that the harbor be protected from erosion by a bulkhead or seawall. Engineering studies were subsequently initiated and in 1869 construction was completed of the first seawall between Black Point (Fort Mason) and Rincon Point (Folsom Street).

Between Market and Powell streets the seawall followed block lines formed by the streets around the base of Telegraph Hill, and thus formed a serrated edge. By 1871 it was obvious that the serrated edge of the first seawall possessed disadvantages, since it provided a series of traps that caught the Bay sediment, and portions of the waterfront adjacent to the seawall were rapidly filling with silt. The Harbor Engineer recommended that the only complete remedy was to modify the line of the waterfront so that it would conform to the general direction of the Bay currents. Based on this finding, the State Legislature appointed a special commission to determine the alignment of the new seawall between Taylor Street and China Basin. The line, which is essentially that of the present seawall, was approved in 1878 and the seawall was constructed in stages and completed in 1916. This seawall established the sweep and continuous edge of the shoreline that has been the strongest determinant of the physical form of today's waterfront.

Existing piers in the Northern Waterfront have been in service a long time. Three piers—5, 20, and 49—were built before 1900, and only one pier—27—has been built since 1936. Construction of the remaining piers occurred in three periods: most piers north of the Ferry Building were built in the periods of 1912-1917 and 1928-1936; most piers south of the Ferry Building were constructed in the period 1904-1915.

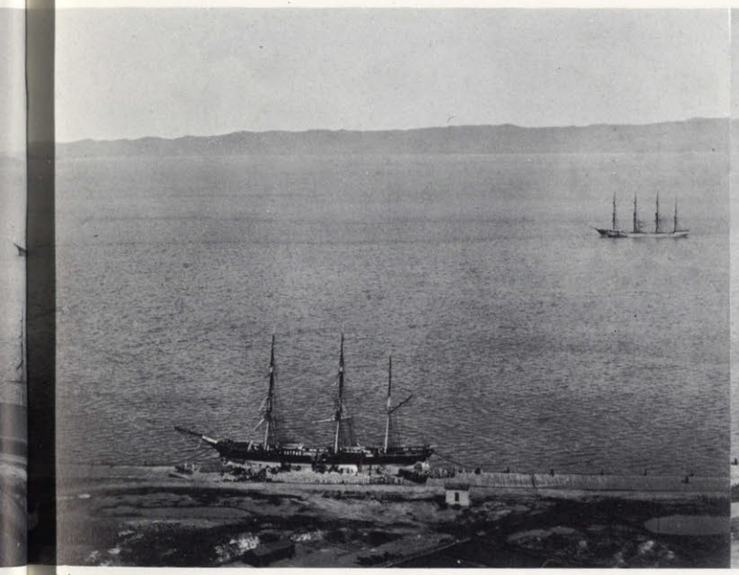
Development Controls

Controls regulating the development of San Francisco's port evolved primarily as a means toward the end of improving its economic viability. The early years, however, were characterized by minimum regulations, mismanagement, and in some cases corruption. By 1850, the port—though active and revenue-producing—was in very poor condition as piers and wharves were disintegrating and filled land was constantly slipping into the bay. Moreover, some wharves were even operated without City authorization. In response to this situation, owners of the wharves proposed to build a stone seawall provided they were permitted to retain control of the waterfront. In 1863, after a bitter political battle, a law was passed by the State Legislature which granted to

3d San Francisco Bay

3e Mt. Diablo, Oakland and Yerba Buena Island

3f Oakland Creek and City Front



3d



3e



3f

a private firm complete control of the port. The Governor, however, vetoed the law and the State took control of the port, vesting its administration and operation in a Board of Harbor Commissioners. Within six years the new Board repaired several wharves and constructed new ones, completed a substantial amount of dredging, and constructed the first seawall. Control and operation of the port since then has remained with the State, although the agency's name was changed to the San Francisco Port Authority. During this period of State control, which extends up to the present, the emphasis has been on maintaining the economic strength of the port, and in 1963 the State Legislature, at the request of the Port Authority, extended the scope of this objective to enable the Port Authority to develop non-shipping activities on port property as long as such development complied with City zoning and building codes.

Conclusion

Early growth of San Francisco, and indeed the Bay Area, was dependent upon trade and port activities. Later, and as a consequence of the Gold Rush, the population increased and provided a base for industrial growth and economic independence. Settlements sprang up throughout the Bay Area which supplied the goods needed and desired by the local population. Thus, in a short time a good-sized port city had emerged and had generated an economically-linked complex of towns and activities.

The Spanish-American War gave to San Francisco a new role—that of the United States' foremost military base on the West Coast. When the war ended and the United States assumed control over the Philippines, the country turned to the Pacific and its great trade potential. Since then, Pacific trade has been the mainstay of San Francisco's port activity, and San Francisco has become the Queen City of the Pacific.

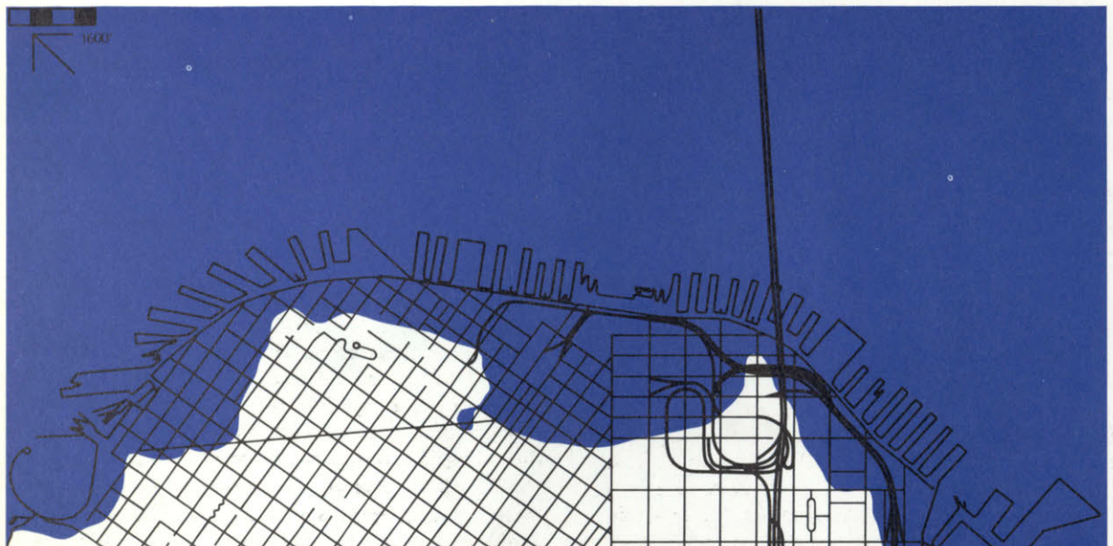
Thus, the waterfront has been San Francisco's principal link to the Bay Area, the nation, and the world—it was the City's "front door." Through it passed the treasure-seekers in search of gold and silver; the Chinese, European, and American immigrants in search of a new life; the cargoes that established San Francisco as a major port and trading center; and the men and materials destined to war in the Far East. Much has been written about the overland trails which shaped the destiny of California, but little has been said about the Pacific maritime trails which also greatly influenced the settlement and the economic development of the City and the State.

San Francisco's port has been largely responsible for the City's image as a cosmopolitan center with significant national and international bonds. That image is partly reflected by the number of shops in San Francisco that trade in merchandise imported from a variety of foreign countries, and the "romance of the sea" that is associated with maritime activity is woven into the City's fabric. In the process of becoming a world port, the City and the port both changed; the maritime jungle of the waterfront is now gone, but the drama and adventure, the heroism and eccentricity, of those early waterfront days have been captured and incorporated into the character of San Francisco.

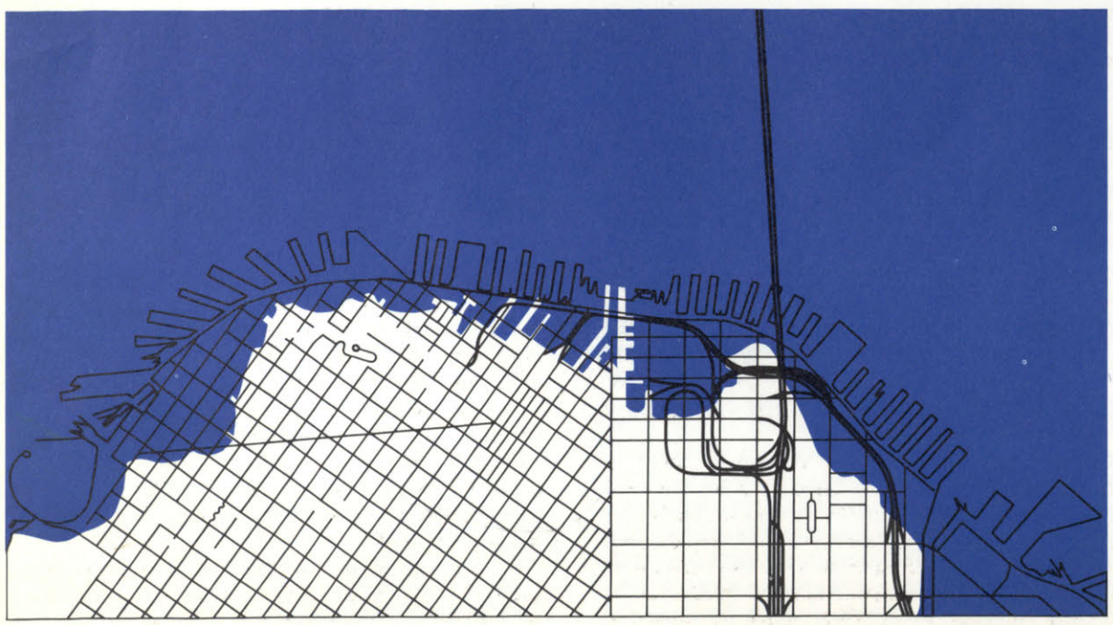
The port and its history provides a perspective on the growth of San Francisco and a sense of the present within a context of the past. Now San Francisco has the opportunity to consider new uses of its Northern Waterfront. Accessibility to this area of the waterfront which was formerly determined primarily by economic considerations of shipping and commerce is still important, but for new and different reasons. Residential, recreational, and commercial uses, with the corollary development and enhancement of views, parks, and public spaces and amenities, provide opportunities for the future and thus their own contemporary justification.

4 Changes in the Shoreline

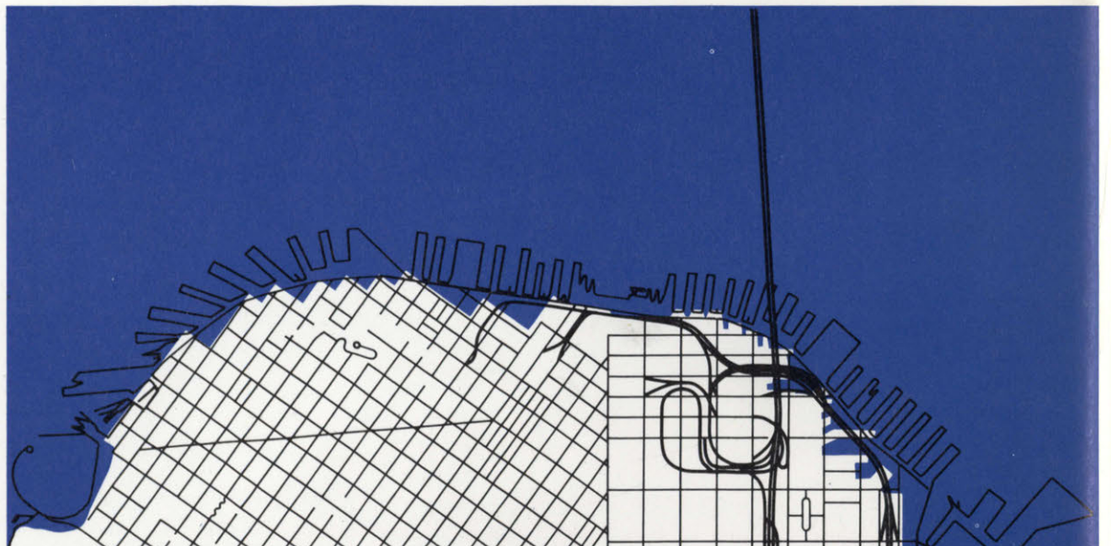
4a The Original Shoreline
4b 1852 Shoreline
4c 1869 Shoreline
4d 1968 Shoreline



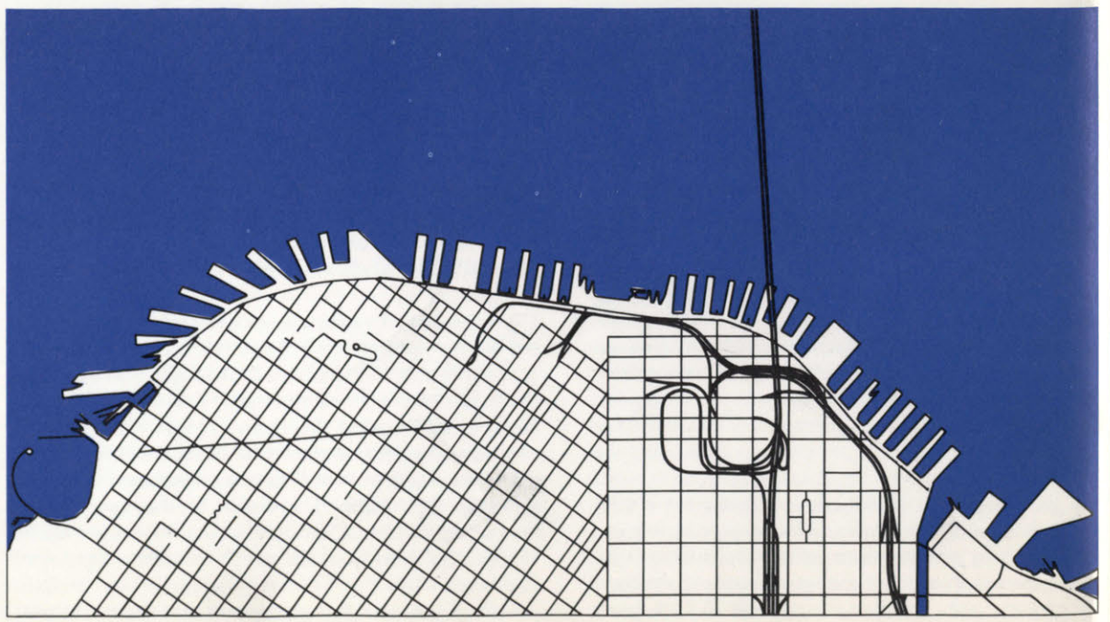
4a



4b



4c



4d

Existing Conditions

The Northern Waterfront encompasses an area whose land use structure is now undergoing substantial change. Warehousing and industrial uses that originally located in the Northern Waterfront in proximity to water and rail facilities are moving to sites in other parts of the City and the region. These activities are being replaced by retail, commercial, and office uses which, in turn, are generating a new cycle of development. These changes, however, are not evenly distributed throughout the waterfront, nor is their character everywhere the same; at least four distinguishable sub-areas have emerged, each with its own character and activity structure.

Activities in the Fisherman's Wharf area include restaurants, retail shops, and entertainment uses, all of which are located in close proximity to the existing attractions of the fishing industry and its related activities. Renovation of the Ghirardelli chocolate factory, The Cannery, and the Haslett Warehouse for shops and restaurants, and development of the Hyde Street Pier ship museum, have created around Aquatic Park an historic and attractive character that, in turn, supports and enhances the nearby fishing activities. Housing has expanded from the slopes of Russian Hill and Telegraph Hill into the flatlands to within a block or two of the seawall. The water's edge is primarily occupied by piers in maritime use, except at Aquatic Park and the Fisherman's Wharf boat basin.

At the present time, the area below Telegraph Hill retains much of the flavor and character of early waterfront development. This portion of the waterfront contained the warehouses and wholesale activities that served the elegant clipper ships; many of the original brick warehouses remain today, including the National Ice Houses, the Merchants Cold Storage Warehouses, and the Seawall Warehouse located at Sansome and Lombard streets, which is the oldest waterfront structure remaining in the City. Although warehousing and industrial activities are traditional in this area, in recent years an increasing number of existing structures have been converted for professional offices and commercial uses.

The current land use structure in the Ferry Building area has been greatly determined by urban renewal actions, such as the Golden Gateway residential complex, the Embarcadero Center office complex, and Embarcadero Plaza. These new projects have generated additional new construction and rehabilitation in adjacent areas as industrial activities are being replaced with offices, commercial uses, and business services. View corridors and upper-level pedestrian systems have been developed within portions of these projects, and their existence generates pressures for their extension to the waterfront in order to connect them with shoreline activities and open spaces.

The shipping uses within this area are concentrated on piers north of the Ferry Building, except for Pier 5 which is condemned. Piers immediately south of the Ferry Building are not being used for shipping at this time because they are in poor condition.

The existing activities south of the Bay Bridge include shipping, warehousing, and light industrial uses, with much of the land along The Embarcadero used for railroad storage yards. Pressures for new development in this area, as well as the number of land use changes that have occurred, are much less intensive than along the waterfront north of the Bay Bridge.

The Northern Waterfront presently functions as a traffic corridor between Downtown San Francisco and other parts of the Bay Region. During peak travel times, much of the major throughfare system in the Study Area is overloaded, particularly that part which is north of the Ferry Building. The Embarcadero Freeway affords high-capacity vehicular connections to the Peninsula and East Bay, but lack of a similar facility connecting Downtown with Marin County forces large volumes of commuter traffic onto the local streets north of the Ferry Building. Intensifying this problem is the fact that this traffic is flowing through the area experiencing the most rapid and extensive growth, and it is clear that the street system lacks the capacity to carry both local and through traffic.

In Sub-Area I, large volumes of pedestrians are mixed with vehicular traffic, and each impedes the efficient and comfortable movement of the other. Through traffic also conflicts with service vehicles, particularly in Sub-Area II, where trucks and trains serving maritime piers interfere with auto movement and, in turn, the autos interfere with transportation service to the port. Large volumes of truck traffic in Sub-Area IV also contribute to congestion in that area. Off-street parking facilities in the Northern Waterfront are generally inadequate, and on-street parking benefits are cancelled by the increased congestion caused on major thoroughfares.

The shoreline of the Northern Waterfront is now used primarily for shipping purposes, and its utilization for leisure and non-shipping activities has oc-

curred only on a very limited basis. Nevertheless, the low height of existing piers and the existence of some views to ships and the water generally create a feeling that the environment is dominated by water and sky. However, recreational open spaces on the shoreline are minimal—in fact, Aquatic Park is the only major developed open space that is located within the Study Area. Physical and visual linkages along the shoreline are discontinuous, present pier structures prohibit distant and panoramic views of the Bay, and there is an absence of water immediately adjacent to The Embarcadero.

The natural conditions of the Northern Waterfront influence the nature and intensity of potential development because construction must take place either on filled land or over water and in either case would require deep and extensive piling. Therefore, construction costs are higher than for areas further inland and these costs must be balanced by other developmental benefits. Development along the water's edge itself is further limited by the additional factors of tidal and wave action which virtually prohibit intensive recreational use of the water and which necessitate costly breakwater construction to provide sheltered berthing space for fishing and pleasure boats; by water pollution and low water temperature which restrict swimming and other water activities; and by the frequent occurrence of cool winds from the ocean which tend to limit the extent and nature of unprotected outdoor activities.

Height restrictions further constrain the intensity of development. San Francisco has controlled the height of development in portions of the Northern Waterfront in order to preserve the openness of views to the water from both Telegraph Hill and Russian Hill, to preserve views from the Bay and shoreline to these dramatic land forms, and to protect Coit Tower as a significant landmark in the City. The City adopted an 84-foot height limit covering the area west of The Embarcadero below Telegraph Hill in 1946, and in 1962 a 40-foot height limit covering all of Fisherman's Wharf and that portion of Sub-Area II east of The Embarcadero.

Most of the Study Area is presently included in M-1 and M-2 industrial zoning districts. These districts permit development of a broad range of commercial and industrial activities, and have contributed somewhat to the present mixed-use pattern of restaurants and shops occurring next to fish processing and the repair of boats. However, development of any kind of residential, hotel, or motel uses is prohibited within these industrial districts.

Pending Development Proposals

A number of private and public projects have either been completed or started during this study and others are imminent. Among the private projects completed is the North Point apartment, office, and retail complex which has been developed on the site formerly occupied by the Simmons Mattress Factory in Sub-Area I. In addition, retail and restaurant space has been increased through the expansion of Ghirardelli Square and the rehabilitation of The Cannery. Near Sub-Area III, development of the Golden Gateway high-rise apartment towers is continuing, and construction has begun on the first phase of the Embarcadero Center high-rise office complex.

The most significant project not yet under construction, but approved by the City Planning Commission and the Board of Supervisors, is the International Market Center. The primary intent of this proposal is to redevelop about 22 acres in Sub-Area II for a wholesale merchandise mart. Looking further into the future, several private developers have expressed interest in constructing hotels, motels, and offices in Sub-Areas I and II.

Although a number of public projects are pending or under construction in or near the Study Area, most of these occur near Sub-Area III. Public projects constructed or under construction include the temporary heliport immediately north of the Ferry Building, a municipal bus turnaround south of the programmed Embarcadero Plaza, the BARTD regional rapid transit system beneath Market Street and the Ferry Building, and the reconstruction of Pier 27 which is the only significant pier improvement along the Northern Waterfront in recent years. Public projects in more preliminary phases of development include Embarcadero Plaza at the foot of Market Street, the reconstruction and beautification of Market Street, and the BARTD platform that is necessary to protect the underwater transit tube and ventilation structure at the rear of the Ferry Building.

Development Problems and Opportunities

Development problems and opportunities in the Northern Waterfront are derived from examining the relationship between existing conditions, market potentials, and the goals for the area. Depending upon how they are viewed, some existing conditions may be considered as either problems or opportunities and, therefore, distinctions may not always be sharp.

Two broad uncertainties are associated with the future development of the Northern Waterfront. First, incremental changes could eventually produce an overall environment that is undesirable. Second, major relationships among key physical and functional elements of the urban structure may not be developed. If unguided growth occurs, it is uncertain that the important relationships among land use, transportation, water and open space, and waterfront amenities would be optimized.

Problems

Perhaps the most important question to be answered is the appropriate re-use of piers and land areas now being released from shipping by the Port Authority. It is clear that there are many alternative ways that these properties may be redeveloped, and it is important that what does occur be integrated with inland development and the transportation system and that adequate open spaces and public access to the Bay are provided. Further, a stated City policy is to concentrate major office and retail uses in the Downtown area in order to maintain a core that is economically strong and viable; future development along the waterfront should be consistent with this objective.

At present, various land uses in the waterfront generally do not relate to each other, although this is less true around Fisherman's Wharf, Jackson Square, and the Broadway entertainment area. The Northern Waterfront is now in a transition period and functional relationships are still evolving. Many land uses do not relate to or require a waterfront location, and in some cases such land uses are totally inappropriate in this area. For example, some industries which serve neither commercial, maritime, nor fishing activities and which require extensive rail and truck service inhibit desirable growth, create congestion, and disrupt the continuity of the development pattern. In addition, two public facilities are inappropriately located in the Fisherman's Wharf area. The Kirkland Bus Yard at Stockton and North Point streets, which provides storage space for Municipal Railway buses, is in an area of increasing pedestrian activity and rising land values and interrupts the continuous expansion of activity from Fisherman's Wharf. The North Point Sewage Treatment Plant, although not necessarily an inappropriate use, is located on a site that cannot be expanded and which impedes the commercial development of that portion of Sub-Area I.

Currently, the opportunities for use of the waterfront and its development are limited. The activities, facilities, and features of this area should serve all segments of the population and should not be restricted to serving the tastes of any one particular group. On the other hand, without a total development program it may not be possible to develop portions of the waterfront for such uses as housing. Indeed, very little housing is now located in the area, and it is important that this development opportunity not be foreclosed.

Integrated transportation service to and within the Northern Waterfront does not now exist, and it appears that transportation systems are independent of one another. Conflicts among the different movement systems, especially between pedestrians and vehicular traffic and between local and through traffic, cause congestion and hazardous conditions and decrease the efficiency and capacities at which the systems operate. Transit terminals are not interrelated and their dispersed locations prohibit direct and convenient interchange among the different systems. Off-street parking facilities are dispersed, inadequate in capacity and unrelated to major thoroughfares and activity centers. The movement system does not link physically or visually the major elements and points of interest within the Northern Waterfront.

Physical and visual access to the water is generally prevented by pier structures, heavily-travelled thoroughfares, and railroads. Aquatic Park is the only major shoreline open space that permits public access to the water, and Aquatic Park together with Coit Tower are the only places from which to enjoy dramatic and panoramic views of the City and the Bay. In addition, there is no variety of open spaces and no connections between those that do exist. The physical structure of the waterfront environment establishes no visible overall image and general de-

sign unity except around Aquatic Park. The absence of these qualities creates difficulties of orientation, and the visitor does not easily perceive the paths of movement within and through the area.

Wind and tidal action, water pollution, and a low water temperature all combine to limit the kinds of open recreational uses which can be developed along the shoreline. Also, the geologic characteristics of the site cause higher development costs within the Northern Waterfront than in areas further inland. Because land development costs are high in this area, there are likely to be continued efforts to break the existing height limits, and if these limits are broken, other values inherent in the waterfront environment may also be compromised.

Opportunities

The tremendous development potential of, and the extensive public land ownership in, the Northern Waterfront offer a broad range of significant investment opportunities and the possibility of developing a creative and innovative partnership between public and private interests. Moreover, it is clear that both public and private interests are committed to improving and developing the Northern Waterfront, as reflected in the International Market Center, Embarcadero Plaza, and the commitment of the Port Authority to make optimum use of properties no longer needed for shipping.

Existing development possesses many qualities which can be exploited to provide the nucleus for future development. The present activity pattern and character of Fisherman's Wharf is an unusual asset and provides a basis for subsequent development in this area. Another quality of the area is the existence of a number of structures from earlier periods of waterfront activity which can be preserved and rehabilitated to create an historic atmosphere. Indeed, this has been done in the case of The Cannery, Ghirardelli Square, the Haslett Warehouse, and the National Ice Houses. The street system offers another unique development opportunity because its gridiron pattern can be used to integrate visually the edge of the City. The "working port" can be a very desirable element in the Northern Waterfront because if it is visible it will provide a very strong attraction that is colorful, interesting, and genuine. The presence of all of these features presents unusual opportunities to create a waterfront activity structure that is both unified and diverse in character.

The location, size, and form of the site contribute greatly to the development potential of the Northern Waterfront. The area's location on the water's edge provides unlimited opportunities to view the natural and man-made amenities of San Francisco, the Bay, and the Bay Area. The size and linearity of the site permit the development of an urban edge that is harmonious with the San Francisco skyline and topography and that extends across perhaps the most distinctive segment of San Francisco's waterfront. Another feature—finger piers along the Embarcadero—present an uncommon opportunity to integrate water and urban development along a city's waterfront. The scenic amenities of the Northern Waterfront and the dramatic views of the City and the Bay establish an attractive and aesthetic setting from which people can derive enjoyable and memorable experiences.

General Development Plan

Elements of the Plan

The General Plan for development of San Francisco's Northern Waterfront is based upon a number of broad concepts. First, water and shipping activities should be integrated into the structure of the City in such a way that there is an even and logical progression of activities from the City to the waterfront. Second, that integration is necessary in order to utilize most effectively the significant opportunities afforded by the Bay and the City's natural topography for providing unity and identity to the urban structure. Third, articulation and integration of water and shipping activities and the City's projected urban structure will enable formation of linkages between diverse activities within the Northern Waterfront and interior areas of the City. Fourth, open spaces and greenways should be provided to create the feeling that the waterfront is open and the water's edge is easily accessible, to define major activity centers, and to link together elements of the City's structure. Finally, integration of the "working port" into the structure of future development will enhance and utilize the authentic maritime atmosphere generated by port and shipping activity in the Northern Waterfront.

The plan builds upon the market forces which have produced a number of land use changes as well as an incremental expansion from the City to the waterfront. At present, industry along the waterfront is being replaced by a variety of commercial activities, and this has resulted in the growth of many mixed-use areas. In some cases, these are undesirable and therefore should be eliminated. More often than not, however, these mixed-use zones and structures have brought about unique combinations of activities that have become distinctly desirable and pleasurable. Therefore, the plan encourages continuation of this development and the stimulation of a continuous process of innovation.

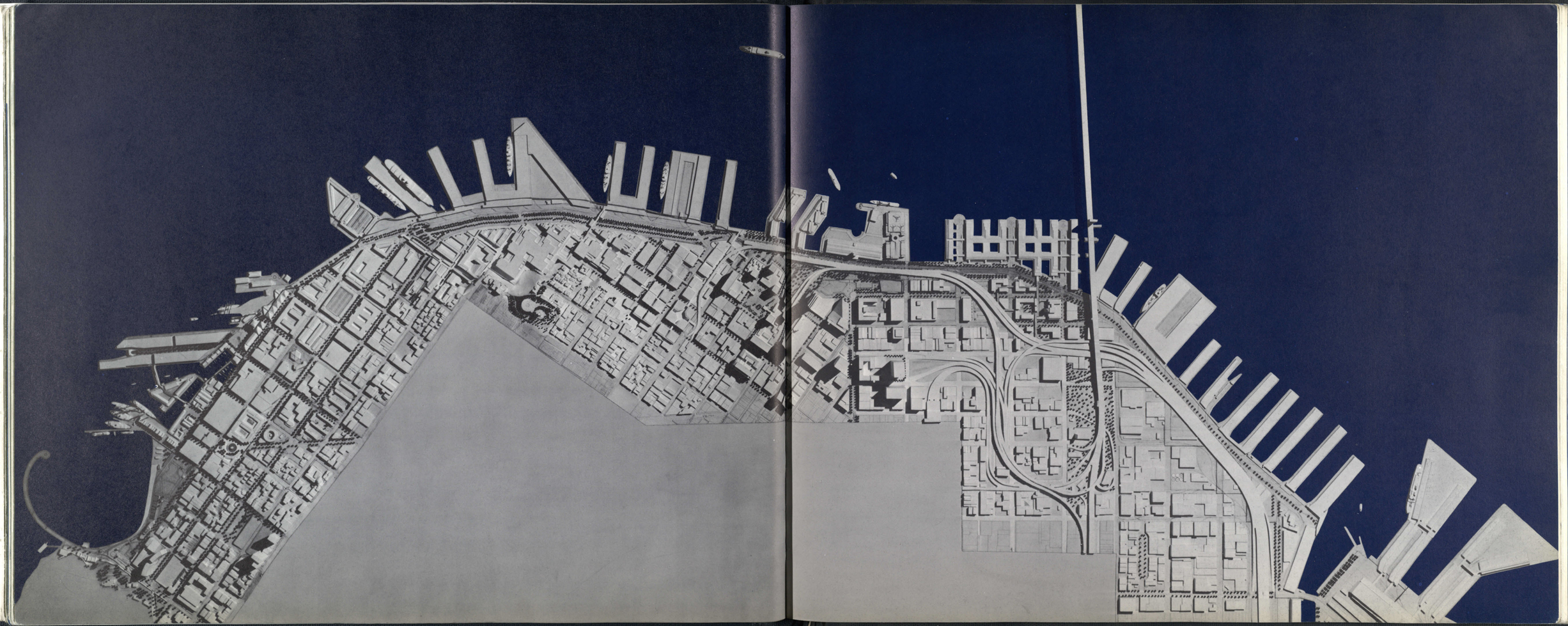
The plan for the Northern Waterfront envisions a unified complex of diverse retail, entertainment, and recreational activities which together provide opportunities and many choices for day-long use and enjoyment by residents and visitors. The "working port" is maintained in the Northern Waterfront, particularly in Sub-Area II, for as long as it is economically feasible, because the maritime atmosphere of port and shipping activities adds genuine interest, variety, and amenity to the waterfront environment.

Each activity area is individually developed and the local open space system depends upon each area's physical attributes. For example, where clusters of existing buildings of historic and architectural merit are found, such buildings are preserved and rehabilitated, thus creating local historic zones. On the other hand, development on hillside areas is terraced down to the water to reflect the form of the hill and the San Francisco skyline and provide open views to the water. In still other cases, unified complexes should be developed upon upper-level platforms that permit a vertical separation of pedestrian and vehicular traffic.

The visibility of existing landmarks, such as Coit Tower and the Downtown skyline, is preserved, but additional landmarks are provided, such as an observation tower at Fisherman's Wharf. Furthermore, the physical forms define major points of entry into activity districts. Materials, colors, and street furniture and equipment are in keeping with both the overall character of San Francisco and the maritime atmosphere of the Northern Waterfront.

The open space system along the shoreline links a sequence of waterfront open spaces with pedestrian pathways and promenades. One gains the impression that the waterfront is dominated by water and sky, since dramatic views of the Bay and the City are interrupted only occasionally by planting and because overall height of development is low. For example, shoreline parks and plazas, in conjunction with waterfront development, provide panoramic and distant views of water, islands, and the Marin and East Bay hills. At periodic locations along the shoreline, large areas of open water emphasize sweeping views of water and hills. The open space system includes contrasting types of open space elements such as urban plazas, natural parks, vista points and overlooks, and pedestrian promenades.

Both the open space system and the transportation system link waterfront activity areas to each other and to the City. Continuity along the shoreline is provided by pedestrian pathways and promenades, while vehicular linkages among areas generally occur further inland. Cable car lines terminate in waterfront plazas, and new transit systems connect Fisherman's Wharf and the Ferry Building, Coit Tower and the waterfront. Street greenways and pedestrian paths extend from activity areas back into the City. Pedestrian overpasses are developed at Piers 9, 27, and 35 across The Embarcadero to provide areas for viewing



◁ 6 The Northern Waterfront—
Model of Proposed Development

port activities.

Different types of transportation facilities are provided, each fulfilling a function within the total transportation system. Emphasis is placed upon pedestrian movement and slow-moving transit facilities within the waterfront to minimize the use of private vehicles and to move large volumes of people.

Transportation facilities have been located so that each may function efficiently, and terminal facilities have been integrated to facilitate interchange among different modes. New streets are developed and existing streets are converted into one-way couples to expand the traffic capacity in the Marin corridor for both local and through traffic. Parking facilities are concentrated in corridors easily accessible to the major thoroughfare system and at key points of entry to activity areas. Such a system is designed to intercept autos along the periphery of the Northern Waterfront and to reserve the shoreline for predominantly pedestrian access and movement.

In summary, if the proposals recommended by this plan are implemented, the City of San Francisco will have developed with wisdom one of its most precious resources.

The following sections of this report describe the elements of the General Development Plan—Land Use, Transportation, Open Space, and Urban Design—and present concepts, policies, and proposals concerning the nature and character of each element within the Northern Waterfront. Also included are plans for each of the four sub-areas; these present detailed development proposals and describe the interrelationships among the major elements within each particular sub-area.

Land Use

Existing Land Use

In its early years of development, the Northern Waterfront was the maritime center through which products of other regions and countries were brought into northern California. Merchandise from China, manufactured goods from the Eastern states, lumber from the Pacific Northwest, and produce from South America all found their way into the expanding California market through San Francisco's port. At the same time, gold and grain were shipped out of San Francisco to numerous markets. During this period of intensive maritime activity, a variety of commercial and industrial uses related to ocean-borne trade developed in the Northern Waterfront.

Subsequent economic and technological changes brought about a general decline of port and industrial activities in the Northern Waterfront. For example, the growing importance of railroads caused a decline in the use of water transportation for inland, intercoastal, and coastwise shipping that retarded the growth of maritime activity, and consequently the port became more dependent upon foreign trade. Later, as trucking became an important mode of transport, warehousing and manufacturing activities placed more importance upon uncongested highway access and loading areas than upon access to the existing railroad service. Furthermore, modern horizontal plant facilities were more efficient to operate than existing multi-story warehouses and factories. During the general decline of shipping and industrial activities, however, both residents and tourists were increasingly attracted to the Northern Waterfront by its natural amenities and maritime environment and consequently shops, restaurants, and maritime museums developed to meet their needs and desires. This infusion of new uses and the conversion of old uses have created at this time a diversified land use pattern which nevertheless does possess a maritime character.

If the momentum of current trends continues, it is likely that it will produce the following development results within the Northern Waterfront:

1
A reduction in the amount of space required for harbor facilities, and a concomitant reduction in the need for supporting facilities such as railroad storage yards and warehousing.

2
Continued movement of manufacturing and processing industries out of the Study Area, particularly from the area north of the Bay Bridge.

3
Expansion of retail, restaurant, hotel, and commercial recreation activities which serve visitors attracted by the maritime environment and the amenity of the waterfront.

4
Expansion of general commercial uses which service Downtown businesses and which require a location near Downtown, especially printing and data processing uses.

5
Expansion of offices attracted by low-cost space and the amenity of the waterfront environment.

Relationship of Land Use to Port Activities

Two types of relationships exist between land use and port activity. The first involves the role of the port as a transportation facility. A survey conducted by the Department of City Planning of the 466 business and industrial firms located in the Study Area indicated that about 22 percent use port facilities for the movement of goods. Activities which are most dependent upon the port for transportation include warehousing, food processing, retail, and special trade contractors. A majority—about 60 percent—are located south of Market Street; another 28 percent are located below Telegraph Hill in Sub-Area II, and 12 percent are located in Sub-Area I.

It appears, then, that the connection between commercial and industrial activities and water transportation is not as significant as might be expected. This conclusion is further substantiated by the fact that firms in the Study Area receive and ship goods primarily by large trucks and secondarily by small vehicles and rail; little use is made of water transportation. Since water transportation is not the predominant mode of transportation used by most firms in the Northern Waterfront, the location of most activities is based on other factors such as land costs and proximity to the central business district.

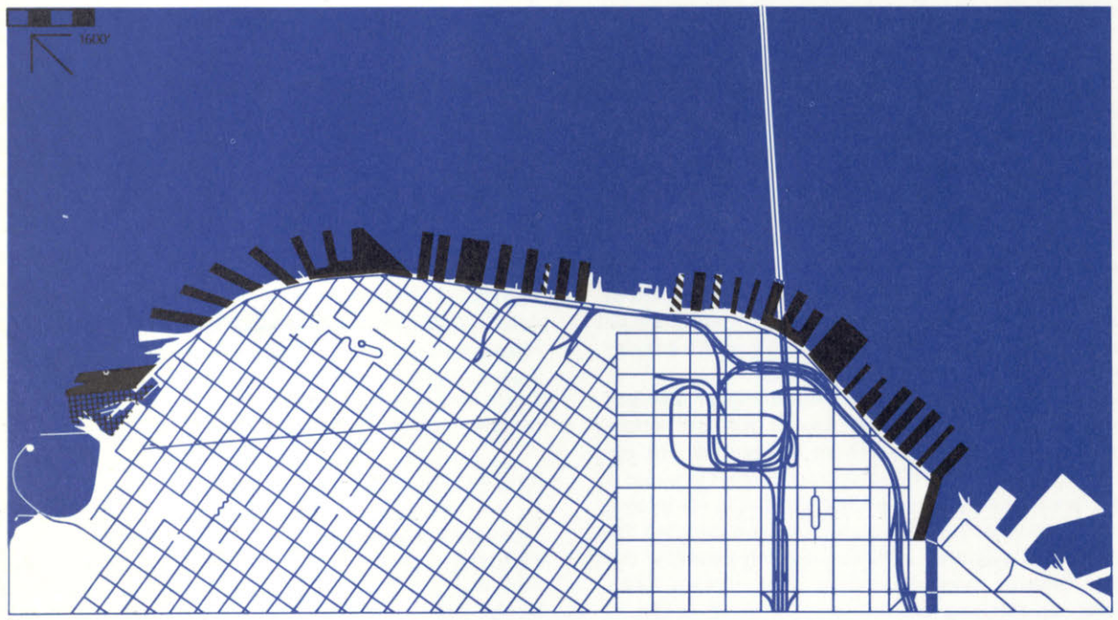
The second form of interaction between the port and other land uses involves the utilization of the scenic amenities associated with a "working port." The sounds, smells, and especially the scenic impact of

7 Existing Port Facilities

Maritime Piers

Piers Unfit for Maritime Use

Fishing Boat Basin



7

the entire waterfront have a dynamic appeal for many people. The authentic maritime flavor created by views of ships sailing on the Bay and loading and unloading at the piers along The Embarcadero offers a rare opportunity to enjoy an historic, but still active and attractive, commercial waterfront.

Retail and restaurant uses in particular have capitalized on the scenic value of port activities. This is most pronounced at Fisherman's Wharf, where restaurants have clustered around the fishing boat basin to provide patrons with views of that colorful and unusual activity. Although this opportunity has been less-exploited elsewhere along the waterfront, some pier restaurants which originally served only longshoremen are now attracting tourists and a general clientele. Finally, this amenity has also contributed to the conversion of some pier sheds into professional offices for architects, engineers, and advertising companies.

Land Use Relationships: Bay Region

Relationships between activities in the Northern Waterfront and the Bay Region are primarily forged on the basis of economic linkages and particular aspects of geographic site and situation. Regional economic factors, for example, influence to a large degree the kinds of activities which can economically exist on the San Francisco waterfront. On the other hand, the site conditions and geography are influential in the locational choices of certain uses.

Projections of the future demand for various activities in the Northern Waterfront as determined by Arthur D. Little, Inc., can be divided into those for which future demand is (a) insistent and expanding, (b) less insistent and constant, or (c) weak and decreasing.

Activities that will grow and expand are those which meet the needs and desires of persons attracted to the waterfront by the amenities found there; those which require a location near Downtown San Francisco; and those which serve these two activity classes. Demand is most insistent and expanding for the following activities; housing, hotels and motels, general retail, restaurants and entertainment, general commercial, professional offices, general and administrative offices, printing, chandlers and marine services, institutions, and public parking. Uses whose demand for expansion are less insistent, but which will retain locations in the area, include: food processing, special trade contractors, and laboratory activities. Finally, a group of some existing uses whose demand for space is declining, includes manufacturing, warehousing, and machine shops.

The demand for space to accommodate shipping activities in the Northern Waterfront is also declining. Increased use of cargo containers has created a need for pier facilities different from those in the Study Area. Although conventional cargo ships can still use the present finger piers, container ships require berthage space adjacent to a large land area for container handling and storage. Consequently, the Port Authority is developing container terminals in the Southern Waterfront, for example the Army Street terminal, where rail and truck access are good and where space requirements can be met. These new terminals have attracted some shipping activity away from the Northern Waterfront, and the unused piers are now available for non-shipping activities. A projection of these current trends indicates that no new piers will be constructed in the Northern Waterfront and that, although present finger piers will continue to be used by conventional cargo ships for some time to come, most will gradually be phased out of service.

In its study of future port needs for the San Francisco Port Authority, Arthur D. Little, Inc., concluded that the following piers are not needed for shipping activity: 45, 41, 39, 37, 14, 16, 18, 20, 22, 24, 34, 38, 40, 42, and 44. The study recommended, however, that Piers 38 through 44 should be held in reserve for the possible future construction of a new "marginal wharf." Also, the study proposed that piers north of the Ferry Building should continue to be used for shipping, not only because they are presently needed in this capacity, but because they provide a desirable maritime atmosphere.

Piers 9 through 35 are in good physical condition and can support maritime activities for some time. Finally, the report concluded that Pier 35 should continue to function as a passenger terminal because construction of a new terminal is not financially feasible at this time.

In general the following attributes of the Northern Waterfront will influence its attractiveness for potential users:

1

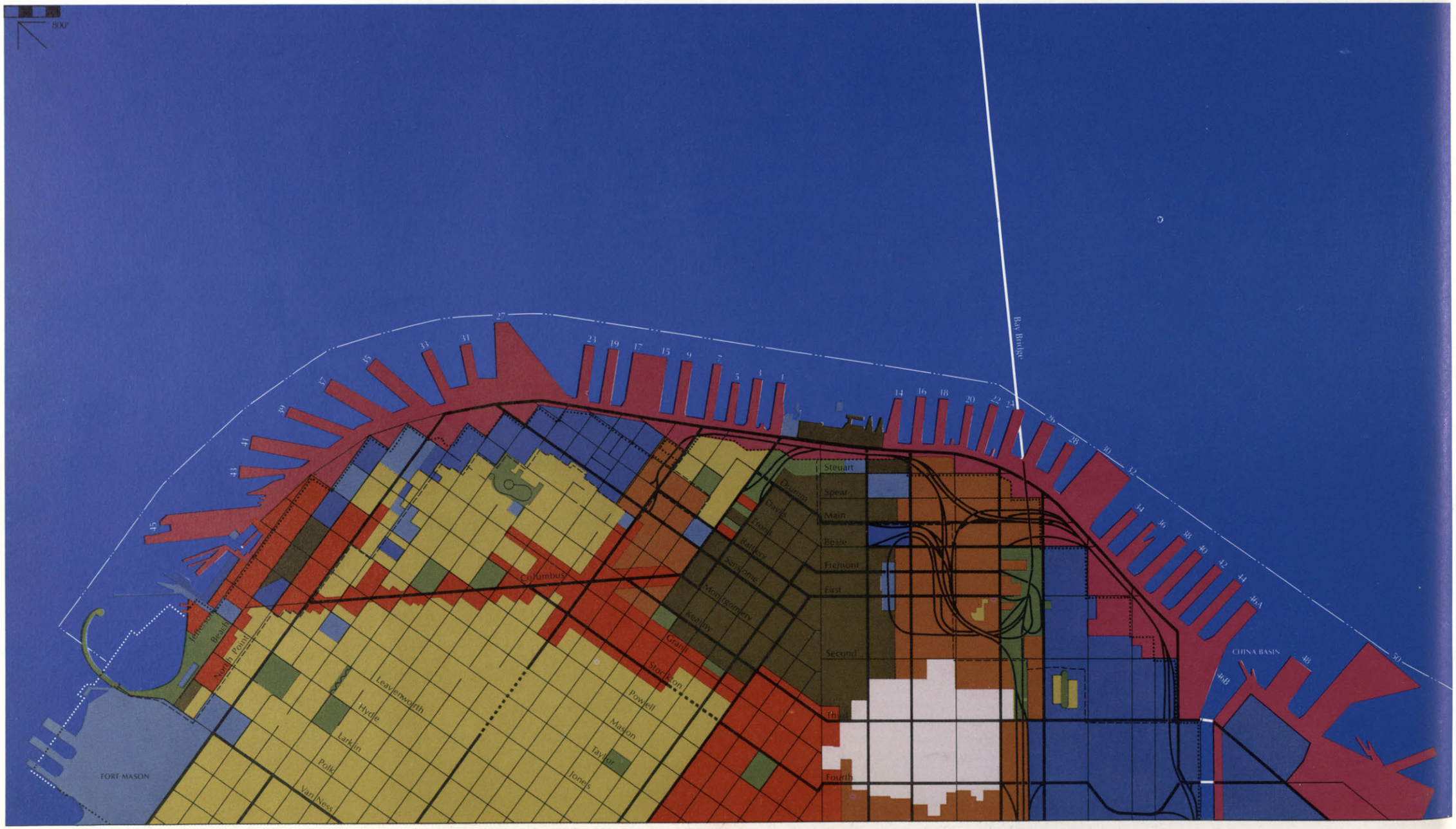
Deep water berths which permit anchorage of ocean-

Generalized Land Use – Existing

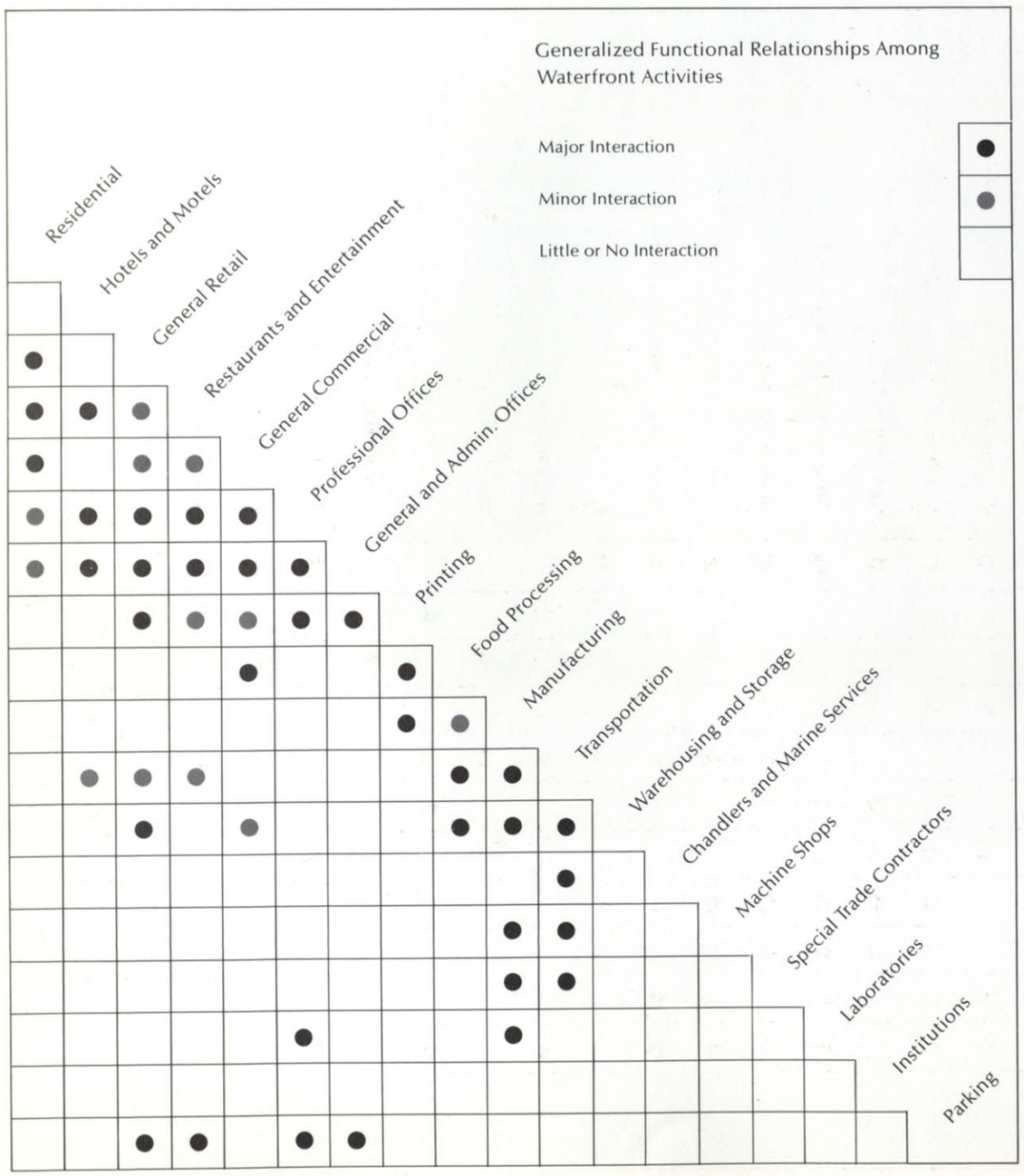
Use	Sub-Area I			Sub-Area II			Sub-Area III			Sub-Area IV			Total		
	Area (acres)	Percent of Total Land	Percent of Study Area	Area (acres)	Percent of Total Land	Percent of Study Area	Area (acres)	Percent of Total Land	Percent of Study Area	Area (acres)	Percent of Total Land	Percent of Study Area	Area (acres)	Percent of Total Land	Percent of Study Area
Retail and Entertainment	51.70	28.8%	16.3%										51.70	7.8%	4.8%
Office	10.14	5.7	3.2				26.70	22.5%	13.6%				36.84	5.6	3.4
General Commercial				16.32	11.3	6.4	32.31	27.3	16.4	44.74	20.4%	14.5%	93.37	14.1	8.7
Maritime	49.19	27.4	15.5	78.68	54.2	30.9	48.97	41.4	24.9	95.91	43.7	31.2	272.75	41.2	25.3
Light Industry	14.12	7.9	4.4	50.02	34.5	19.7				59.18	26.9	19.2	123.32	18.6	11.5
Residential	20.46	11.4	6.4							0.68	0.3	0.2	21.14	3.2	2.0
Public Facilities and Institutions	17.49	9.8	5.5				8.79	7.4	4.5				26.28	3.9	2.4
Public Open Space	16.15	9.0	5.1				1.65	1.4	0.8	19.05	8.7	6.2	36.85	5.6	3.4
Total Land[a]	179.25	100.0%	56.4	145.02	100.0%	57.0	118.42	100.0%	60.2	219.56	100.0%	71.3	662.25	100.0%	61.5
Water	138.76		43.6	109.52		43.0	78.23		39.8	88.44		28.7	414.95		38.5
Study Area	318.01		100.0%	254.54		100.0%	196.65		100.0%	308.00		100.0%	1077.20		100.0%

[a]Includes platforms over water. Source: John S. Bolles Associates

38


800'
Bay Bridge
Jefferson
Beach
North Point
Columbus
Leavenworth
Hyde
Larkin
Polk
Van Ness
FORT MASON
Davis
Front
Battery
Sansome
Montgomery
Kearny
Grant
Stockton
Powell
Mason
Taylor
Jones
Steuart
Spear
Main
Beale
Fremont
First
Second
Third
Fourth
CHINA BASIN
Bay
Francisco
Chestnut
Lombard
Greenwich
Filbert
Union
Green
Vallejo
Broadway
Pacific
Jackson
Washington
Clay
Sacramento
California
Pine
Bush
Sutter
Post
Geary
O'Farrell
Ellis
Market
Mission
Howard
Folsom
Harrison
Freeway
Bryant
Brannan
Townsend
King
Berry
Channel

		Gross Area (acres)	Percent of Total		
Retail and Entertainment		51.70	4.8%	Retail and Entertainment. These uses, including motels, have developed to serve visitors attracted by the mixture of land	and sea activities. Recent developments containing these uses have, on the whole, occurred in the Fisherman's Wharf area.
Office		36.84	3.4	Office. General and Administrative offices as well as professional offices are located in the Study Area. Professional	offices have tended to locate in all sections of the waterfront, while general offices are concentrated in Sub-Area III.
General Commercial		93.37	8.7	General Commercial. This group includes such uses as business services, photographic shops, and wholesalers. These	activities are presently located south of Market Street and in the southern portion of Sub-Area II.
Maritime		272.75	25.3	Maritime. Port facilities which include cargo and passenger ship piers and the fishing fleet harbor at Fisherman's Wharf.	
Light Industry		123.32	11.5	Light Industry. These include three types of uses. First, those which remain from early periods of waterfront development, including warehousing, machine shops, and special trade contractors; most of these are located south of Market Street, but a number of warehouses are located in Sub-Area II and several contractors and machine shops remain in the Fisherman's Wharf area. Second, industrial activities which at this time find it economically feasible to remain in their water-	front locations; these include printing, food-processing operations, and laboratories, all of which are located in Sub-Areas II, III, and IV. Third, activities which originally served water-oriented uses and which have been able to integrate their operations with the changing environment; these include chandlers and marine services, most of which are located south of Market Street, and fish processing activities located at Fisherman's Wharf.
Residential		21.14	2.0	Residential. Most of the housing in the Study Area is located in Sub-Area I. Residential uses are located outside the Study Area adjacent to Sub-Area I, on Telegraph Hill adjacent to	Sub-Area II, and in the Golden Gateway Redevelopment Project adjacent to Sub-Area III.
Public Facilities and Institutions		26.28	2.4	Public Facilities and Institutions. These uses include schools, museums, utility stations, and transportation terminals.	
Public Open Space		36.85	3.4		
Water		414.95	38.5		
	Total	1077.20	100.0%		
Yerba Buena Redevelopment Area					



Source: John S. Bolles Associates

General Relationships Between Activities and Market and Locational Factors

		Activity																			
		Residential	Motels and Hotels	General Retail	Restaurants and Entertainment	General Commercial	Professional Offices	General and Administrative Offices	Printing	Food Processing	Manufacturing	Transportation	Warehousing and Storage	Chandlers and Marine Services	Machine Shops	Special Trade Contractors	Laboratories	Institutions	Parking
Projected Market Demand	Expanding	●	●	●	●	●	●	●	●					●				●	●
	Constant									●		●				●	●		
	Declining										●		●		●				
General Nature of Activity	Living	●	●															●	
	Working					●	●	●	●	●	●	●	●	●	●	●	●		●
	Leisure			●	●							●						●	●
General Locational Considerations Primary ● Secondary ●	Proximity to Waterfront Amenities[a]	●	●	●	●		●	●											
	Proximity to Downtown		●	●	●	●	●	●	●										
	Proximity to Basic Growth Activities[b]			●	●	●	●		●										
	View of Water and Bay	●	●		●		●	●											
	Physical Location Near Water	●	●		●		●	●		●		●	●	●					

[a]Waterfront amenities include proximity to water, maritime activities, and authentic maritime atmosphere, dramatic views of the City and the Bay.
[b]Basic growth activities generate demand for both "imitators" and firms which service basic growth activities.

Source: John S. Bolles Associates

going ships. The Northern Waterfront possesses advantages for port activity that are not available in many portions of the Bay shoreline.

2
Scenic and panoramic views of the Bay, the City, and the shipping industry.

3
A colorful and genuine maritime atmosphere derived from fishing and shipping activities.

4
Locations contiguous with the regional center of business, shopping, hotel, entertainment, and tourist areas.

Land Use Relationships: San Francisco

Relationships between activities in the Northern Waterfront and the balance of San Francisco are based primarily on three factors: (a) the waterfront as an economic activity producing jobs, income, and tax revenue; (b) the functional linkages between waterfront activities and adjacent uses including those in the central business district; and (c) the manner in which the waterfront environment influences the "image" of San Francisco.

Arthur D. Little, Inc., in its study of future port needs demonstrated that waterfront activities contribute significantly to the strength and vitality of San Francisco's economy. Port activity is directly responsible for producing 23,000 jobs and $195 million in annual payrolls (4.8 percent of all jobs and 6.1 percent of all annual payrolls in the City). Non-port activity in the Northern Waterfront directly produces 16,000 jobs and about $106 million in annual payrolls (3.3 percent of all jobs and payrolls). Together, then, port and non-port activities produce 8.1 percent of the jobs and 9.4 percent of the annual payrolls in San Francisco. In addition, port activity indirectly produces another 29,000 to 44,000 jobs and $195 to $295 million in annual payrolls.

The Northern Waterfront is also an important source of revenue to San Francisco. For example, in 1963 the City obtained from waterfront activities about $3 million in revenue – $2,600,000 from property taxes and $400,000 from fees and licenses. The City also obtains revenue from taxes on retail sales; although retail sales data for small areas are unavailable, it is estimated that sales in the Northern Waterfront currently add $125,000 to $175,000 to annual City revenue.

The Northern Waterfront provides a location for many activities that serve businesses and offices in Downtown San Francisco. Printing firms serve the trade, finance, and service industries as proximity to Downtown permits them to perform custom work where time and accessibility are important factors. Professional offices also benefit from being close to the central business district as well as to motels, restaurants, and entertainment activities. In addition, the Northern Waterfront contains a variety of specialized service and supply companies, all of which are tied closely with Downtown activities.

Finally, waterfront activities influence the "image" of San Francisco as visualized by both residents and visitors. The survey by Arthur D. Little, Inc., showed that ninety percent of the visitors to Fisherman's Wharf consider it one of the five best attractions in San Francisco, and of this group 46 percent of those visitors were attracted to the area by the waterfront's authentic maritime atmosphere, the docks and ships along The Embarcadero, ships sailing by, and views of the Bay. Many tourists visit Fisherman's Wharf either because of the Northern Waterfront's unique atmosphere or because they strongly associate the area with San Francisco's past. Thus preservation of these qualities and amenities will enhance both the area itself and the entire City.

Land Use Relationships Within the Study Area

The land uses attracted to the Study Area, and the locations they select, are influenced by the following considerations: (a) the functional linkage and accessibility requirements between an activity and its users and suppliers; and (b) the extent to which the success of an activity depends on optimizing its use of waterfront amenities.

Functional relationships between various kinds of commercial activities in the waterfront are more numerous than those between various kinds of industrial uses or between commercial and industrial uses. Projections of market demand indicate that waterfront activities which are tending to remain constant or to decline are generally those with few functional relationships with other activities. Conversely, activities which are tending to expand are extensively interdependent with other land uses, and generally require a location in proximity to the central business district.

Land uses which are experiencing an expanding demand are service rather than production oriented. Thus, waterfront development tends to be characterized by three groups of activities: (a) those which serve the living and leisure needs of residents and visitors; (b) those which serve activities in the central business district and are ancillary to (a) above; and (c) production activities such as the port, transportation, food processing, and manufacturing.

Land Use Policies

The land use policies presented in this plan for the Northern Waterfront are based on three general principles: (a) land uses should be physically interrelated; (b) development should relate the interior of the City to the shoreline; and (c) development should create an environment possessing a strong maritime and water oriented character.

Land use policies include the following:

The land use plan should develop a continuity of land use both along the shoreline and from the City to the water; at the same time, it should emphasize various land uses to establish an overall character of diversity along the entire waterfront. This policy calls for the extension of inland use districts to the water as well as the integration of various land uses along the shoreline. Thus, the types of shoreline uses should generally reflect the contiguous inland uses. For example, inland residential and commercial areas should be expanded to the shoreline, and where harbor facilities are proposed, inland uses should reflect the commercial and industrial nature of the port activity. Where an extension of one use along the shoreline is juxtaposed with the extension of another use from the City to the water, areas of mixed-use should generally be developed. The overall character of shoreline uses, however, should clearly indicate the integration of differing land uses and the unity between inland and shoreline districts. *The nature and character of land uses along the shoreline should be in keeping with the maritime environment of the waterfront and with the amenity afforded by water, by panoramic views of the City and the Bay, and by shipping and fishing activities.*

Employment and Income Generated by Activities in the Northern Waterfront

	Employment		Wages and Salaries	
Source of Employment and Income	Number	Percent of City Total	Number	Percent of City Total
Directly Attributable to Port Activity[a]	23,000	4.8%	$ 195,000,000	6.1%
Directly Attributable to Non-Port Activity in the Northern Waterfront[b]	16,000	3.3	106,000,000	3.3
Total Directly Attributable to Waterfront Activity	39,000	8.1	301,000,000	9.4
Total in San Francisco	482,000	100.0%	$3,200,000,000	100.0%

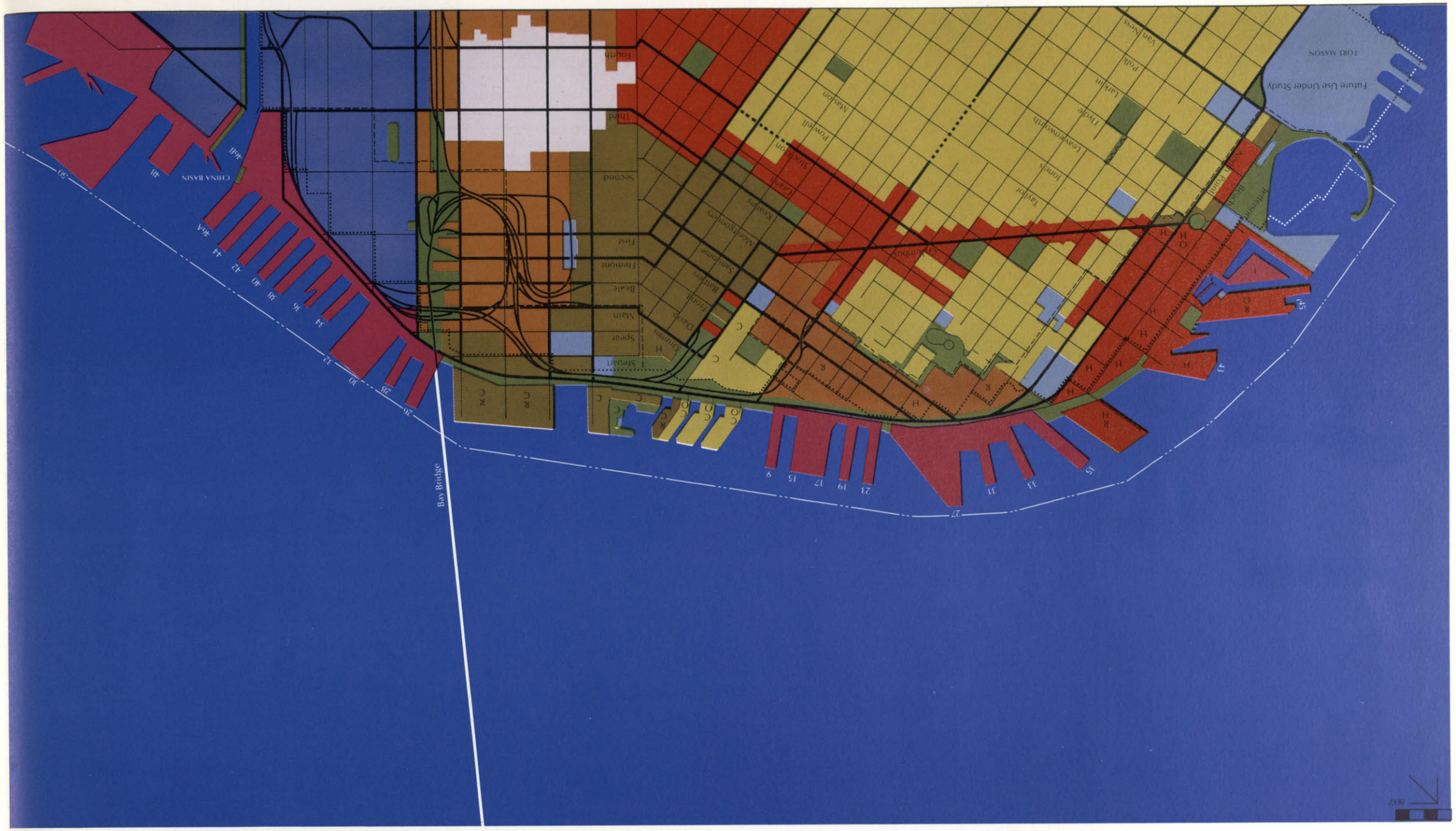
[a]Source:
Arthur D. Little, Inc., *The Port of San Francisco: An In-Depth Study of Its Impact on the City, Its Economic Future, the Potential of Its Northern Waterfront,* September, 1966.

[b]Source:
San Francisco Department of City Planning and John S. Bolles Associates.

Generalized Land Use—1985

Use	Sub-Area I			Sub-Area II			Sub-Area III			Sub-Area IV			Total		
	Area (acres)	Percent of Total Land	Percent of Study Area	Area (acres)	Percent of Total Land	Percent of Study Area	Area (acres)	Percent of Total Land	Percent of Study Area	Area (acres)	Percent of Total Land	Percent of Study Area	Area (acres)	Percent of Total Land	Percent of Study Area
Retail and Entertainment	110.20	59.2%	34.7%										110.20	16.0%	10.2%
Office	6.74	3.6	2.1				66.39	48.7%	33.7%				73.13	10.6	6.8
General Commercial				67.36	46.5%	26.5%	19.05	13.9	9.7	37.68	17.2%	12.2%	124.09	18.1	11.5
Maritime	6.28	3.4	1.9	57.82	39.9	22.7				76.19	34.7	24.7	140.29	20.4	13.1
Light Industry										80.95	36.9	26.3	80.95	11.8	7.5
Residential	18.96	10.2	6.0	1.36	0.9	0.5	14.28	10.5	7.3				34.60	5.0	3.2
Public Facilities and Institutions	20.12	10.8	6.3				7.09	5.2	3.6				27.21	4.0	2.5
Public Open Space	23.87	12.8	7.5	18.48	12.7	7.3	29.60	21.7	15.1	24.74	11.2	8.1	96.69	14.1	9.0
Total Land[a]	186.17	100.0%	58.5	145.02	100.0%	57.0	136.41	100.0%	69.4	219.56	100.0%	71.3	687.16	100.0%	63.8
Water	131.84		41.5	109.52		43.0	60.24		30.6	88.44		28.7	390.04		36.2
Study Area	318.01		100.0%	254.54		100.0%	196.65		100.0%	308.00		100.0%	1077.20		100.0%

[a]Includes platforms over water. Source: John S. Bolles Associates



9 Land Use Plan

		Gross Area (acres)	Percent of Total		
Retail and Entertainment		110.20	10.2%	Retail and Entertainment areas would have a predominantly pedestrian and leisure character, with entertainment uses concentrated near the water. Major retail and entertainment uses include import and specialty shops, eating and drinking establishments, and commercial recreation uses that are in keeping with the maritime character of the waterfront. Other uses permitted include hotels and motels, consumer services	of a retail nature, banks, offices, and parking (in designated corridors). Offices should not unnecessarily interrupt the retail character at street level, and the ground floors of parking garages should have stores along the streets. In shoreline districts, retail and entertainment activities could be housed in ships or on floating platforms.
Office		73.13	6.8	Office areas would include small professional offices and small single-tenant structures for small firms desiring corporate identity. Permitted retail and service uses would be	oriented to the uses in the structure rather than to the street and the public generally. Hotels and parking would also be found in these areas.
General Commercial		124.09	11.5	General Commercial areas would include primarily wholesale firms and business services (printing, data processing, etc.) related to Downtown activities. Secondary retail uses	as well as office uses and parking would generally be permitted in these areas.
Maritime		140.29	13.1	Maritime areas include the piers and shipping activities as well as fishing boat dockage space. Other uses permitted in these areas include railroad and storage facilities directly	related to port operations and industrial services related to the fishing fleet. Some retail, service, and office uses would be permitted.
Light Industry		80.95	7.5	Light Industry areas would consist largely of warehousing, light manufacturing, and food processing uses. Service, retail,	and parking would be included as secondary uses.
Residential		34.60	3.2	Residential areas would have a definite urban character and should be designed to permit open views from housing units to the City and the Bay. Other permitted uses which would	serve residents of the housing include retail and commercial uses and parking.
Public Facilities		27.21	2.5	Public Facilities include museums, schools, utility stations, transportation terminals, etc., which support other uses.	
Public Open Space		96.69	9.0		
Water		390.04	36.2		
	Total	1077.20	100.0%		
Yerba Buena Redevelopment Area					

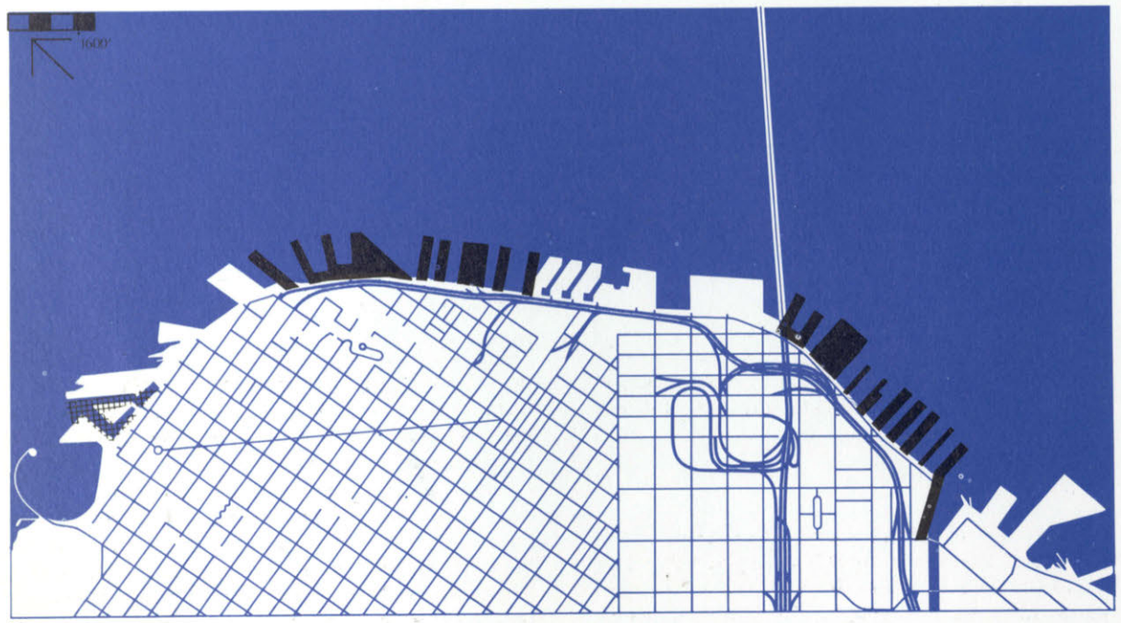
Other Permitted Uses:

Residential	R
Hotel	H
Retail, Commercial	C
Office	O
Fish Processing and Marine-related Industry	I

10 Proposed Location for Port Facilities
in the Northern Waterfront

Maritime Piers

Fishing Boat Basin



10

This indicates that fishing activities should be protected and maintained in the Northern Waterfront because of the amenity which they contribute to the area's environment, and that efficient operation of harbor facilities should be provided to strengthen the shipping industry and enhance the port as a scenic amenity.

Land use activities and districts should be interrelated with other activities in the Northern Waterfront, with Downtown uses, with residential districts adjacent to the Study Area, and with shipping activities. Uses should be developed that meet the needs of visitors attracted to the waterfront and people living in or near it, that service Downtown office and retail activities, and that serve other uses in the area. Moreover, the quantity of these uses should be related to the development potentials inherent in the area itself. That is, retail and entertainment uses in the Northern Waterfront should serve people attracted by the unique amenities of the area and should not detract from the Downtown retail and entertainment districts. Similarly, offices in the area should be of a density and type which will not encourage the dispersion of major office uses from the Downtown office district. Hotels and motels should primarily serve those visitors who are attracted to and use other activities in the waterfront area.

Shoreline recreation areas and open spaces should be developed to utilize the recreational potential of the waterfront in a manner that will serve all persons who work or reside in, or visit, the Northern Waterfront. The full potential of the Bay as a recreational resource cannot be realized without the development of portions of the shoreline for leisure purposes. Thus, waterfront parks, plazas, marinas, and marine attractions should be provided, and shoreline roads should be emphasized as scenic drives. Aquatic Park and the ship museum on Hyde Street Pier are good examples of present recreational uses of the waterfront.

Land Use Plan—1985

The Land Use Plan for 1985 presents proposals for retail and entertainment uses, hotels, offices, services, shipping, industry, and housing. Further, it is interrelated with proposals for urban design, open space, and circulation, as all of these elements are based upon an overall concept of what should be the form and character of the Northern Waterfront. It is difficult to use standard land use categories to describe the intended character of the area because many mixed-use districts have been proposed. In these cases, such mixtures are beneficial, for they encourage a continuity of use while also permitting varying kinds of emphasis. This is especially valid in the Northern Waterfront, where continuity of uses both along the shoreline and from the City to the water is desirable, but where emphasis upon differing uses can establish diversity and variety within the waterfront environment. Therefore, the Land Use Plan recommends emphasis according to broad land use categories, but it also defines desirable secondary uses and mixtures of uses within those broad categories.

General Proposals

The Land Use Plan proposes several major long-range developments. They are:

1
Consolidation of maritime shipping activities in the Northern Waterfront within Sub-Areas II and IV and elimination of shipping facilities in the Fisherman's Wharf and Ferry Building areas.

2
Expansion of space for berthing of fishing boats at Fisherman's Wharf and the relocation and consolidation of fish processing activities onto a new fish pier in the center of the expanded fishing boat basin.

3
Elimination of most industrial uses now located north of the Bay Bridge. The only industrial uses that should remain are those fish processing and marine services that are directly associated with the fishing fleet, and these should be concentrated near the fishing boat basin in Fisherman's Wharf.

4
A major expansion of water-oriented retail, restaurant, and commercial recreation uses in Sub-Area I, and a minor expansion of these uses in Sub-Area III.

5
An expansion of housing in Sub-Areas I, II, and III, with particular emphasis on expanding housing to the water north of the Ferry Building and where Sub-Areas I and II meet.

6
Expansion of office uses in the area south of the

Ferry Building. To complement the Downtown office district, these offices should be limited in height and should be oriented towards users that require on-site parking and easy access to the regional freeway system.

7
Expansion and intensification of shoreline open spaces—parks, plazas, and vista points—and museums and institutions that utilize the recreational potential of the Bay and develop scenic views of the shipping and fishing activities.

8
Development of a major cluster of motels and hotels in the eastern portion of the Fisherman's Wharf area.

9
Expansion of professional offices and wholesale uses from Jackson Square northward into Sub-Area II.

10
Development in Sub-Area II, and the South of Market area, of business services which support uses in the Downtown office and retail districts.

Fisherman's Wharf Area

Land use proposals for the Fisherman's Wharf area are directly related to the accessibility of various districts within this sub-area. In the western and central districts auto access is relatively difficult and the volume of pedestrian movement is high. In the eastern district, however, auto access is relatively easy. Land uses in each of these three districts should be appropriately related to these access considerations.

Proposed land uses in the western district—the Aquatic Park area—should be oriented towards continuous pedestrian access rather than auto access. Major land use proposals are:

1
Expansion of the historic character and use pattern represented by Ghirardelli Square, The Cannery, the Haslett Warehouse, the Maritime Museum, and the Hyde Street Pier ship museum.

2
Expansion of the fishing boat basin and relocation of fish processing to a central pier in the expanded basin, and development of Fish Alley for a dramatic mixture of historic, retail and entertainment uses, and waterfront open space.

3
Elimination of industries not related to the fishing fleet and fishing activities.

4
Development of a major public plaza—Columbus Circle—to terminate Columbus Avenue both visually and functionally and to separate waterfront traffic from through traffic.

Proposed land uses in the central district—Fisherman's Wharf itself—should also emphasize pedestrian-oriented uses rather than auto-oriented activities. Proposals include:

1
Development of a major urban plaza at the foot of Taylor Street that would focus pedestrian and transit movement at the center of Sub-Area I.

2
Expansion of retail and entertainment uses and housing onto Pier 45 and around the new plaza. The character of these commercial activities should be in keeping with the waterfront atmosphere created by the Bay and the fishing activities.

3
Development of commercial recreation uses on Piers 43 and 43½ that establish a Fair or Exposition character.

Land uses in the eastern district—the area immediately west of the passenger ship terminal at Pier 35—should be accessible both by auto and on foot. Specific proposals include:

1
Development of a major open space and pedestrian promenade—North Point Park—along the water's edge at the present locations of Piers 39 and 41.

2
Expansion of residential uses from Telegraph Hill to the water and of retail and entertainment uses along the shoreline, culminating in a cluster of hotels and motels at the eastern end of the Fisherman's Wharf area.

Maritime Parkway Area

Land uses located in Sub-Area II below Telegraph Hill should relate to three types of activities—housing on Telegraph Hill, shipping along the shoreline, and Downtown office and retail uses. Consequently, the plan proposes the following:

1
Piers 9 through 35 should continue in maritime use for two reasons: they are needed to service conventional cargo ships, and they provide a colorful and unique amenity in the Northern Waterfront.

2
A predominance of professional offices and general commercial uses should be developed in this area to serve Downtown. Activities found in Jackson Square are now expanding into this area, and that expansion should be supported and promoted.

3
The development of housing in Sub-Area II should be encouraged. Mixed-use structures with housing at upper levels would be especially appropriate in this area.

Ferry Building Area

Three primary relationships should be developed between land uses in the Ferry Building area and uses within the interior of the City. First, the central portion of this area, including the Ferry Building itself, is the City's most important symbolic link to the water, and that link should be strengthened by the programmed redevelopment and beautification of the Market Street spine into Downtown and construction of Embarcadero Plaza in front of the Ferry Building. Second, uses in the area north of the Ferry Building should be related to the dominant residential use of the Golden Gateway. Third, uses in the area south of the Ferry Building should be related to the Downtown office district.

The land use proposals for Sub-Area III include:

1
Development of a major open plaza on the water's edge at the rear of the Ferry Building. This plaza can be developed on the platform that will be built to protect the ventilation structure for the BARTD underwater transit tube. Development of this plaza should include a ferry boat terminal, as well as renovation of the Ferry Building to provide retail uses on the ground floor.

2
North of the Ferry Building, Piers 1 through 7 should be removed and replaced with housing. This development would continue and extend the residential use pattern of the Golden Gateway to the water.

3
South of the Ferry Building, Piers 14 through 24 should be removed and replaced with office uses which require parking facilities and easy access to the regional freeway system. Other uses which might be developed here are a waterfront university or a multi-use facility that would include offices, hotels, shops, and a passenger ship terminal. This use pattern extends the Downtown office district to the waterfront.

China Basin Area

In general, Sub-Area IV could be an appropriate location for shipping activities and industrial uses (it is used for those purposes now), for housing and commercial activities, or for some combination of several or perhaps all of the above uses.

A choice among these alternatives depends upon a number of broad considerations. The extent and nature of future port development in the Southern Waterfront will influence the extent to which existing harbor facilities in Sub-Area IV will continue to be used. The feasibility of housing in this area must be determined in relation to development costs and opportunities in other parts of the City, and overall City development policy regarding housing will especially influence this possibility. City policy regarding industrial expansion and job promotion must be considered in determining the desirability of industrial expansion. Finally, the present operation of private market forces in Sub-Area IV is very unclear, and the economic potential for development of alternative activities is indeterminate.

Broad considerations such as those outlined above are beyond the scope of this study. Therefore, the Land Use Plan at this time proposes no changes in the predominant use pattern in Sub-Area IV.


Napa
Fairfield
Petaluma
Novato
Vallejo
Concord
San Rafael
Richmond
Berkeley
Walnut Creek
Oakland
San Francisco
Hayward
Livermore
San Mateo
Fremont
Palo Alto
San Jose

11 Existing Regional Circulation

Freeway

Urban Thoroughfare

Major Highway

Rapid Transit

Transportation

Existing Transportation

The transportation system and facilities in the Northern Waterfront are critical elements in this plan because they serve not only local needs but also large volumes of commuters moving to and from the central business district. This situation coupled with the number of different modes operating within or through the area presents a number of transportation and development problems.

Regional and Local Trafficways

San Francisco is connected to the Penninsula and the East Bay by a complete freeway loop that is bounded on the north by the Bay Bridge and on the south by San Jose. However, the North Bay Freeway system is incomplete as it lacks connections between the Golden Gate Bridge and the Bayshore Freeway and the Bay Bridge; between the San Rafael-Richmond Bridge and the Eastshore Freeway; and between Vallejo and Novato.

The Northern Waterfront previously has been considered as a potential freeway corridor which, if developed, would complete San Francisco's portion of the North Bay freeway system. Because of both its geographic situation and the existence of the Embarcadero Freeway (which could be extended), the Northern Waterfront remains a potential corridor for the movement of traffic generated between Downtown San Francisco and Marin County. Indeed, it presently functions in this capacity.

The present freeway system in the Northern Waterfront offers high-capacity vehicular connections from Downtown to the Peninsula and East Bay, and the southern extension of the Embarcadero Freeway will increase the capacity of that system. The major thoroughfares south of Broadway connect large traffic generators to each other and to the freeway system.

North of Broadway, however, major thoroughfares perform two functions: they carry large volumes of through traffic (e.g., between the Financial District and Marin County) and large volumes of local traffic moving within the City (e.g., between the Marina and North Beach). During morning and evening peak travel times, the lack of a high-capacity, limited access facility connecting Downtown and Marin County forces through traffic onto the local streets north of the Ferry Building. Congestion caused by the conflicting movements of through and local traffic prevents a major portion of the Northern Waterfront traffic system from functioning efficiently.

Peak hour traffic greatly overloads Bay Street, Columbus Avenue, and The Embarcadero. Although The Embarcadero is congested, construction of the southern extension of the Embarcadero Freeway will provide some relief of The Embarcadero from Mission Street south. However, no plans now exist for the alleviation of traffic congestion on Bay Street, Columbus Avenue, and the northern portion of The Embarcadero.

Trucks constitute a significant portion of traffic movement in the Northern Waterfront. Activities which generate large amounts of truck traffic are the port itself and warehousing and industrial activities in the areas below Telegraph Hill and south of Market Street. Traffic conflicts occur, particularly in Sub-Area II where trucks and other delivery vehicles which service the maritime piers interfere with auto movement and, conversely, where autos interfere with port service traffic. Large volumes of truck traffic in Sub-Area IV also add to the general congestion of thoroughfares south of Market Street.

Parking Facilities

In general, off-street parking facilities throughout the Study Area are poorly located, inadequate in size, widely dispersed, and located on sites likely to be developed for other activities. In the Fisherman's Wharf area, parking lots occur along Beach Street, on properties subject to future development, and in the center of the Wharf area, between Jefferson Street and The Embarcadero. Parking in the Broadway district is on properties under the jurisdiction of the Port Authority and the San Francisco Redevelopment Agency and some of these are scheduled for development. In the Market Street area, parking exists on port properties at the Ferry Building, under the freeway, and on a portion of the site to be used for the proposed Embarcadero Center. A major off-street parking garage exists contiguous with the Study Area in the Alcoa project in the Golden Gateway Redevelopment Area. This facility is located in the Portsmouth corridor, which the City has designated as a preferred off-street parking location to serve the Financial district. Other parking garages,

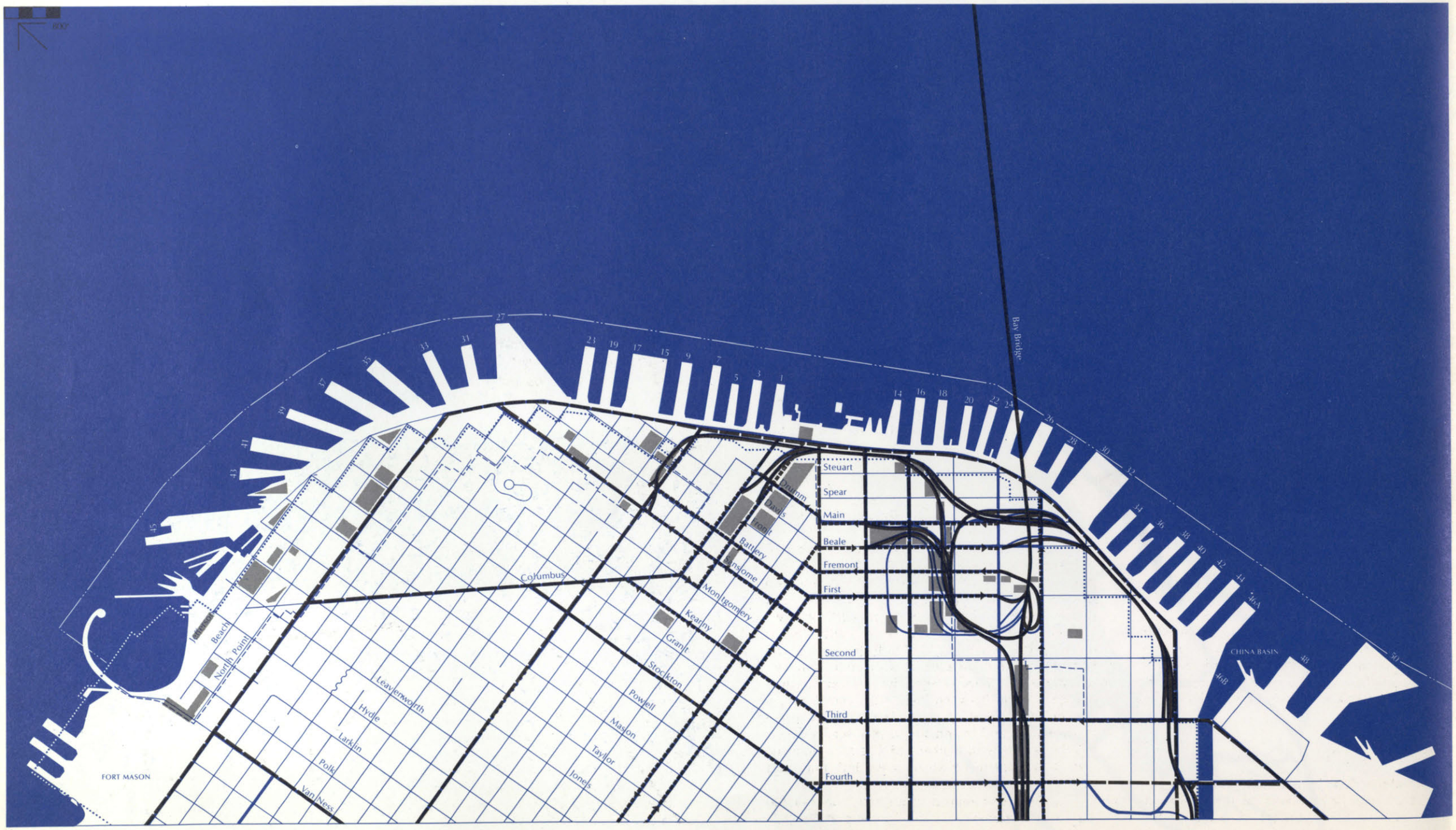
12 Existing Northern Waterfront
Trafficways System and Parking

Freeway

Major Two-Way

Major One-Way

Parking Lot or Garage



but considerably smaller in size, exist at Ghirardelli Square, the North Point complex, and in Sub-Area II along Sansome Street.
On-street parking is present everywhere throughout the Study Area and constitutes approximately 45 percent of the total parking supply. However, the transportation benefits to the area are somewhat mitigated since much of this curb parking occurs on major thoroughfares and contributes to congestion by decreasing street capacities.

Regional and Local Transit

A variety of public transit modes and systems presently operate to, within, and through the Northern Waterfront. Currently, four systems are part of the regional transit network—the Marin Greyhound bus, the Tiburon ferry (Marin County), the AC Transit bus (Eastbay), and the Southern Pacific Railroad (Peninsula), and when completed, the BARTD subway will add another mode and system connecting San Francisco and the Eastbay.
The Northern Waterfront is connected to other parts of the City by Municipal Railway cable cars, buses and trolleys, and to the San Francisco International Airport via the temporary Downtown heliport that is now located immediately north of the Ferry Building.
The multiplicity of transit modes and systems results in a number of separate terminals which are often poorly connected, and consequently do not facilitate convenient interchange between regional and City transit systems. Several transit terminals are located near the Ferry Building—City buses, California Street cable car, Marin Greyhound, Tiburon ferry, the Downtown heliport—but all are dispersed and separated by activities or by major thoroughfares.
Local transit systems do not adequately connect together some waterfront activity centers. For example, attractive and direct transit connections between Fisherman's Wharf and the Ferry Building, and between Coit Tower and waterfront activities, do not now exist.

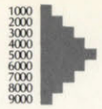
Pedestrian Walkways

Concentrated pedestrian movement in the Northern Waterfront occurs in two areas. In the Fisherman's Wharf area, pedestrians generally move along Jefferson Street between Aquatic Park and the Balclutha and along Taylor Street between the Powell Street cable car turnaround and Fisherman's Wharf. The second major concentration of pedestrian movement is found along the Market Street spine from the Ferry Building and the Trans-Bay Terminal into the Financial District. Both of these pedestrian systems are located at ground level in street rights-of-way, and result in congested traffic and hazards to pedestrians, especially during periods when large volumes of vehicular and pedestrian movements occur.
Two secondary pedestrian movement patterns exist in the Northern Waterfront—one in the Golden Gateway Redevelopment Area and the other below Coit Tower on the east slope of Telegraph Hill. Both of these pedestrian systems are independent of, and separated from, vehicular movements, as the Golden Gateway walkways are at an upper level and the Telegraph Hill walkways occur on the hillside where there are no streets.
Pedestrian walkways are the least-developed movement systems in the Northern Waterfront. Continuous pedestrian linkages between activities are not now developed, nor is there a well-defined and continuously-developed pedestrian route along the shoreline.

Railroad

Railroad facilities were originally developed in the Northern Waterfront to serve the port activity and industries and warehouses. However, the importance of rail service in some areas has diminished in recent years as a result of changing land use patterns and the relocation of port activities. Specifically, with the exception of the rail ferry slip at Pier 43, port activities west of Pier 35 have been virtually eliminated. Also, the movement of industries out of the Fisherman's Wharf area leaves at this time only two which use rail service extensively; the Kodak facility on Beach Street between Polk Street and Van Ness Avenue, and the malt plant on Francisco Street, between Powell and Mason streets. Rail service needs in Sub-Area II have also been reduced as commercial and office activities have replaced industries and warehouses.
Rail facilities that remain cause some undesirable impacts. For example, the rail ferry slip at Pier 43½

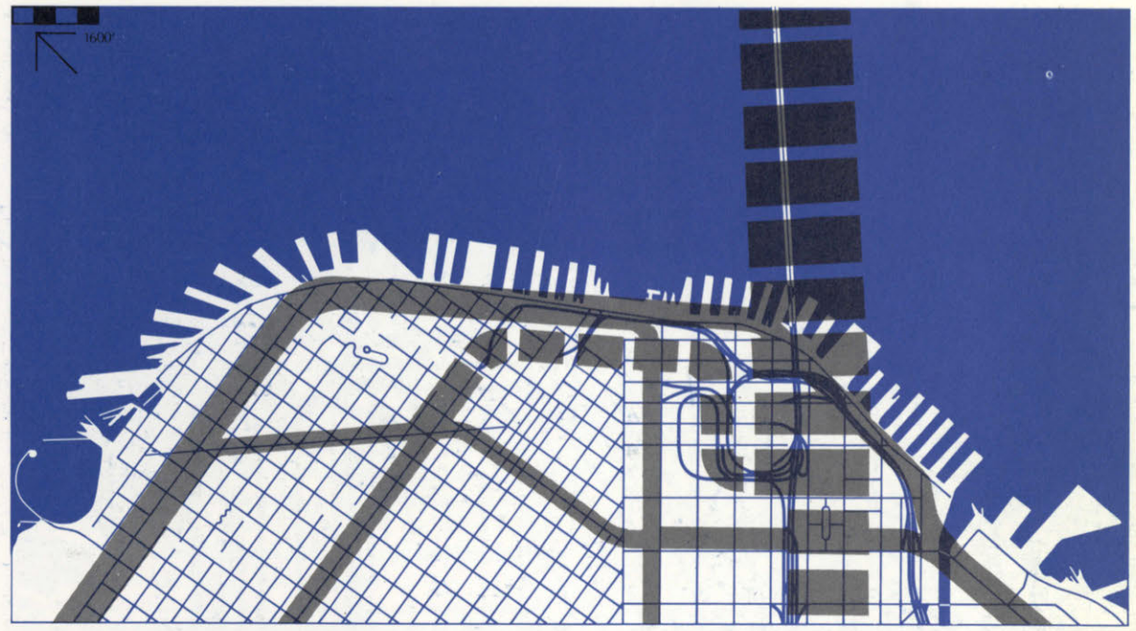
13 Existing Traffic Volumes: Evening Peak Hour Traffic



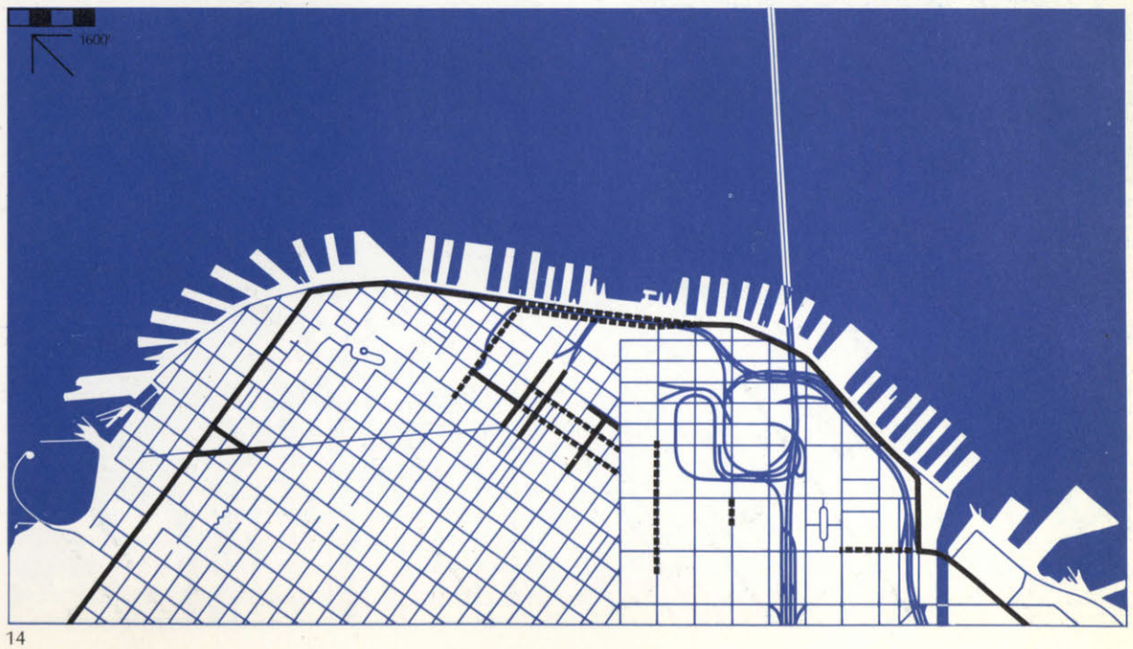
14 Peak Hour Traffic Volume: Percent of Street Capacity

90% to 100% or more

75% to 90%



13



14

15 Truck Traffic: Percent of Total Traffic

50% to 100%

25% to 50%

16 Existing Transit Systems

Cable Car

AC Bus

Marin Bus

Helicopter

Commuter Ferry

Recreational Ferry

Passenger Ship Terminal

17 Existing Pedestrian Walkways

Existing

Under Development

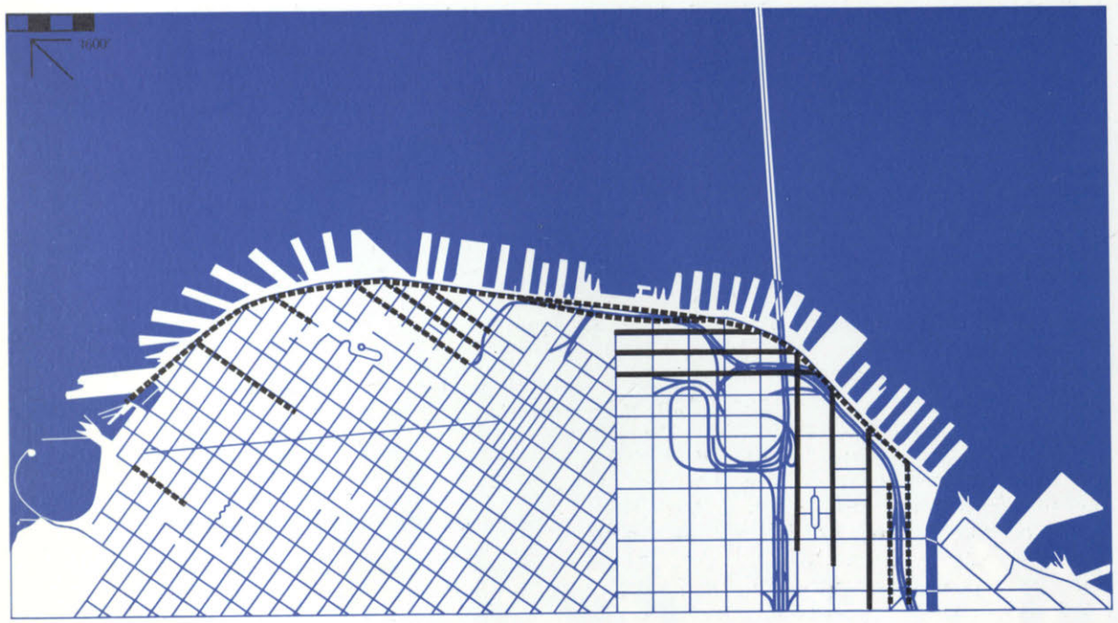
18 Existing Rail Facilities

Rail Lines

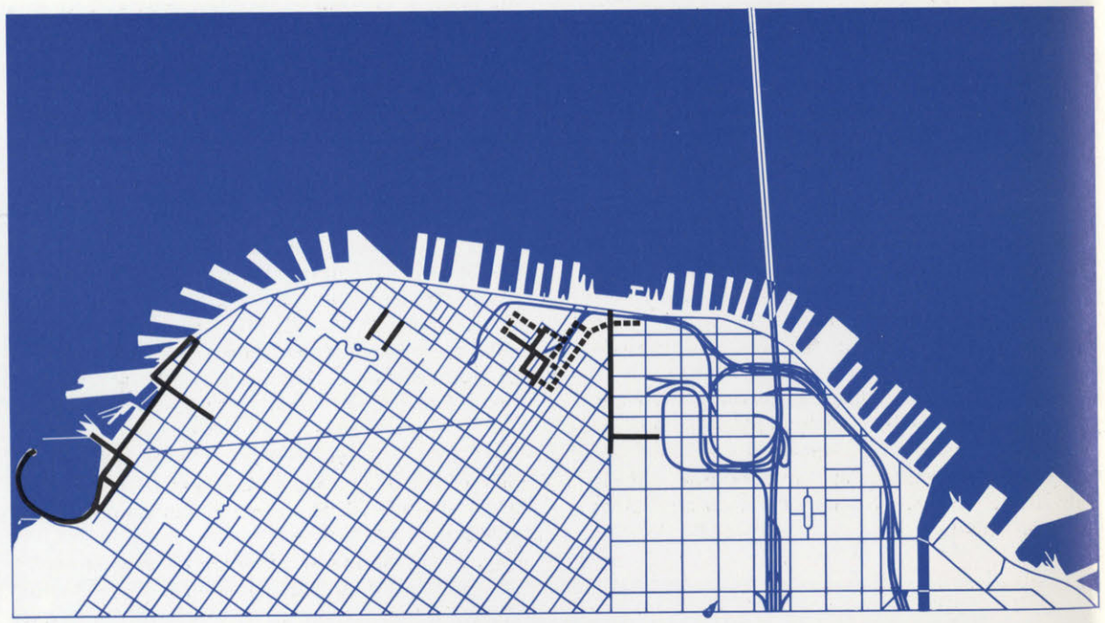
Rail Yards and Facilities

Number of Rail Lines

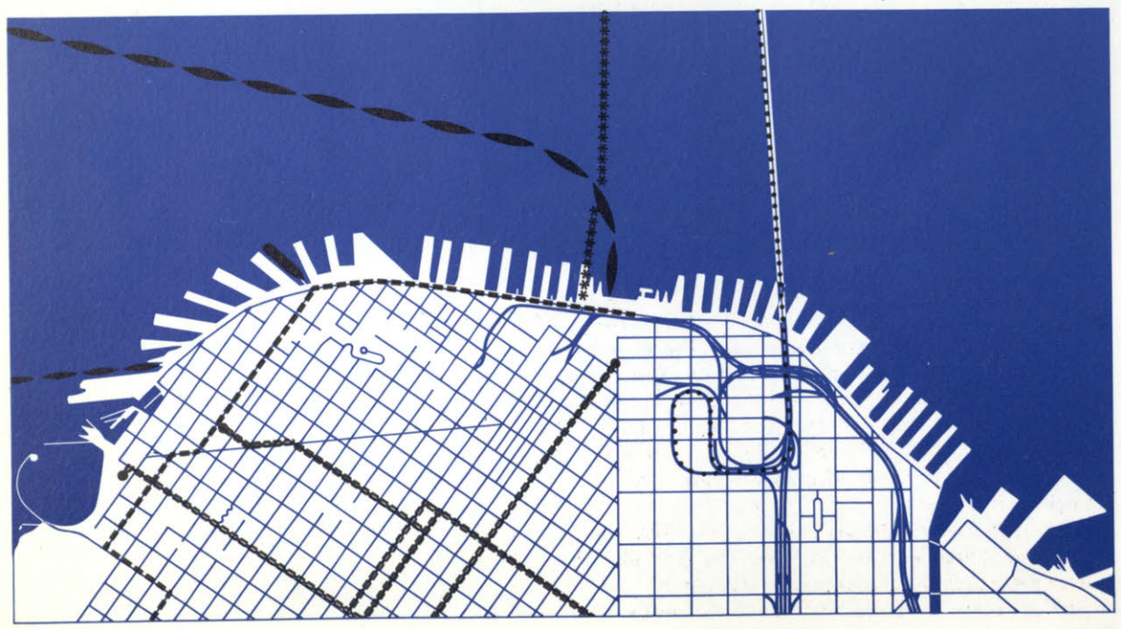
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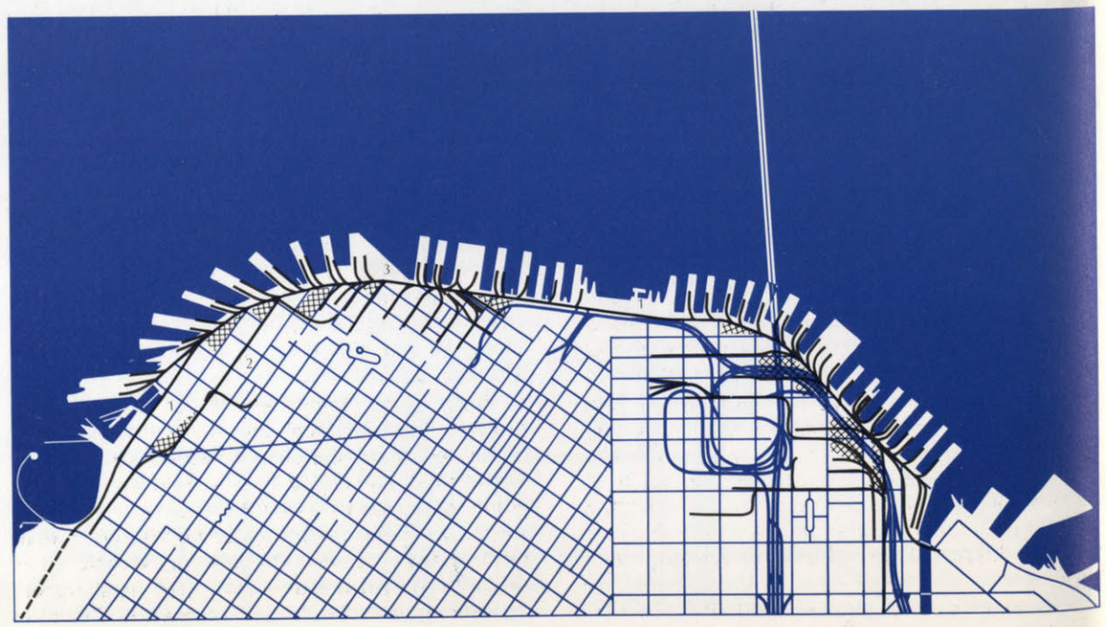
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17



16



18

and adjacent storage yard impede the natural eastward expansion of Fisherman's Wharf, and noise caused by nighttime switching operations disturbs residents of nearby motels and apartments. Similarly, the roundhouse at Lombard Street and The Embarcadero frustrates somewhat the present trend towards development of non-industrial activities below Telegraph Hill.

Rail traffic must cross The Embarcadero to service shipping at maritime piers, and because this service must accommodate the irregular arrivals and departures of ships, rail movement has precedence over automobiles. Therefore, trains at times disrupt traffic flows on The Embarcadero, particularly north of the Ferry Building.

Because the Presidio requires rail service, it is necessary to maintain the existing tracks in Jefferson Street. At the present time such service is infrequent and generally performed late at night, and does not unduly disrupt pedestrian and vehicular traffic along Jefferson Street.

Transportation Policies

A number of principles concerning the nature and function of transportation systems provided the background for the development of specific transportation policies and proposals. The first—and perhaps most fundamental—is that transportation needs are a direct function of land use activities. Transportation services are the means which enable people, firms, and institutions to perform their activities at different spatial locations. Therefore, the nature and distribution of land uses generate the demand for specific transportation facilities. Conversely, the second principle is that transportation systems can influence and determine the distribution of various land uses. A major factor in locational decisions is the relative accessibility of alternative sites to and from other activities and markets. Within intensely-developed urban areas, commercial activities cluster around important transit stops, as is the case in the Fisherman's Wharf area where shops and restaurants have located in close proximity to the cable car lines on Hyde Street and Taylor Street. Thus, transportation policies can be used strategically to either encourage or discourage alternative development patterns.

The third principle is that transportation facilities can provide a strong physical link between areas and are an important element in the organization and design of urban space. Therefore, the Northern Waterfront transportation system can be used to physically and functionally integrate waterfront activities with each other and with other districts in the City.

The final principle is that in a complex urban structure no one mode of transportation can satisfy the diverse needs and public objectives of the population and their activities. Therefore, the development of a comprehensive transportation plan must coordinate and integrate all of the modes into a total system. Furthermore, it is not enough to develop a functionally sound system, as the design and aesthetic qualities of various transportation facilities are important and must be considered.

The following policies were based on the above mentioned principles, and on an analysis of the existing interrelationships between transportation and land use.

The transportation system should be integrated with land use and open space systems throughout the Northern Waterfront. The transportation system should serve activities in the Northern Waterfront, and should connect major traffic generators within the waterfront and the City. The transportation system within the Study Area should be directly connected with existing local and regional transportation facilities. Moreover, movement needs should determine the type of transportation facilities proposed. For example, waterfront development should provide maximum opportunity for pedestrian access to the shoreline; therefore, circulation along the water's edge should emphasize pedestrian movement and de-emphasize automobile movement. Streets that must be located near the water should be designed as scenic routes for slow-moving, recreational traffic and should provide for safe pedestrian access to the water's edge.

To preserve the identity and character of land use districts, major thoroughfares and freeways should be located on the periphery of activity centers. Major off-street parking facilities should be located at points of access to major thoroughfares and freeways and should also be located on the periphery of major activity centers. Off-street parking facilities should be provided and on-street parking along major thoroughfares should be eliminated. Public action to provide off-street parking will be necessary to ensure the proper location of major garages.

Public transit facilities should be provided to connect activity centers within the Northern Waterfront to each other and to other centers in the City. Transit terminals should be located within major activity centers and in close proximity to the shoreline. In addition, land use districts in the waterfront should be connected with a continuous pedestrian walkway.

Harbor facilities should be maintained in Sub-Areas II and IV. These facilities should mainly service conventional cargo ships and major container ship operations should be concentrated in the Southern Waterfront where railroad and freeway access are better than that found in the Northern Waterfront. However, efficient railroad and truck access to piers in Sub-Areas II and IV must be maintained. In accordance with land use proposals regarding the location of industrial activities, railroad facilities other than those directly serving harbor piers should be eliminated north of the Bay Bridge.

Transportation terminals should be closely interrelated. In order for the different transportation modes to function efficiently as a total system, the various parts of that system must be closely linked with each other. The key points for interconnection are at the terminals of each circulation mode, and direct and convenient interchanges between modes should be facilitated. Therefore, the terminals of various modes should, as much as possible, occur at the same location.

Elements of the transportation system should be safe and efficient. Examples of movement conflicts are common; the transportation system should provide for the separation of pedestrians and vehicles, of automobiles and service vehicles, and of through and local traffic, and it should establish a direct relationship between trafficways and parking. The design and visual aspects of each transportation mode should clearly define its nature and function; for example, major thoroughfares for through traffic should be clearly differentiated from local streets (such as by using a particular kind and spacing of street trees).

Transportation facilities serving specialized movement functions should be developed in the Northern Waterfront. Some elements of the transportation system serve generalized functions; for example, the trafficways network serves work, business, shipping, recreation, and shopping trips. Other elements serve more specialized functions, and the Northern Waterfront is uniquely-suited as a location for many of these. In particular, the waterfront provides opportunities to develop transportation facilities which serve special purposes and which are related to recreation, views, and amenities, and the transportation system should therefore provide for them.

The following sections of the Transportation Plan describe proposals for vehicular, parking, transit, pedestrian, railroad, and special transportation facilities.

Proposed Trafficways System

The basic problem to be solved is how to develop an adequate trafficways system in the Northern Waterfront that will possess sufficient capacity. The existing streets and highways simply are not adequate to meet future needs which will result from new growth and development in both the waterfront and Downtown. However, there are many limiting conditions associated with developing an adequate traffic system—geography and topography, existing development, community values, and overall community objectives. In view of these, this plan attempts to optimize the use of traffic facilities which now exist, to provide new facilities where possible, and to develop alternative circulation systems where necessary.

The trafficways plan foresees no extension of the Embarcadero Freeway through the Northern Waterfront as construction of such a freeway would be contrary to the present official policy of the City and its citizens. At the present time other studies are being conducted to evaluate the feasibility of public transit systems between San Francisco and Marin County to serve commuter movement. Therefore, the Northern Waterfront trafficways plan includes only the existing freeway system and the southern extension of the Embarcadero Freeway.

Rush hour traffic already overloads City streets between Downtown and the Golden Gate Bridge and in the absence of a freeway connection the capacities of existing streets must be expanded. The plan proposes the following system of major thoroughfares:

1
Designation of Bay Street one-way east and North Point one-way west; this one-way couple would connect to Bay Street and Van Ness Avenue to the west and to a new roadway to the east.

2
Development of a new landscaped Embarcadero Boulevard, inland of the Belt Line Railroad tracks, connecting to Bay and North Point streets to the north and to a redesigned Embarcadero to the south (at Broadway). The present Embarcadero should become an access road serving ships berthed at Piers 9 through 35. This arrangement of streets will separate automobile and service traffic and will eliminate conflicts between general vehicular traffic and railroad movements to and from the piers.

3
Designation of Battery Street one-way southbound and Sansome Street one-way northbound: this one-way couple would connect to the new Embarcadero Boulevard to the north and the existing freeway ramps and one-way couple at Broadway to the south.

4
Redesign of the present Embarcadero between Broadway and Mission Street; construction of an underpass in front of the Ferry Building for the southbound lanes along with the relocation of the Marin Greyhound terminal. This action would not only provide smoother traffic flow but would permit expansion of Embarcadero Plaza up to the west side of the freeway structure.

5
Designation of Mission and Howard streets as major thoroughfares in the area south of Market. As additional street capacity is needed, a one-way couple could be formed using either Mission and Howard streets or Howard and Folsom streets. Since two-way directional movement is presently preferred for the operation of Municipal Railway buses, Mission Street should remain two-way if it is developed as a major transit street; in that event, the one-way couple would be formed by Howard and Folsom streets.

6
Designation of a one-way couple using Harrison Street one-way southwest and Bryant Street one-way northeast. This would provide easy access for trucks moving between The Embarcadero and the Bay Bridge and Bayshore Freeway.

7
Extension of the one-way couple of Third Street one-way northwest and Fourth Street one-way southeast, between Market Street and China Basin. This one-way couple presently extends from Market Street to Brannan Street, and its extension (with a Fourth Street crossing over the Southern Pacific Railroad tracks, as currently planned) would improve access between Downtown and China Basin and provide another connection to the southern extension of the Embarcadero Freeway. Stockton Street, presently one-way southbound between Post and Market streets, and Kearney Street, presently one-way northbound to Columbus Avenue, would connect across Market Street to Fourth and Third streets, respectively.

8
Designation of a one-way couple using Brannan Street one-way southwest and Berry Street one-way northeast, between Fourth Street and The Embarcadero. This would facilitate movement between The Embarcadero and the Third-Fourth streets one-way couple, and would provide easy access between sites in Sub-Area IV and the southern extension of the Embarcadero Freeway.

9
Retention of Columbus Avenue, Van Ness Avenue, and Broadway as two-way major thoroughfares connecting Downtown to trafficways in the Northern Waterfront.

10
Retention of the following existing one-way couples connecting Downtown to trafficways in the Northern Waterfront: Washington and Clay, Pine and Bush, Main and Beale, and Fremont and First streets.

Projected Traffic Volumes and Street Capacities

Two traffic systems in the Northern Waterfront are presently overloaded during peak hours: (a) Bay Street and The Embarcadero north of the Ferry Building, which carries Marin County commute traffic during peak hours, and (b) Third Street and The Embarcadero south of the Ferry Building, which carries traffic between Downtown and southeast San Francisco. Because the southern extension of the Embarcadero Freeway will supply added capacity to the latter traffic corridor, the proposed traffic facilities outlined above are particularly concerned with increasing traffic capacity in the "Golden Gate" corridor. The following discussion presents a traffic analysis of proposed traffic facilities north of the Ferry Building.

The proposed facilities consist of a six-lane boulevard paralleling and west of The Embarcadero, and a one-way couple composed of Bay and North Point streets. In addition, a one-way couple composed of Battery and Sansome streets is proposed to provide a direct connection between the Financial District and the new waterfront boulevard.

Traffic Projections Based on Data from the City of San Francisco

	West of Columbus Avenue	East of Columbus Avenue
Corridor Volumes, Average Daily Traffic (not including Broadway)	65,900	43,400
Peak Hour (assume 10%)	6,600	4,300
Directional Hourly Volume (assume 70%)	4,600	3,000
Assume 75% of All Traffic on Bay-North Point One-way Couple	3,450	
1975 Critical Volumes	3,450	3,000
1985 Critical Volumes, Vehicles Per Hour, One Direction (assume 1975–1985 extrapolation factor of 2% per year)	4,200	3,650

Sources:
San Francisco Department of Public Works and John S. Bolles Associates.

A number of traffic projections for this area have been prepared by City and State agencies; these were based upon (a) an assumed land use structure similar in nature and intensity to that proposed in this plan, and (b) the existence of alternative transportation facilities—construction of only the Golden Gate Freeway, of only the Panhandle Freeway, of both freeways, or of no freeways. In view of stated City policy, the following analysis assumed no freeway will be constructed and utilizes the corresponding projections to establish a probable range of future traffic volumes.

Following conventional procedure for traffic analysis, these projections are expressed as total corridor volumes. The corridor extends from the northerly termination of the Embarcadero Freeway to Fort Mason

19 Proposed Northern Waterfront Trafficways System and Parking

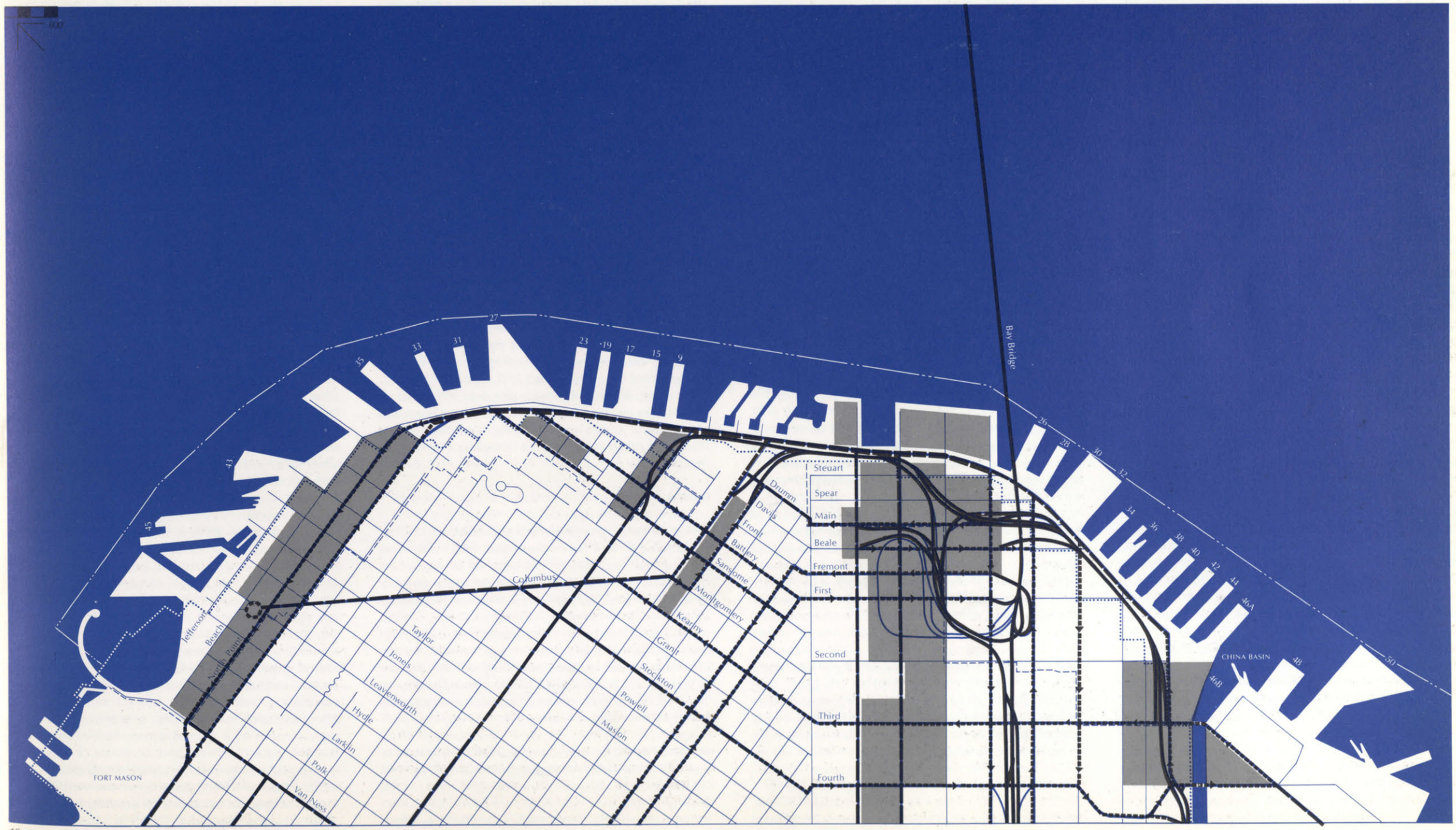
Freeway

Embarcadero Boulevard

Major Two-Way

Major One-Way

Areas Accessible to Automobiles and Appropriate for New Parking Facilities



and includes streets between Broadway and The Embarcadero. Three main routes exist through this corridor: Broadway and Van Ness Avenue, Broadway and Columbus Avenue, and The Embarcadero and Bay Street.

The composition of corridor traffic includes both through and local traffic. Trip desire studies indicate that of all traffic from the Golden Gate Bridge, forty percent is destined for the Downtown area, seven percent for North Beach, and only two percent travels through the City to the Bay Bridge. Although comparable figures are unavailable for traffic from the Bay Bridge or other external points, it can be assumed that such traffic will follow the same distribution pattern.

Two estimates of future traffic volumes have been developed. One is based on data from the San Francisco Department of Public Works and shows a 1985 critical peak hour one-way volume of 3,650 vehicles per hour. The other estimate is based on data from the California Division of Highways and indicates a 1985 critical one-way volume of 3,800 vehicles per hour. Consequently, it is assumed that the critical volume for design purposes lies between 3,650 and 3,800 vehicles per hour.

The standard technique for determining the adequacy of traffic service on a street system compares projected traffic volumes with the theoretical capacities. Capacity in this context is defined as the maximum number of vehicles which can reasonably be expected to pass over a given section of roadway during a given time period under prevailing roadway and traffic conditions. When operating at capacity, traffic flow is unstable, speed is low, and stoppages may occur for varying periods of time. This does not represent ideal design criteria, but the high projected traffic volumes preclude any consideration of more desirable flow characteristics.

The Embarcadero Boulevard is proposed as a six-lane divided roadway between Davis Street on the south and North Point and Bay streets on the north. Intervening grade intersections will be provided at Battery and Sansome streets. Operational features will include limited access and prohibition of on-street parking. The capacity of this facility under the assumed conditions is estimated at 3,100 vehicles per hour in one direction. Directional hourly volume for this section of the corridor is estimated at between 3,650 and 3,800 vehicles per hour. It appears that the proposed facility will be operating slightly above its theoretical capacity; however, several comparable San Francisco streets operate under comparable volumes, so the boulevard as planned should be adequate for the projected traffic.

Traffic Projections Based on Data from the California Division of Highways

	East of Columbus Avenue
Corridor Volume, Directional Peak Hour (including Broadway)	6,600
Less Broadway (assume Broadway presently at capacity)	−1,500
Remaining Corridor Traffic	5,100
Assume 75% of All Traffic on Bay-North Point One-way Couple	3,800
1985 Critical Volume, Vehicles Per Hour, One Direction	3,800

Sources:
California Division of Highways and John S. Bolles Associates.

North Point and Bay streets are each proposed as four-lane one-way streets. Operational features include prohibition of on-street parking, elimination of on-street loading zones, installation of a coordinated signal system, minimal midblock access, and smooth-flowing transition sections at either end of the one-way operation. North Point Street, which would carry the evening peak traffic volume, is estimated to provide a capacity of approximately 3,600 vehicles per hour. Peak hour projected volumes for this street range from 3,800 to 4,200 vehicles per hour; thus some congestion might occur during that period. Again, however, comparable City streets are carrying similar volumes of traffic on a per-lane basis without excessive congestion.

Summary

The trafficways plan for the Northern Waterfront proposes to increase street capacities in the Golden Gate corridor by developing Bay and North Point streets as a one-way couple and by constructing a new boulevard that would segregate autos and port service traffic. In addition, the Battery-Sansome one-way couple will increase in capacity as present truck loading and unloading activities along Battery and Sansome streets are eliminated with changes in land use of adjoining properties.

Evaluation of the traffic capacity of the proposed street system has been made on the basis of the daily evening peak hour, since this volume represents the critical design standard. From the preceding analysis, it appears that the system will carry projected peak hour traffic volumes on a medium-range basis. The nature of planned land use within the Golden Gate corridor itself will generate traffic largely during off-peak periods, and the proposed system should be more than adequate for these volumes.

It should be noted that one major unknown factor is the element of attracted traffic (i.e., traffic currently using an alternative route through or outside the corridor that would be attracted to the new facilities). If no improvements are made to other routes, or no new routes constructed, the new facilities proposed above could attract enough traffic to exceed projections and result in premature congestion and overloading.

Parking

The plan for public parking in the Northern Waterfront is based on the concept that major off-street parking facilities should be located on the periphery of intensely developed areas. This principle was first described in the 1963 Downtown Plan and later established in redevelopment planning and in the Downtown Zoning Study. Previous plans have established parking zones in two locations peripheral to the Downtown core: a) between Mission and Folsom streets, and b) between Washington and Clay streets. The Northern Waterfront Plan proposes parking zones in the following areas:

1
Between Beach and Bay streets from Fort Mason to Polk Street, to serve the Aquatic Park and Ghirardelli Square area.

2
Between Beach and Bay streets, from Columbus Avenue to Grant Avenue, to serve the entire Fisherman's Wharf area.

3
Between Battery and Sansome streets, to serve Coit Tower, the waterfront, and activities in the area below Telegraph Hill.

4
Between Broadway and Vallejo Street, to serve the Broadway entertainment area, Jackson Square, and the area immediately north of Broadway.

5
Between the Ferry Building and the Bay Bridge, to serve the Ferry Building and the area to the south of the Ferry Building east of The Embarcadero. This zone is an extension of the Mission Street zone.

6
Between Second and Fourth streets at China Basin, to serve increased parking needs in that area if the nature and intensity of development increases.

Parking in each of the zones north of Broadway would be readily accessible from the proposed major thoroughfare network, while parking in zones south of Broadway would be readily accessible from both the major thoroughfare system and the freeway. The parking zones are located between thoroughfares and activity centers thereby separating vehicular traffic from transit and pedestrian movement.

Peripheral parking is an especially important element in the Fisherman's Wharf area, where the location of major parking facilities is the key factor in attaining the intended pattern of development. At the present time, there are 4,805 public parking spaces in the Fisherman's Wharf area – consisting of 2,625 off-street parking spaces and 2,180 on-street spaces. A substantial increase in the supply of off-street parking spaces is needed for two purposes: (a) to accommodate the parking demand generated by projected growth, and (b) to eliminate many on-street spaces so that existing streets can be used at full capacity.

The Land Use Plan projects a maximum potential development of 3,724,000 square feet of retail, restaurant, entertainment, and commercial recreation uses for this Sub-Area. By usual standards for commercial center developments in outlying districts then it would be necessary to provide 6 spaces per 1000 square feet of development. At the present

time, however, about fifty percent of all person-trips to Fisherman's Wharf use public transit; therefore, assuming that this ratio will continue in the future, it is possible to reduce the parking standard to 3 spaces per 1000 square feet. Applying this standard to anticipated development produces a projected demand for about 11,175 parking spaces. However, it is not desirable to provide this number of spaces because the physical development capacity of the area would be exceeded and also because the extensive public transit facilities which are proposed will provide easy access from a large number of contiguous off-street parking facilities in other nearby areas. It is recommended that public action provide 4,225 off-street parking spaces and 600 on-street spaces, or a total of 4,825 spaces. Also about 2,665 privately-developed off-street parking spaces will remain.

The present San Francisco Master Plan states that publicly-assisted parking facilities should be provided in the Fisherman's Wharf-Aquatic Park business and entertainment area in which parking facilities should be provided in accordance with overall plans for the development of the area. It is proposed, therefore, that public action provide four parking garages; these garages are strategically located at the major points of entry into the Fisherman's Wharf area—at Van Ness Avenue, Columbus Avenue, and along the eastern portion of North Point Street. A 700-space garage should be located either beneath the foot of Van Ness Avenue (north of North Point Street) or beneath the Galileo High School playing field to serve the Aquatic Park—Maritime Museum—Ghirardelli Square complex. A garage should be located at the termination of Columbus Avenue providing 1,625 spaces to serve activities at Hyde Street Pier, The Cannery, Fish Alley, Pier 45, and Fisherman's Wharf. In conjunction with this garage, a plaza and traffic circle should be developed to terminate Columbus Avenue both physically and functionally. This circle would direct local traffic towards, and through traffic away from the Wharf. Motel, office, and retail uses should be developed around the circle to reinforce the open space above ground and add activity to the periphery.

A 300-space garage should be constructed beneath the present Longshoreman's Union parking lot on Taylor Street to serve Pier 45 and Fisherman's Wharf activities. A garage should be constructed on the site of the present Kirkland Bus Yard providing commercial space on the ground floor and parking for 1,600 cars. This facility will serve Pier 45, Fisherman's Wharf, and retail, restaurant, and hotel uses in the vicinity of Pier 35.

Finally, the plan proposes development of 600 on-street spaces on streets with low traffic volumes. Additional parking garages, if privately-built, could be located in the parking zone between Beach and North Point streets. Land use activities located in blocks south of Jefferson Street should be required to provide a minimum number of parking spaces to serve only a portion of their own needs. In keeping with the objective of maximizing pedestrian movement north of Jefferson Street, public parking north of Jefferson Street should generally be discouraged.

Proposed Transit System

The following proposals regarding public transit in and through the Northern Waterfront are designed to interrelate a number of different types of transit types according to function and purpose and to relate various terminals with each other and with activity centers. The proposals concern regional transit, intra-city transit, and transit facilities for movement within the Northern Waterfront.

Regional Transit

The long-range development plan includes three subway transit systems to serve peak hour commuter traffic. One subway system is now under construction by BARTD and would serve parts of San Francisco and the East Bay. A BARTD station at Davis Street would greatly facilitate the movement of people between the waterfront and the East Bay. Two subway systems are presently being studied by the Department of City Planning. One is a Municipal Railway subway beneath Columbus Avenue that would connect with the BARTD system at Davis Street and would either extend to Marin County or to the Presidio (where Marin County commuters could leave their vehicles and change to the subway to connect with Downtown). A second system under study would serve the Peninsula and could connect to the Montgomery Street station of the BARTD system. Short-range regional transit proposals include the continued operation of the Marin County commuter buses, supplemented by a ferry system, and the continued operation of the Southern Pacific Railroad commuter trains.

Intra-City Transit

The plan proposes that buses and cable cars be used for the movement of people between waterfront activity centers and the remainder of the city. Although the routes of these facilities connect the waterfront with other parts of the City reasonably well, the present capacities of these systems need to be increased by revising schedules and adding new equipment.

Two short extensions of the cable car system are proposed in order to integrate cable car terminals with major activity centers and with other transportation terminals: The California Street and Powell Street cable car lines should be extended into major public plazas at Fisherman's Wharf and Embarcadero Center, respectively. In addition, the turntable for the Hyde Street cable car should be extended further into Victorian Park in order to provide cable car "back-up" space within the park.

A public transit facility between the waterfront and Coit Tower should be developed to provide a second means of access to Coit Tower and to relieve congestion on Lombard Street and in the parking area at the tower. This connection could be provided by a funicular railway located in the Greenwich Street corridor.

The Columbus Avenue subway system described previously would add a fast and direct connection between Fisherman's Wharf and Downtown. This subway would run beneath Columbus Avenue with a stop in the vicinity of Columbus Circle. The Market Street Muni subway will include a stop at Davis Street and thus bring people within close proximity of the Ferry Building.

Intra-Waterfront Transit

It is proposed that an attractive transit system be developed along the shoreline to connect activities at Fisherman's Wharf and the Ferry Building. Because of its shoreline location, this system should serve the dual purposes of movement and recreation. As a transit facility, it should provide stops within major activity districts along its route and it should be closely related to, but not conflict with, pedestrian movement along the shoreline. As a recreation facility, it should provide dramatic views of the City and the Bay and of ships and maritime activities north of the Ferry Building.

An elevated system would supply these operating characteristics because it would be separated from surface movement systems. It could pass over or through the sheds on Piers 9 through 35 and permit public proximity to the maritime area north of the Ferry Building. While not interfering with cargo handling operations it would still provide dramatic views of the City, the Bay, and ships docked at the piers. However, the size and supporting structure of an elevated system must be small in scale so that the facility does not become a visual barrier between the City and the water.

One system now in existence which meets these criteria is the low-speed minirail used at Montreal's EXPO 67 and at Houston's Hemisfair. The supporting structure for the system is light and unobtrusive and the transit vehicles themselves are quite small. The plan recommends the construction of a minirail system between Fisherman's Wharf and the Ferry Building.

A direct and attractive transit connection such as this between Fisherman's Wharf and the Ferry Building could also expand the number of parking facilities which might serve Fisherman's Wharf. For instance, parking which serves the Financial District would be little used during the weekends and could be used to accommodate visitors to Fisherman's Wharf if low-cost Downtown parking could be combined with a transit ride.

An intra-bus system is proposed within the Fisherman's Wharf area in order to connect activity centers and major parking garages and to encourage pedestrian movement. The operating characteristics of an intra-bus system should include the following:

1
Slow-moving vehicles designed to permit easy ingress and egress (similar to cable cars).

2
Frequent service (five-minute intervals).

3
Rubber-tired vehicles that would limit noise and easily permit route changes to accommodate growth and development of the area.

4
Attractive and easily-identifiable vehicles.

20 Proposed Regional Transit System

BARTD Subway

Muni Subway

Commuter Ferry

Recreational Ferry

Helicopter

AC Bus

21 Proposed Intra-City Transit System

Existing Cable Car

Proposed Cable Car

Muni Subway

Coit Tower Transit

22 Proposed Intra-Waterfront Transit System

Fisherman's Wharf Intra-Bus

Waterfront Minirail

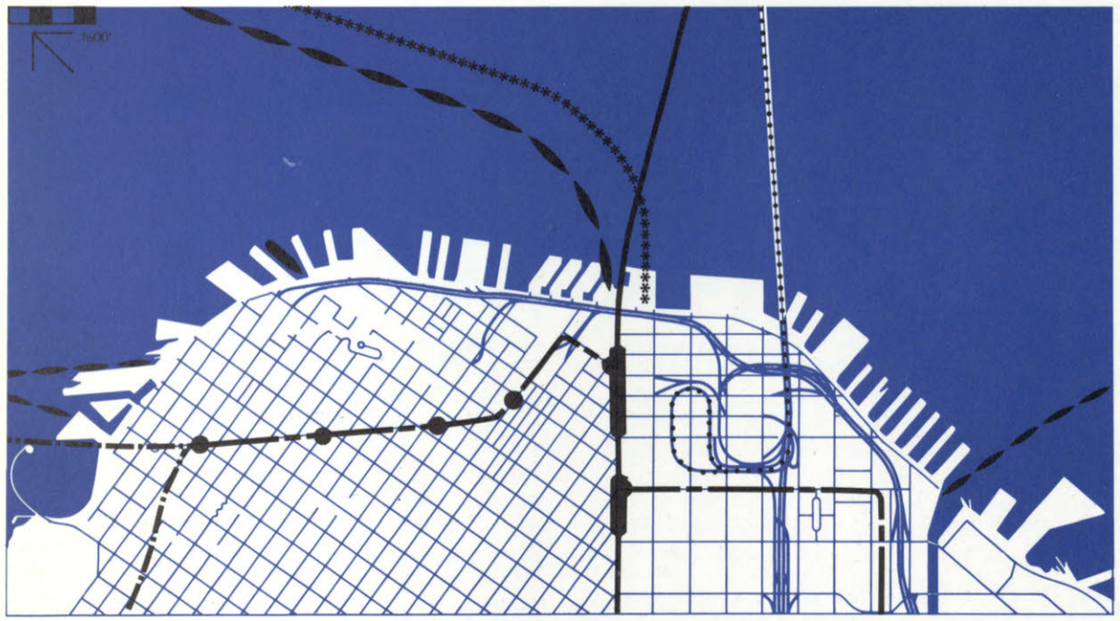
23 Proposed Rail Facilities

Rail Lines

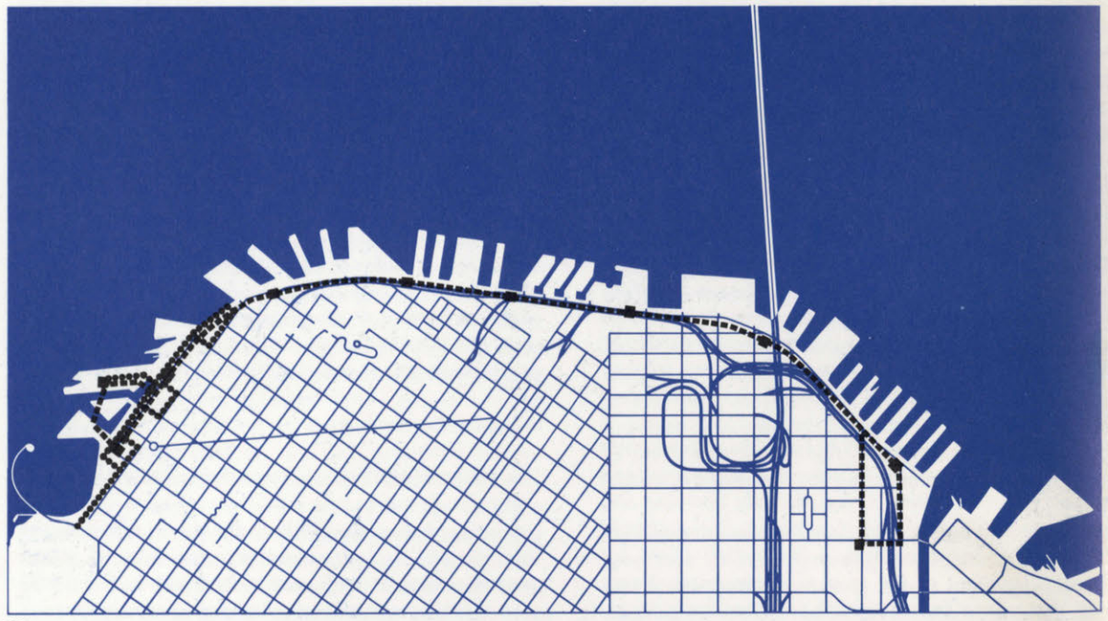
Rail Yards and Facilities

Number of Rail Lines

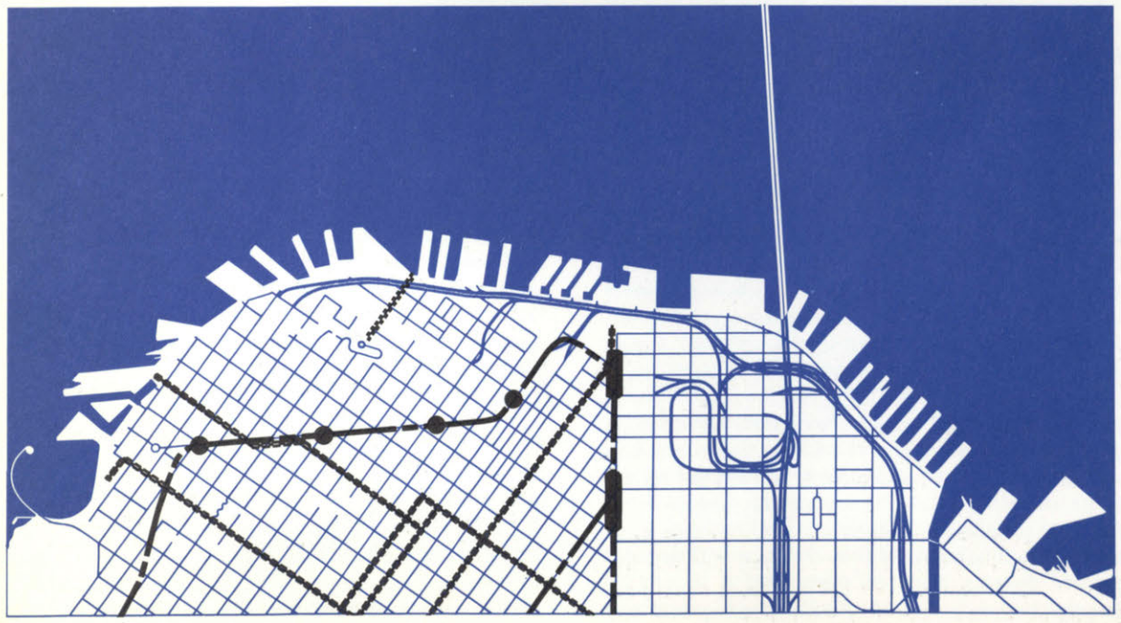
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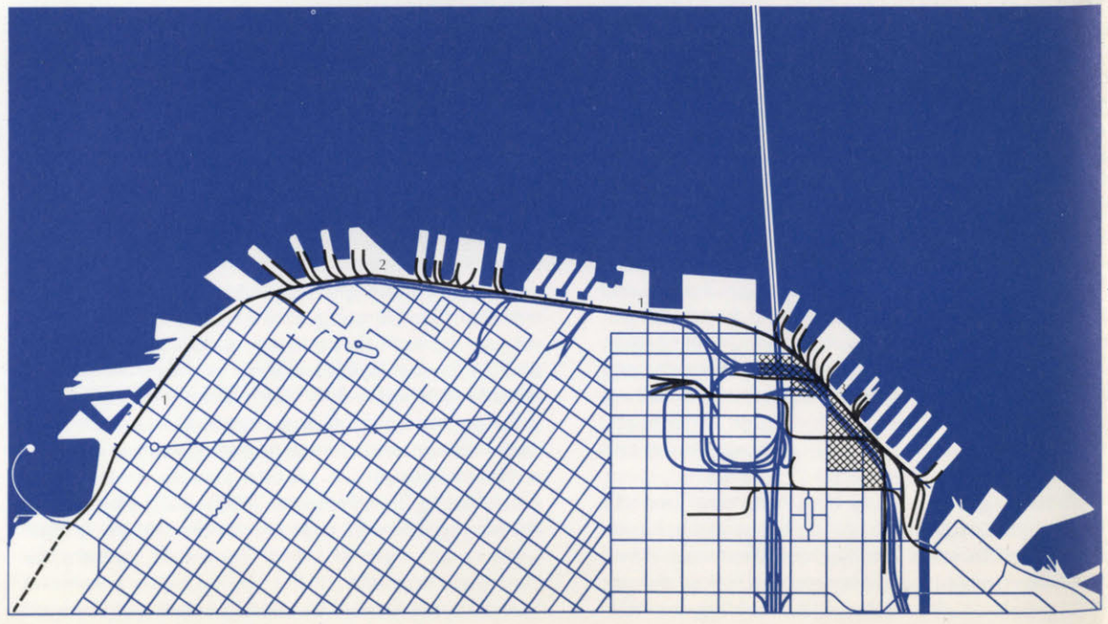
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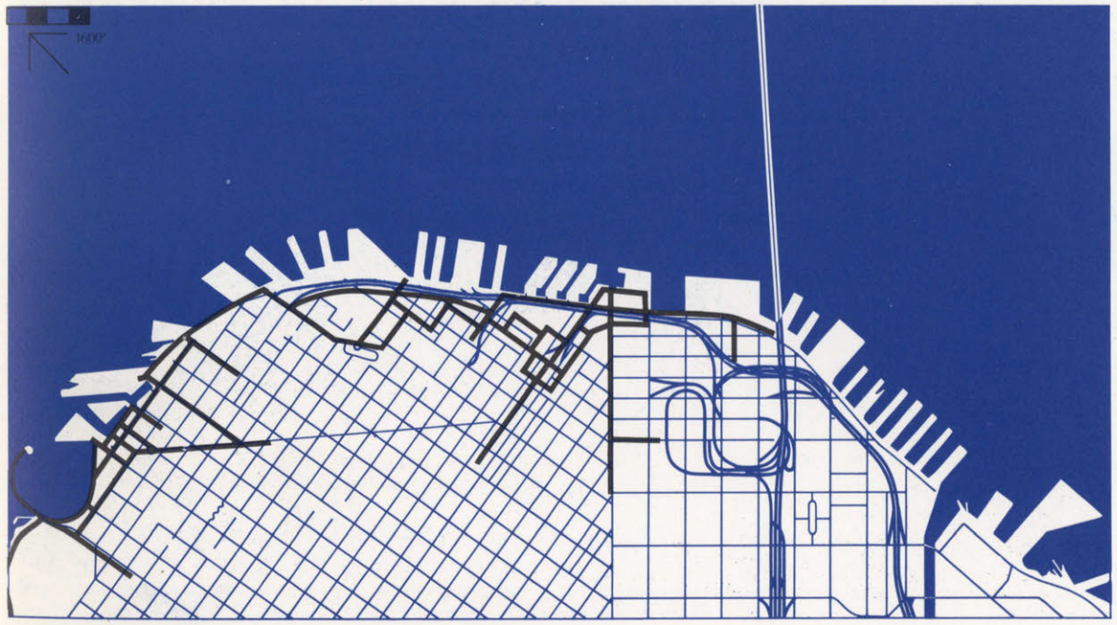
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Use charges should be minimal in order to encourage maximum use of periphery parking facilities.

Pedestrian System

A system of pedestrian walkways should be developed to connect major activity centers along the waterfront and to connect the waterfront with the interior of the City. These walkways should focus upon the major open spaces within activity centers at Aquatic Park, Fisherman's Wharf, Coit Tower, the Ferry Building, and the Financial District. Pedestrian routes which connect activity centers should lie within the system of public and private open spaces and provide access to the water's edge. Furthermore, pedestrian ways should connect major off-street parking facilities with activity centers and with shoreline open spaces and promenades.
Design of pedestrian paths should be varied and range from street greenways including both pedestrians and vehicles to formal promenades at the shoreline and on upper-level platforms.

Railroads

North of the Bay Bridge, railroad facilities should be limited to those which serve the maritime piers below Telegraph Hill. Industrial activities that are now located in the Fisherman's Wharf area and below Telegraph Hill and which require rail service should be encouraged to relocate. Special rail facilities, such as the rail ferry slip at Pier 43, rail storage yards located on seawall lots along The Embarcadero, and the roundhouse at Lombard Street and The Embarcadero, should be eliminated or relocated to appropriate areas south of the Bay Bridge or in the Southern Waterfront.
It is necessary at this time to maintain a single rail line between Pier 35 and the Presidio. However, every effort should be made to eliminate this line at the earliest possible date.

Special Transportation Facilities

Several specialized circulations systems such as ferry boats and helicopters use the Bay and the airspace above it, and terminals for such systems should be developed in the Northern Waterfront. These terminals should be located in conjunction with the terminals of land-based systems and should be conveniently accessible from the City's trafficways.
It is recommended that terminals for recreational ferries, tour boats, and water taxis be developed at Hyde Street Pier, Fisherman's Wharf Plaza, and Ferry Building Plaza. These sites are in close proximity to the Hyde Street, Powell Street, and California Street cable car lines, to proposed minirail stations, and to shoreline pedestrian paths. In addition, if a Marin-San Francisco commuter ferry system is found to be feasible, a commuter ferry terminal should be developed at the Ferry Building. The *Special Studies* section of this report includes a study of potential sites for ferry and tour boat terminals.
The airspace above the Bay is currently used by helicopters connecting the San Francisco International Airport with various portions of the urban region. A temporary heliport serving San Francisco is now located immediately north of the Ferry Building. This should be removed and a permanent Downtown heliport should be developed south of the Ferry Building, where there is convenient access to and from the trafficways system.
Terminals and moorings for tour boats and passenger ships should be related to recreation, views, and amenities. Similar types of moorings should also be developed for historical and ceremonial ships even though some of these ships might be permanently anchored. The ship museum at Hyde Street Pier should be expanded and additional historical ships should be located at Pier 43½, including the Balclutha. In addition, a mooring should be developed at the Ferry Building Plaza for ceremonial ships such as ships of visiting foreign dignitaries, naval vessels connected with holidays, and military and training ships from foreign countries. This type of mooring will reinforce the Ferry Building and the foot of Market Street as the symbolic entrance to the City. In the short-run Pier 35 should continue to be used as the passenger ship terminal. However, there are a number of alternative locations which might suit this facility, and one of these alternatives may become preferable at some time in the future. A discussion of these alternatives is contained in the *Special Studies* section of this report.

Open Space

Open space can be defined in two ways: (a) it can be defined in absolute terms (area of open land) and in relative terms (the degree of light, visible sky, and contrast of open surface with its surroundings); and (b) it can be defined in terms of character—the extent of trees and planting, the nature of surfacing material (grass, brick, paving, etc.), the activities for which it is designed (active or passive), and the arrangement of design elements (planting, walks, furniture, etc.).

Concepts of Open Space

A number of concepts about the nature and function of open space systems provide the background for open space proposals.

First, the open space system should establish an overall character of an open and accessible waterfront, so that the public is invited to use and enjoy the significant amenities and resources of the area for recreation and leisure purposes. Thus, parks, plazas, and promenades should be developed along the shoreline, and pedestrian and street greenways should provide view corridors that offer visual and physical links between the City, the water's edge, and the "working port."

Second, the open space system should function as a unifying element that links together the various activities in the Northern Waterfront with each other as well as with the inland activities—that is, the open space system should give visible continuity to the waterfront and visibly relate the waterfront with the interior of the City. Furthermore, the waterfront open space system should be connected to other segments of the City's open space network in order to integrate waterfront activities and open spaces within the City's overall physical structure.

Third, the open space system should function as an organizing element for the overall activity structure in the Northern Waterfront and provide focal points around which activity centers themselves may be structured. It should also be integrated with the transportation systems—vehicular, transit, and pedestrian—and it should provide transition zones between different types of land use districts.

Open Space Policies

The following open space policies were formulated within the context of the previously-described concepts.

Develop open space as the predominant characteristic of the waterfront. Open spaces of contrasting character should be developed in the Northern Waterfront, ranging from mini-parks and viewing platforms to urban plazas and natural parks. Two kinds of users and observers determine the way in which open space can be used to achieve openness on the waterfront. First, views from automobiles which are moving along The Embarcadero should reveal the general impression of a predominance of water and sky broken occasionally by planting, intensive activity, and structures. Special attention should be given to views featuring the Downtown panorama, Coit Tower and Telegraph Hill, and complexes of buildings.

Second, views for pedestrians moving along the waterfront and along streets perpendicular to it should emphasize panoramic and distant views of the water, islands, and Marin County and the East Bay hills. Particular attention should be devoted to the development of views through large open spaces to the water and hills.

Establish an open character of the shoreline by limiting development height and density. Important considerations in the Northern Waterfront include the preservation of the special topography of San Francisco and the preservation of views to and from the hills and of the skyline. Along the waterfront there are few opportunities to establish a broad expanse of park space between inland development and the water which would preserve the form of the hills. These considerations dictate that the density of development and the height of structures along the shoreline should be relatively low.

Protect awareness of waterfront amenity and beauty for those entering and traveling through the area. The awareness of waterfront amenity should be provided by increasing the breadth and sweep of views along The Embarcadero; by bringing water back to the seawall along the edge of The Embarcadero; by increasing the visibility of port operations and ships docked at the piers; by providing periodic open views along shoreline routes; by opening views to the water down streets perpendicular to the shoreline; and by arranging park planting and street trees to enhance vistas.

Utilize the unifying potential of the waterfront. A prominent body of water is a valuable natural fea-

25 Proposed Open Space System

Open Space and Pedestrian Walkways

Street Greenways

26 Relationship of Proposed Open Space System to Proposed Traffic System

Freeway

Embarcadero Boulevard

Major Two-Way

Major One-Way

27 Relationship of Proposed Open Space System to Proposed Pedestrian Walkways

Pedestrian Walkways

28 Relationship of Proposed Open Space System to Proposed Transit System

BARTD Subway

Muni Subway

Commuter Ferry

Recreational Ferry

Helicopter

AC Bus

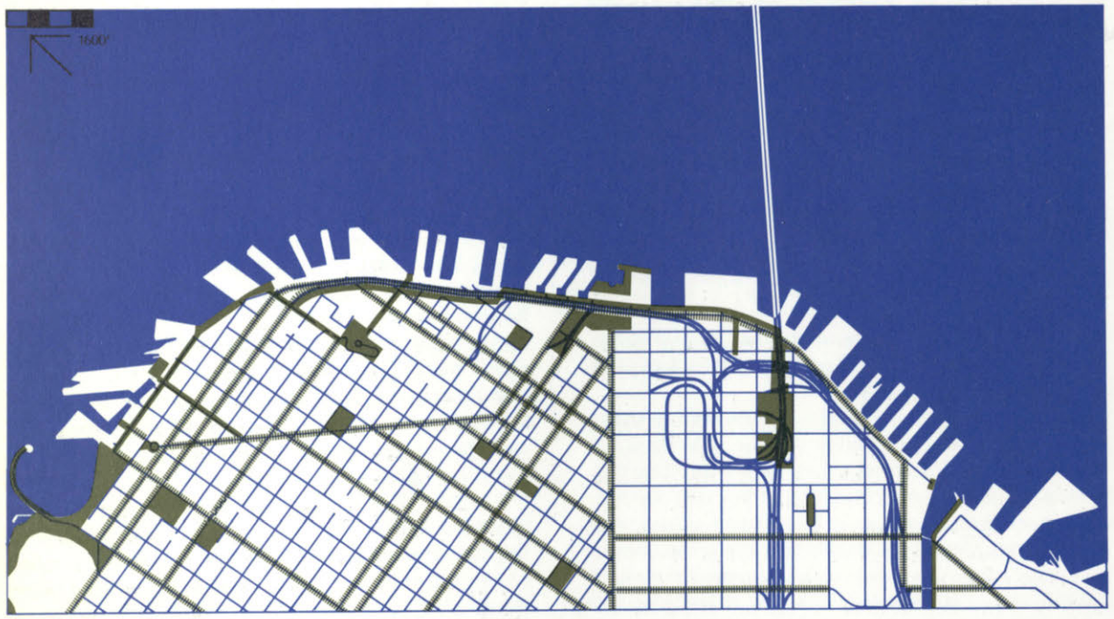
Existing Cable Car

Proposed Cable Car

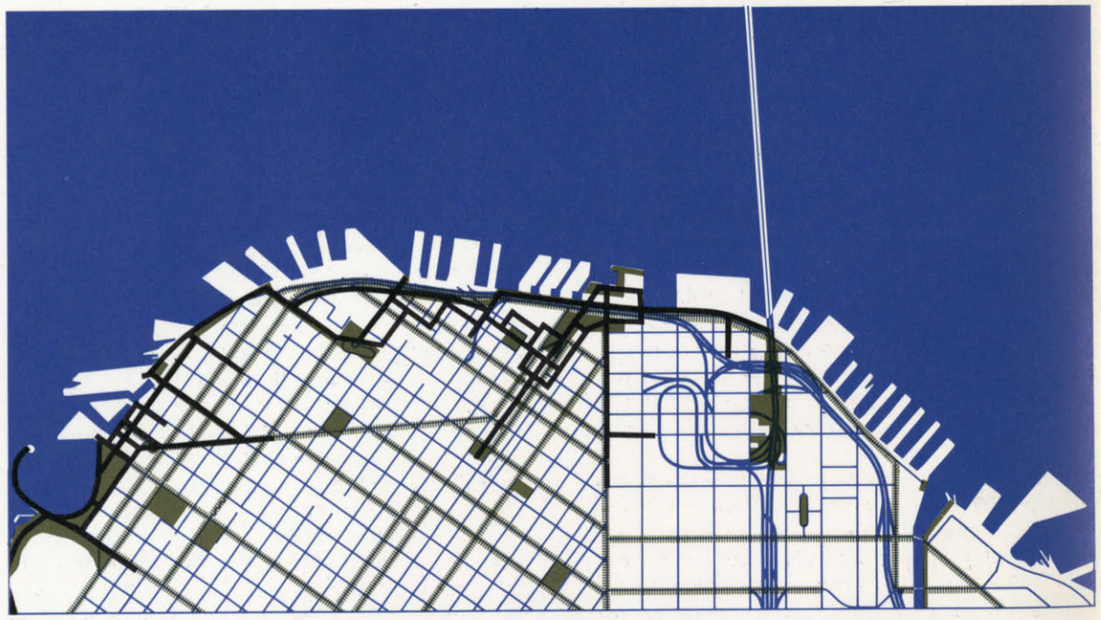
Coit Tower Transit

Fisherman's Wharf Intra-Bus

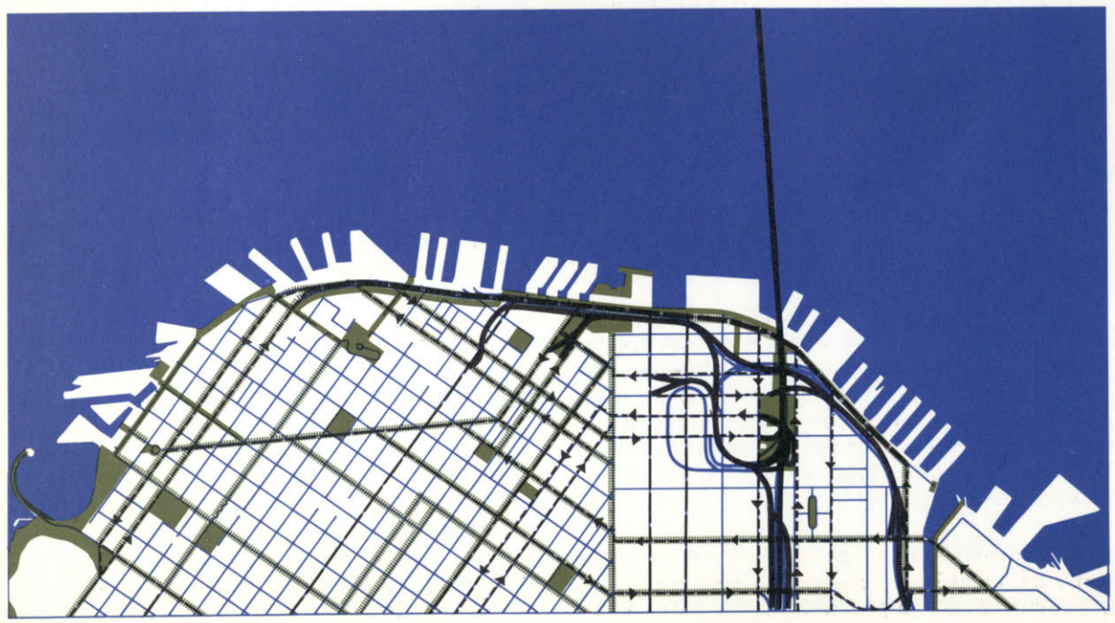
Waterfront Minirail



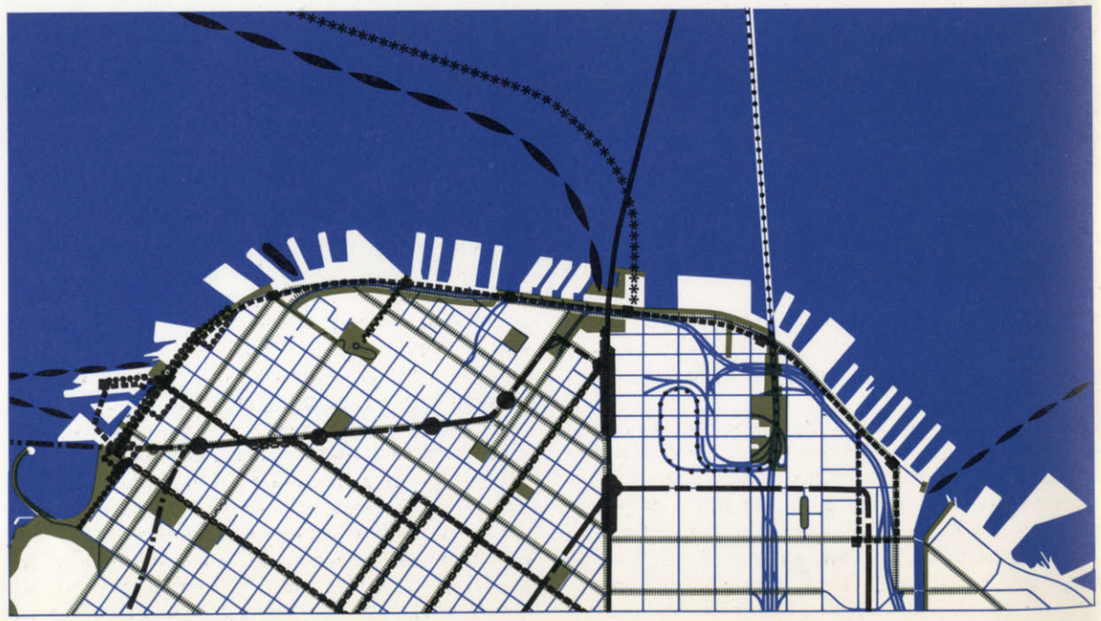
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ture that has the inherent capability of providing unity and identity to an urban area. Moreover, San Francisco's prominent topography further enhances that capability. Three basic means of experiencing water and land relationships are present in the Northern Waterfront: (a) movement by automobile, bus, or other motorized vehicle, (b) movement by walking or other personalized conveyance such as bicycling, and (c) observation of the continuity of the waterfront by viewing it from public or private spaces such as Telegraph Hill and Russian Hill.

The continuity along the waterfront should be reinforced primarily by a system of pedestrian ways and bicycle paths with contrasts provided by natural parks and intensively-developed plazas and promenades; street landscaping which forms greenways should be used as a secondary means of strengthening continuity.

Develop strong physical linkages between the City and the waterfront. The waterfront can be linked with the interior of the City by developing new and existing pedestrian and vehicular greenway systems and existing cable car systems. In the latter case, the Hyde Street cable car line already terminates in a waterfront plaza, and it is proposed that both the Powell Street and California Street lines be extended into plazas on the waterfront.

In Sub-Areas II and III the direct relationship between the City and shoreline requires particular attention because of the problems caused by railroad and auto traffic along The Embarcadero. In Sub-Area II, frequent pedestrian overpasses should be provided to solidify and enhance the linkage between City and shoreline. They should be in scale with the width of roadway and railroad crossed. Since that width in Sub-Area II is extensive, the overpasses should be fairly broad, and should be capable of accommodating some commercial uses. Each overpass should be located with regard to pedestrian movement and the distribution of activities, and should be designed to be inviting so as to encourage its use.

In Sub-Area III, the present width of The Embarcadero diminishes the direct relationship between City and shoreline. However, this width can be reduced in the important Ferry Building area, and the relationship strengthened, by relocating the Marin Greyhound bus terminal from beneath the freeway to an area adjacent to the Embarcadero Plaza bus turnaround; and, by relocating southbound traffic lanes to an underpass adjacent to the freeway.

Relate waterfront access to the preservation of shoreline open spaces. It is essential that the plan insure the maximum utilization of precious shoreline park space and minimize circulation and parking needs adjacent to and within the shoreline zone. Three types of physical access are basic to the waterfront: pedestrian, transit, and vehicular. In general, pedestrian access should be continuous along the shoreline, while transit and vehicular access should interrupt it only periodically. Transit terminals should be located within or at the edge of open spaces (for example, the cable car turnarounds), and major parking facilities should be located on the periphery of open spaces. The zone along and parallel with the shoreline should generally be reserved for pedestrians, the next zone inland should be primarily used by transit, and the furthest zone inland should serve vehicular movement.

Relate locations of waterfront parks and plazas to land use districts. Shoreline parks, plazas, and overlooks should be located in activity districts so as to provide a central focus for the organization of surrounding and contiguous activities. In addition, they should be located so that they function as transition areas between land use districts of widely varying types such as residential and port uses.

Existing Open Spaces

There are few existing open spaces in the Northern Waterfront, and these in general are poorly related to each other and to activity districts. Furthermore, access to the shoreline is infrequent and relatively difficult. Aquatic Park is the only major developed open space that is located within the Study Area; however, it has been developed in substantial accord with the open space policies outlined above.

Aquatic Park takes utmost advantage of the unifying potential of the Waterfront by offering distant and panoramic views that are quite dramatic, and which emphasize the open water and sky. Furthermore, Aquatic Park has a diverse character, ranging from the natural western and central portions to the more formal and urban area of Victorian Plaza at the cable car turnaround. It includes such special features as the Municipal Pier, views of historic ships moored at the Hyde Street Pier, and the Hyde Street cable car which provides a strong linkage with Downtown. In Aquatic Park, access to the water's edge is direct – the shoreline zone is reserved for pedestrians, yet the view of open water and sky is preserved for the driver moving along Beach Street. The dimensions of the park provide adequate open space between development and the water and offer a suitable transition between the water's edge and residential development stepping down from Russian Hill. Finally, Aquatic Park has provided a strong core around which development has been structured; for example, Ghirardelli Square was designed to focus upon the park and to take advantage of the panoramic views provided by it.

Similar open spaces are not found elsewhere on the waterfront. Although open areas at Fisherman's Wharf provide some distant and panoramic views, the views are contained and the open spaces do not form a coherent pattern that focuses on the center of activity. Physical and visual linkages along the shoreline are discontinuous. Aquatic Park and Fisherman's Wharf are not connected by pedestrian promenades, street greenways, or view corridors, nor is there any shoreline pedestrian link between Fisherman's Wharf and the Ferry Building. Linkages into the City are also generally weak and discontinuous, although the cable car lines at Hyde and Taylor streets in Fisherman's Wharf, the Greenwich and Filbert Street stairways on Telegraph Hill, and California and Market streets all possess great potential and can be developed. An automobile driver's view of the water as he passes through the Northern Waterfront is generally obscured by piers and structures and by the absence of water immediately adjacent to The Embarcadero. Furthermore, views to the water along streets perpendicular to the shoreline are also blocked by piers and structures. In spite of these deficiencies, the waterfront still creates an image of water and sky coming together because some views, however infrequent, do exist and because existing pier development is generally quite low. This image, however, must be greatly enhanced and strengthened if it is to become the principal natural element providing unity and identity to the Northern Waterfront.

Open Space Plan

The proposed waterfront open space system includes a number of parks and plazas which are linked by street greenways and pedestrian promenades, both to each other and to activity areas and other open space elements in adjacent areas of the City.

Nature of Open Space Elements

Six new major shoreline open spaces are proposed in this plan: (a) Fisherman's Wharf Plaza at Taylor Street and The Embarcadero; (b) North Point Park, along the shoreline between Stockton and Kearny streets; (c) Pier 27 Overlook, between Piers 23 and 27; (d) Pier 9 Plaza, at Broadway and The Embarcadero; (e) Ferry Building Plaza, on the BARTD platform at the rear of the Ferry Building; and (f) Bay Bridge Park, located immediately north of Pier 26 beneath the Bay Bridge. Further, if China Basin is eventually removed from shipping use, a plaza should be developed at Second Street and The Embarcadero and a linear park should be provided along the south edge of China Basin.

A key feature of the open space plan is a pedestrian promenade that will connect the Marina Green to Bay Bridge Park and China Basin. In the Fisherman's Wharf area, the promenade would be located along the water's edge, while in Sub-Area II it would be located along the inner edge of the proposed Embarcadero Boulevard, preferably at an upper level in order to offer better views of the working port; in the Ferry Building area, it would again be located along the water's edge.

Connections from within the City to the shoreline open space system occur in two ways – as pedestrian promenades and as street greenways. Pedestrian promenades should be located along six routes: Taylor Street in the Fisherman's Wharf area; Kearny Street and Greenwich Street in Sub-Area II; and in Sub-Area III, one promenade from the Golden Gateway, one from Embarcadero Center, and one near Folsom Street. Street greenways, which function as both traffic and pedestrian routes, provide additional important linkages between open space elements and between activity districts. In the Fisherman's Wharf area, Jefferson Street with its pedestrian emphasis connects together Aquatic Park, Fisherman's Wharf Plaza, and North Point Park. Van Ness Avenue, Hyde Street, and Columbus Avenue and Circle, with their traffic emphasis, connect waterfront open space elements with adjacent areas of the City. In Sub-Area III, street greenways at Broadway, California Street, and Market Street would connect Pier 9 Plaza

and the Ferry Building Plaza with Jackson Square and the Financial District. Greenways on Mission and Howard streets would connect the waterfront promenade with the south of Market Area.
In Sub-Area IV, greenways along The Embarcadero and Berry Street would extend the pedestrian promenade from Bay Bridge Park to China Basin, while Second and Third streets would connect China Basin with South Park, the Yerba Buena Redevelopment Area, and the open space included in the Bay Bridge approach.

Relationship To Existing Open Spaces

The proposed Northern Waterfront open space system is an extension of shoreline open space development west of Fort Mason. The acquisition of the shoreline portion of Fort Mason is recommended in order to provide an important open space link between Aquatic Park and the Gaslight Cove Marina and Marina Green park area.
Development of Fisherman's Wharf Plaza and North Point Park, in combination with development of the shoreline pedestrian promenade and Jefferson Street greenway, would extend the open space system to the shipping area that begins at Pier 35.
It is proposed that Coit Tower would be directly connected to North Point Park by the Kearny Street greenway and pedestrian overpass. Further extension of the present Greenwich Street pedestrian promenade would directly link Coit Tower to Pier 27 Overlook by a pedestrian overpass. A third pedestrian overpass would cross The Embarcadero at Pier 9 Plaza to provide access from the pedestrian promenades in the area of Sub-Areas II and III. All three of these overpasses should be in scale with the width of The Embarcadero and should be broad enough to include some commerical uses upon them.
Portsmouth Square and Walton Square will both be connected to Embarcadero Plaza and Ferry Building Plaza by a pedestrian promenade through the Golden Gateway Redevelopment Area. Since the Ferry Building Plaza extends the Embarcadero Plaza through and around the Ferry Building to the water's edge, it will reinforce lower Market Street as the focal point of Downtown San Francisco and as the City's symbolic "front door." Both the California Street and Market Street greenways emanate from lower Market Street and connect Embarcadero Plaza and Ferry Building Plaza to the Financial District, the Downtown retail and hotel area, and the Civic Center. The open space at the Bay Bridge approach on Rincon Hill is connected to the waterfront promenade and Bay Bridge Park and is linked with China Basin by the Second and Third street greenways.

Relationship To Activity Districts

The proposed open space system provides public parks and plazas at the center of major activity districts and, where appropriate, on the periphery of districts. For example, Aquatic Park has provided a central focus for the development of Ghirardelli Square, The Cannery, the Haslett Warehouse, and the Hyde Street Pier ship museum. Open spaces at Fisherman's Wharf, North Point Park, the Ferry Building, and China Basin will function in a similar capacity. Pier 27 Overlook is a special situation requiring the introduction and development of a viewing platform in the center of an existing activity district (the "working port"). Pier 9 Plaza, Bay Bridge Park and the open space between Pier 35 and the proposed waterfront hotel in Fisherman's Wharf are located on the periphery of activity districts. These will provide significant opportunities for public use of the waterfront and will act as transition zones between the "working port" and non-shipping activities.

Relationship To Circulation System

Basic continuity along the shoreline of the Northern Waterfront should be provided by pedestrian paths and promenades accented and enriched with parks and plazas.
In Sub-Area I, the proposed system of open spaces, pedestrian ways, and street greenways along the shoreline is independent of the major vehicular traffic system, as open space elements occur at locations or on streets removed from major thoroughfares.
In Sub-Area II, open space elements and thoroughfares along the shoreline are interdependent. In this case pedestrians and vehicles have been separated vertically, for here pier sheds block most of the ground-level views of the water. A continuous upper-level pedestrian system should be developed along Embarcadero Boulevard to permit both pedestrians and vehicular observers to enjoy a sweeping view of the maritime activity occurring between Piers 9 and 35. The upper-level pedestrian system should be extended, using overpasses, across Embarcadero Boulevard and The Embarcadero to the pedestrian path and the working port area at Piers 9, 27 and 35.
In Sub-Area III, the pedestrian shoreline promenade north and south of the Ferry Building is independent of The Embarcadero and is located along the water's edge. At the Ferry Building open space elements and thoroughfares come together. Here, first the southbound lanes and ultimately the northbound lanes of The Embarcadero would be depressed to provide ease of pedestrian movement between Embarcadero Plaza, Ferry Building Plaza and the shoreline promenade.
In Sub-Area IV, pedestrian movement along the shoreline will be much less than found elsewhere. However, street plantings should be introduced, even though on a modest scale at this time, along the shoreline thoroughfare system to identify the extension of the Northern Waterfront shoreline promenade from Bay Bridge Park to the Second Street Overlook at China Basin.
The transit system, in contrast with vehicular facilities, should be an integral element of the open space system. The Hyde Street, Taylor Street, and California Street cable car lines should terminate in waterfront plazas. The proposed waterfront transit system (i.e., the minirail) should include stations at each of the parks, plazas, and overlooks along the shoreline between Fisherman's Wharf and the Ferry Building. The proposed Jefferson Street greenway should function as the major transit route within the Fisherman's Wharf area, and the proposed Telegraph Hill transit system would connect Coit Tower and Pier 27 Overlook via the Greenwich Street promenade corridor. A commuter and recreational ferry terminal should be located at Ferry Building Plaza, and recreational ferry terminals should be located at Fisherman's Wharf Plaza and at China Basin Park.

Urban Design

The Northern Waterfront presents to San Francisco an extraordinary opportunity to develop a dramatic and delightful physical environment. The Northern Waterfront's potential for drama and beauty is created by the area's overpowering natural qualities of the Bay's waterscape and the striking dominance of the surrounding hills and landforms. The interaction of the natural environment of the Bay, landforms, and sky with the man-made urban environment, and the vivid spectacle created by constantly changing patterns of light and color, create a magnificent setting that provides rich and unforgettable images to both residents and visitors.

Qualities of the Natural Environment

The Bay contributes several important qualities to the physical environment. First, the uniqueness and dominance of the Bay establishes the identity and image of the urban region; indeed, the common name of the metropolitan region is "the Bay Area." Second, the scale and vastness of the Bay divides the metropolitan region into distinguishable components and enhances perception and understanding of the physical environment. Third, the openness and spaciousness of the water and the sky establish unity among the various sectors of the urban region; the Bay has determined the orientation of a large portion of the urban settlement. Its presence makes possible unobstructed and distant panoramic views which connect the various shores of the Bay with each other and with the ocean.

The waterscape is perhaps the most significant determinant of the overall richness and quality of the environment. First, the surrounding landforms and the water create a perceptible organization of the environment. Second, the vivid textures, colors, and reflectivity of the waterscape provide drama and visual and psychological excitement throughout the day and night. Third, activities on the water inextricably link the metropolitan area to the ocean and symbolize the City's world connections through ocean commerce.

The landforms of the Bay Area also contribute unique qualities to the physical environment. Perhaps the most striking image is created by the buildings of San Francisco and their relationship to the hills and water. Also, the landforms are contrasted with the water and serve to orient individuals within the physical environment. Finally, the hills provide vista points permitting visual and psychological interaction with the Bay and the urban region.

The Northern Waterfront already presents a strong and dramatic image. It is, however, uneven in quality and does not fully capitalize upon all of the natural attributes and potentialities. San Franciscans value highly a beautiful environment that offers continuous enrichment and daily delight and enjoyment. Urban design policies and guidelines are therefore an important and integral element of this plan.

The underlying design philosophy of this plan is that urban forms should fully develop the outstanding natural beauty and qualities inherent in the character of the Northern Waterfront. The form and arrangement of man-made urban elements should be determined by, and subordinate to, the great natural forms of the water and the land.

Design Concepts

The preceding elements of the plan described proposed functional characteristics of and relationships among Land Use, Transportation, and Open Space systems in the Northern Waterfront. The Urban Design element is concerned with the three-dimensional or physical manifestations of those functional elements. Two concepts about the nature and quality of design in the waterfront area provide the background and bases for urban design policies.

First, physical form should express visibly and harmoniously the relationships among various elements and segments of the environment. This expression should establish a strong sense of continuity along the shoreline and of connections between the waterfront, the City, and the water. Physical form should also be easily comprehended and understood by persons using the area and by persons moving through it. Most importantly, the physical form of man-made urban elements should be determined by the natural environment and should reinforce and enhance those qualities.

Second, the physical form of the waterfront environment establishes the general character and spirit of the area which is a transition zone between the City and the water. The waterfront should connect the City and the Bay, and the potential drama and delight that is inherent in this area should be developed without compromise. These concepts, then, are

the context within which design policies have been formed.

Design Policies

The physical environment of the Northern Waterfront should create a spirit of drama, delight, and a rich association with the Bay and the Ocean and should achieve a character of diversity and variety. The general design theme permeating the waterfront area should emphasize the Bay and the visual excitement associated with it. An overall character of openness to the water should prevail by developing numerous distant and panoramic views of the Bay, by providing open spaces along the shoreline and within development projects, by limiting shoreline development to a relatively low and generally uniform height, and by using colors which generally are light and warm. Physical design should be compatible with the maritime atmosphere created by the "working harbor" and the romance of the port's historic past. Redevelopment forms should generally be consistent with the existing finger-pier configuration.

Numerous districts of varying character should be developed in the waterfront to achieve a sense of variety, diversity, and interest. Clusters of structures having historic and architectural merit should be preserved and districts developed having an overall historic character. Hillside development should be terraced to reflect the form of the hill and its relationship to the water. Development coverage of land and water should vary among districts to create density variations and a modification of openness. Landscaped spaces of distinctive and contrasting character should be developed, ranging from viewing platforms and roof gardens to formal urban plazas and informal natural parks. Moreover, open spaces and recreation areas should be provided for both short-term and long-term users.

In open spaces of pedestrian activity, such as plazas and recreation areas, warm and intense colors and warm-colored paving materials (such as red brick) should be used to increase the apparent warmth of the physical environment. Materials and textures should also be in character with the immediate environment. Important landmarks, structures, and public spaces should be well-lit at night, particularly where they occur next to water. Fountains and outdoor sculpture which are in keeping with the general spirit of the waterfront should be placed in public spaces and within development projects.

Waterfront physical form should establish an overall character of unity and integration of the Bay with elements of the urban structure, and it should create an environment that is comprehensible to those individuals who will use it. The clarity with which an individual perceives and understands the physical environment influences how that environment is used. The natural qualities of the Bay, the sky, and the landforms should be the paramount determinant of urban physical form in the Northern Waterfront. A heightened awareness and use of the Bay should be derived from extensive and imaginative integration of water and structures in shoreline development areas. The form of the Northern Waterfront should be made perceptible by establishing numerous districts of varying identity and character which divide the area into comprehensible units. Views and visual linkages, both panoramic and contained, serve as unifying elements by visually connecting waterfront activity areas with each other and with other areas of the City and the Bay; they also increase the perception of various elements of the environment. Therefore, it is important that existing views and visual connections be preserved and enhanced and that additional ones be developed. The continuity of paths and movement systems should be readily apparent and points of entry into districts should be physically defined. Landscaping should be used effectively to differentiate circulation routes and to orient persons to major elements of the movement system, and the major thoroughfare system should be planted continuously with street trees to link the districts of the Northern Waterfront to each other and to the City. Because landmarks also serve an orienting function, the dominance and visibility of existing major landmarks should be preserved and additional landmarks should be provided. In major pedestrian areas, ground-floor uses should be visible and continuous. Signs, street equipment, and street furniture should establish a harmonious street character, and signs and kiosks should communicate directions of movement and points of interest and activity.

The physical environment of the Northern Waterfront should establish a scale that harmoniously relates the waterfront to the City and the Bay and that is compatible with the desired character and spirit of the area. The scale of the physical forms and spaces within the Northern Waterfront should be determined by the needs of pedestrians. Such a scale will permit the natural forms of the Bay and the hills to be viewed, contemplated, and appreciated. The speed of internal transit facilities should be slow and the physical form of the waterfront area should strongly emphasize pedestrian movement. The proposed open character of the shoreline environment will reinforce that pedestrian scale of the area. The views within the waterfront environment should be both intimate and impersonal. For example, visual links between plazas should be developed to establish continuity, but the field of vision from within a plaza should be generally constrained and enclosed by surrounding structures and planting. However, plazas and parks located on the shoreline should afford exciting contrasts by providing in addition to controlled and focused views, a field of vision that features distant objects which are not directly related to human scale. Additional excitement and drama is provided by views from open spaces toward the City which are framed by foreground structures but which include as a background the City's skyline and hills. This contrast between intimate and closed views and distant and panoramic views of the Bay and the City is one of the unusual features of the Northern Waterfront.

Existing Appearance of the Northern Waterfront

Early development of the San Francisco waterfront was physically and visually haphazard. Constraints on development did not really exist until the present seawall was constructed and the City street grid was extended to its edge. Private development then occurred within the blocks formed by the street grid, and maritime piers extended in finger-like fashion from the seawall into the water. The present form of development reflects that structure.

The character of early development reflected the maritime functions of shipping and related warehouses and industrial shops, and the fishing fleet with its associated activities of fish processing, boat repair, and net mending added to the colorful and genuine maritime environment. The early physical environment was unified to some extent by the uniform facades of piers north of the Ferry Building and the numerous brick warehouses. However, the pier facades were not particularly attractive and blocked views of the water.

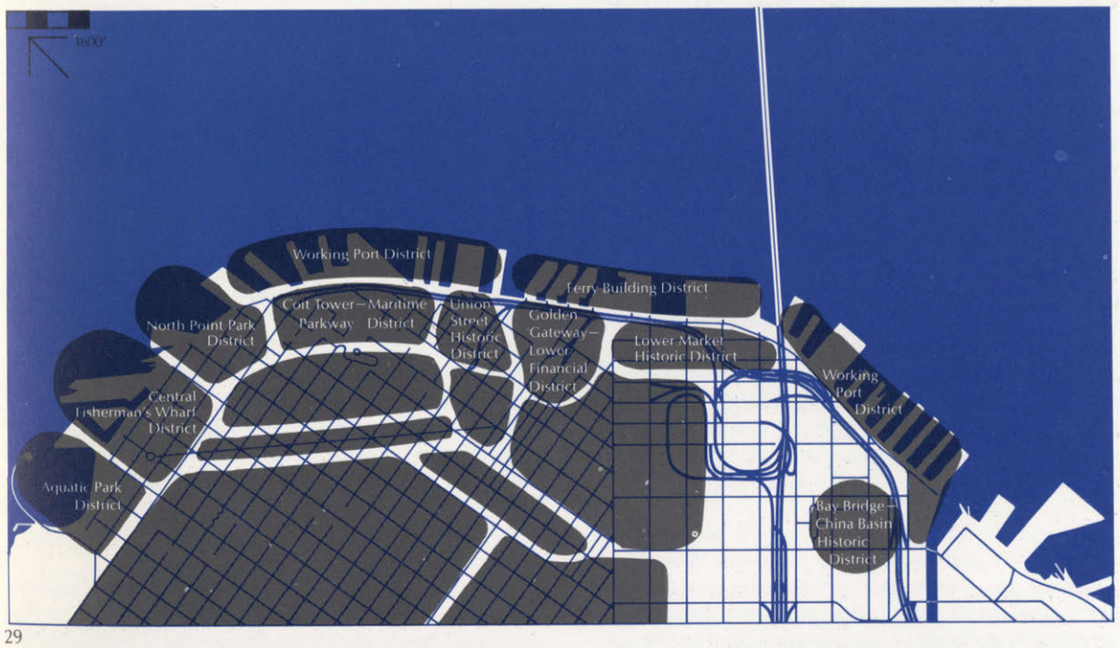
Early non-maritime activities on the waterfront served persons employed in maritime commerce. In more recent times, restaurants and shops developed to serve the large volumes of people attracted to the scenic amenities of the boat basin at Fisherman's Wharf. However, the orientation of these shops and restaurants sought to take advantage not only of the fishing boat basin but also of the many other objects of interest visible from this area. Particularly important were views of the Bay and passing ships, the Marin headlands and Mount Tamalpais, Angel Island and Alcatraz Island, and the cityscape (especially Telegraph and Russian Hills).

Consequently, an intense competition developed over those locations possessing the greatest number of amenities, and the result has been that the development process took on some self-destructive aspects. In the Fisherman's Wharf area, for example, restaurants, shops, and other non-maritime uses in their efforts to find the best location produced a pattern of dispersed activities. Although attractive, the strength of the fishing fleet limited the distance between activities and the boat basin. Nevertheless, it was difficult to develop a visible and orderly system connecting groups of these activities, and movement within the area became very confusing. Currently, a number of movement modes operate within the area, including through traffic, pedestrians,, local traffic, cable cars, service traffic, and buses. Today it is difficult for one even to find his way to Fisherman's Wharf, and once there it is not clear how one should move among the various activities. Pedestrians and autos searching for destinations often impede other movement flows and in some cases, as along Taylor Street and at Columbus Avenue and North Point Street, hazardous conditions are created for both pedestrians and vehicles. The dispersal of activities has generated an unclear and dispersed pattern of parking facilities that further confuses and that often produces additional barriers to pedestrian movement between activities. Adequate shoreline open space and public access to vista areas and the water's edge have not been provided and visual access from the City to the water have often been blocked by structures.

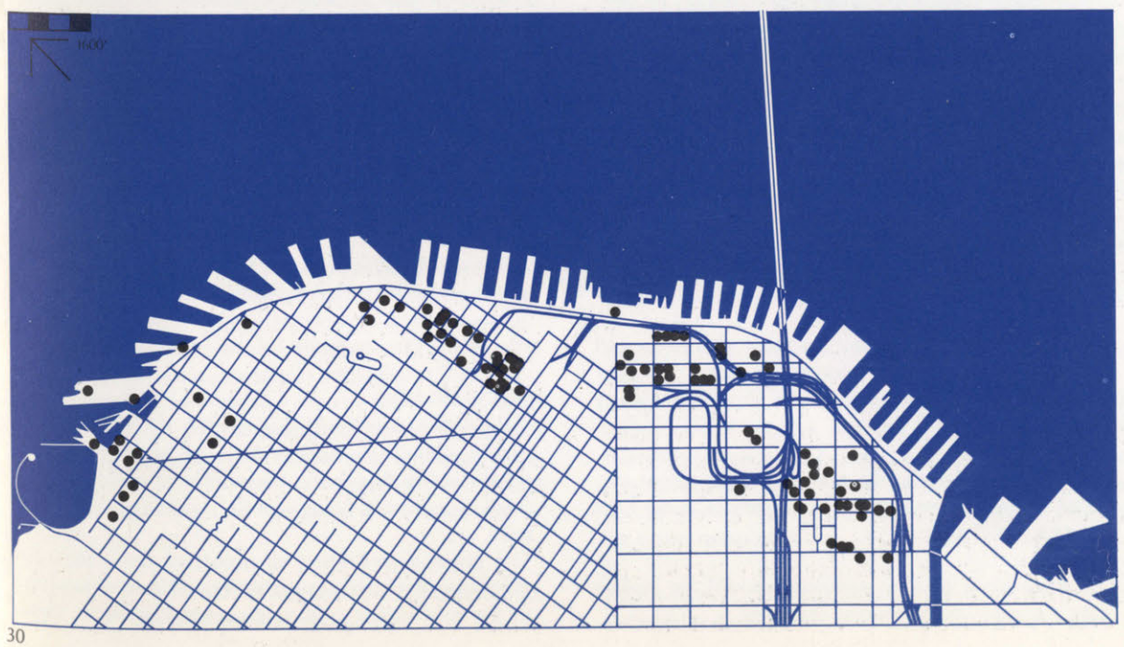
Along The Embarcadero, the distance between the shoreline and inland development is a visual barrier to the water. However, the width of The Embarcadero

29 Proposed Districts

30 Buildings of Historic and Architectural Merit



29



30

is not the only deterent as the large volumes of traffic it carries, the railroad tracks, the massive and monolithic facades of the pier sheds, and the storage yards all inhibit and in some cases prevent any use of the shoreline or visual appreciation of the water. The elevated Embarcadero Freeway is the prime example of a visual barrier that interrupts views from the City to the water.

Another deficiency in the existing physical environment is the lack of design accents along the sweep of the waterfront. Design character and emphasis is generally uniform throughout the area and interesting diversions do not occur.

The waterfront environment does include numerous positive features and elements. Aquatic Park and its surrounding development are architecturally attractive and interesting. Throughout the waterfront there are buildings having historic and architectural merit which afford opportunities for imaginative and functional rehabilitation and reuse. Ghirardelli Square, the Haslett Warehouse, and The Cannery are superb examples of how such opportunities have been exploited. Coit Tower presents a vista point that affords dramatic and sweeping views of the waterfront, the Bay, and Downtown. These positive features and elements contribute greatly to the area's special potential for development; they should be preserved and utilized effectively to shape a satisfying and pleasurable waterfront environment.

Design Plan

A number of elements are important to the design and appearance of the Northern Waterfront; these include the following:

1
Districts
2
Views
3
Paths and entry points
4
Landmarks
5
Edges
6
Nodes
7
Development Height and Coverage
8
Landscaping
9
Colors and materials
10
Street furniture and equipment
11
Signs and informational aids

The Design Plan recommends guidelines and proposals for the development of the Northern Waterfront which are in keeping with the general Design Policies.

Districts

Districts are physical areas or enclaves of the City and are the basic units which structure the physical environment. The dominant characteristic of a district includes physical form, activity structure, and relation to natural setting. San Francisco possesses numerous districts of distinct character which provide the City with a sense of variety and strong identity. Several districts exist in the Northern Waterfront and more can be developed; thus the waterfront can become an area composed of a number of strong and identifiable districts interrelated by topography, paths, and the water's edge.

The following guidelines for the design of districts are recommended:

1
Each district should possess a sense of special identity—a vivid character—that clearly differentiates it from other districts.

2
The character of each district should be derived from the aesthetic qualities afforded by the water, the hills, and views of the Bay and the City, and from its own special opportunities and characteristics.

3
Each district should include a clearly-marked central focus that emphasizes its special identity.

4
Historic districts should be developed by preserving and rehabilitating buildings of historic and architectural merit. Two kinds of existing structures in the Northern Waterfront have been identified: (a) buildings which are associated with important historical events (such as the Ferry Building), and (b) groups of

buildings possessing a distinct architectural style and which represent a particular period of San Francisco's history (such as groups of early brick warehouses).

5

Entrances into districts, and pathway connections between them, should be visible and be clearly marked.

The plan recommends development of eleven districts in the waterfront area. Four districts emphasizing historic character should be developed: (a) the district comprising Aquatic Park, Ghirardelli Square, the Haslett Warehouse, The Cannery, Hyde Street Pier, and Fish Alley; (b) the area included between Union and Jackson streets in Sub-Area II, which would be, in effect, an extension of the character presently found in Jackson Square; (c) an area bounded by Market Street, Main Street, the Bay Bridge, and The Embarcadero; and (d) the area south of the Bay Bridge between Second and Third streets.

The central district of the Fisherman's Wharf area should reflect the character of a maritime market, bazaar, and fair atmosphere. An historic maritime character of this district could be developed by preservation and use of the existing structures on Pier 45 and the arch over the rail ferry slip and Pier 43 although the pier sheds could be removed and replaced by structures that would heighten the market and bazaar character.

In those areas along the waterfront where extensive changes are proposed, three new districts have been established which utilize the opportunities offered by each site; (a) the North Point Park district in Fisherman's Wharf; (b) that portion of Sub-Area II that lies below Coit Tower; and (c) the Golden Gateway Redevelopment Area and the lower Financial District. However, because of the particular opportunities of each district, new forms of development are recommended for each district. For example, the North Point Park district with its large volumes of pedestrian movement should bring open water back to the seawall and should emphasize the shoreline promenade and the open water vista area between Piers 37 and 43 that focuses on Alcatraz Island and Angel Island. The district below Coit Tower should feature an attractive roofscape and a terraced development form that does not interfere with sight lines from Coit Tower to the water's edge. Development in this district should include an upper-level pedestrian promenade along Embarcadero Boulevard from which shipping activity could be viewed, as well as pedestrian pathways between Coit Tower and the waterfront. In contrast, development form in the Golden Gateway and lower Financial District emphasizes a pedestrian system and towers set on an upper-level plaza.

The Ferry Building district should be characterized by intense urban activity that is unified by a Downtown waterfront esplanade. Development form should not detract from the Ferry Building as the symbolic "entrance" to the City from the sea, and should reflect the mixed-use nature (housing, commercial recreation, offices, transportation, and public spaces) of the district.

Finally, it is recommended that the "working port" and maritime character of two districts—Piers 9 through 35 to the north and Piers 26 through 46 to the south—be accentuated by providing public access where feasible and open views to ships and water, by consolidation of open cargo-storage areas, and by displaying the flags, colors, and symbols of shipping companies assigned to various piers.

The original maritime character of the entire Northern Waterfront can be reflected by decorating public spaces with maritime flags and artifacts and sculpture based upon maritime themes. Development of activities within the Northern Waterfront area which use water or are related to water uses—ferry boats and terminals, a passenger ship terminal, historic ship docks, chandlers and marine services—will enhance the sense of integration between development and water.

Views

One of San Francisco's most valuable assets is the sweeping panorama of land, water, and distant mountains that is seen from many areas in the City. Also important are views from the Bay and the shoreline of the City's dramatic landforms which rise above the low horizontal foreground and which are accentuated by the structures covering them. These views should be preserved and reinforced by limiting the height of shoreline development and by developing new shoreline open spaces and vista points.

A feature characteristic of San Francisco is the presence of view corridors to the Bay and the hills along the streets. These view corridors are especially important because streets are the most-used public spaces, and because streets combine both physical and visual access to the Bay which can be experienced by many people in their everyday pursuits.

Two policies are recommended to improve and protect this visual access to the Bay. First, preservation of views down streets from hilltops requires that high development which would block views to the water should not be permitted. Furthermore, where development is permitted over streets, view corridors should be maintained through the development so that the seawall is visible from streets on the hills. Second, preservation of views along level streets requires that these corridors should be opened to the Bay by aligning new development with the inland grid pattern and by prohibiting development within the corridors as defined by projecting the widths of existing streets into the Bay.

Paths

Paths are the channels along which people travel into, within, and through the Northern Waterfront. They are the streets, pedestrian ways, transit lines, ferry boat routes, etc., that structure the form of movement and help to orient people within the area. The design of paths should be based on the following guidelines:

1

The character of a route should be distinctive from others.

2

Routes which penetrate into districts should be distinguishable from routes which carry people through the Northern Waterfront.

3

Paths should possess visual continuity and a clear sense of direction and orientation.

4

Intersections and important decision points should be clearly identified; the intersecting path should be exposed, and necessary maneuvers should be clearly marked.

5

Views from primary routes should expose major elements and activities and should clearly indicate how one reaches them.

6

The waterfront and its symbols should be visible from the main paths within the City.

7

Entrances to the waterfront and to its individual districts should be clearly marked.

The proposed movement system in the Northern Waterfront includes two kinds of paths.

Paths along the waterfront enable one to travel parallel to the shoreline, and they provide a clear sense of movement around the edge of the City and the Bay. These paths include the vehicular route comprised of the Bay—North Point streets one-way couple, Embarcadero Boulevard, and The Embarcadero; the waterfront minirail; and the shoreline pedestrian way.

Paths from the interior of the City to the shoreline provide a clear sense of penetration into the waterfront area. These paths include Van Ness Avenue; Hyde Street, Powell Street, and California Street cable car lines; Columbus Avenue; Taylor Street promenade; pedestrian overpasses at Kearny Street, Greenwich Street, and Broadway; Telegraph Hill funicular; and Market Street.

The Bay provides an opportunity to pass around the edge of the waterfront and to penetrate into the centers of many shoreline activity districts. This "path" affords the best opportunity to experience the waterfront in its relationship to the City from this vantage point. Therefore, development of water movement systems—tour boats, commuter and recreational ferries, and water taxis—should be encouraged. A sense of continuity along the paths should be attained by establishing visual continuity along each path and by common treatment of elements relating to a particular path, including lighting fixtures, trees, and street furniture.

A sense of variety, communication of information, and a sense of progression along a path should be achieved by a rhythm of spatial experiences along the path. For example, along the circumferential vehicular route there is a sense of closure along Bay and North Point streets, a broad sweep along Embarcadero Boulevard with a changing rhythm of views to the water, hills and skyline. Additionally, as one passes along this route, the visible activities change from commercial to residential, maritime, and office uses.

The physical definition of points of entry into districts orients people to a district and to their position in the movement system. Development form, land-

scaping, and design treatment should all emphasize important points of entry and should be combined with informational aids to tell people how to use the area.
Existing entry points to the Northern Waterfront include Fort Mason-Fontana Towers, the Bay Bridge, and the freeway ramps at Broadway, Washington-Clay, and Main-Beale. It is proposed that entry points be defined at the eastern end of the Fisherman's Wharf area, the north ends of Battery and Sansome streets, and at China Basin. A grand circle should be provided at the northerly termination of Columbus Avenue both to terminate properly the street and to emphasize that point of entry into Fisherman's Wharf. Expansion of Embarcadero Plaza and construction of the BARTD platform with a commuter ferry terminal and a mooring for ceremonial ships will enhance the Ferry Building as an important entry point to Downtown San Francisco.

Landmarks

Landmarks are those prominent visual features of the City which assist people in orienting themselves as they move to, through, and within the City. In this study, consideration of landmarks was limited to those elements of the Northern Waterfront that are prominent and visible from many locations in the City, such as Coit Tower and the Downtown skyline, and those elements which are prominent and visible within the waterfront area itself, such as the Ferry Building tower.
The guidelines concerning landmarks in the Northern Waterfront are as follows:
1
The visibility and dominance of existing landmarks should be preserved and, where possible, increased.
2
New landmarks should be located at highly visible sites to denote major activity centers.
3
New landmarks should possess the qualities of singularity and uniqueness; therefore, they should be associated with an event or place, and they should have a name which can be generally known and accepted.
4
All landmarks should be identifiable both day and night and visible from near or far.

Existing landmarks serving the Northern Waterfront function quite effectively. The Downtown skyline is the most significant landmark from all directions, but Coit Tower and Telegraph Hill, Alcatraz Island, Russian Hill, the Golden Gate Bridge, the Bay Bridge, Angel Island, and the Marin headlands all serve to locate the area in relation to the City and the region. The predominance of these features should be recognized and preserved.
In addition, landmarks assist an individual to orient himself within an area by indicating the location of the major activity districts. Such landmarks are the Ghirardelli Square tower and the Ferry Building tower. One important district that lacks a strong landmark is the central district of Fisherman's Wharf; therefore, it is proposed that the Balclutha be relocated to Pier 43½, and that a tall but slender observation tower be located at the terminus of Mason Street adjacent to Fisherman's Wharf Plaza.

Edges

Edges are linear elements which (a) form boundaries between two areas, such as between water and land, or (b) provide seams along which two areas are joined together, such as along Market Street. As barriers, edges may be relatively impenetrable and close off areas from one another; as seams, they integrate two areas.
Although not as dominant as paths, edge elements are important organizing features, especially when they hold together such generalized areas as the Bay and the hills. The strongest edges are those which are visually prominent, continuous in form and impenetrable. The Bay is a prime example of this type of edge.
The following guidelines were used to design edges:
1
Important edges should be both visible and continuous.
2
Edges should define districts. Edges which act as barriers between incompatible land use districts should be relatively impenetrable, while edges which act as seams linking two districts together should be quite penetrable.
3
Edges should reinforce directional qualities so that they serve as orientation and organizing elements.

The demarcation between land and water is the most important edge occurring in the Northern Waterfront, and it forms the most important organizing element of the plan. The proposed linear park and pedestrian promenade along the shoreline is a highly visible edge that is varied in scale and exposes the Bay and the City to view; throughout much of its length, the water is visible and accessible. Contrasting uses and open spaces, differentiation of events along the shoreline, and lateral breadth create a shoreline edge that is reinforced by the concentration of paths and activities along it.
Three basic edge conditions along the shoreline are proposed. First, in Sub-Area I the edge is acessible primarily to pedestrians and transit vehicles; automobiles may penetrate to the edge but they cannot move along it for any substantial length. Existing development along part of this edge has a haphazard but delightful nature and has created an extremely irregular edge with water areas among development. It is proposed that portions of this edge be strengthened by increasing the amount of open space and water along the shoreline.
The second condition is found in Sub-Areas II and IV, where shipping uses occupy the water's edge. In Sub-Area II, it is proposed that the edge be defined by a broad boulevard faced by the pier buildings and an upper-level pedestrian way. The edge in Sub-Area IV is similar, but this edge will be created by pier buildings and the southern extension of the Embarcadero Freeway.
The third condition is found in the Ferry Building area, where the Downtown core focuses upon the water. A broad esplanade is proposed from which fingers of development, open spaces, and view corridors extend out into the Bay. At intersections with perpendicular paths, water is brought back to the seawall, thus providing a clear demarcation between land and water.
The Embarcadero Freeway is an undesirable edge—it does not serve any edge functions that are not served by the proposed esplanade, and it is a visual and psychological barrier impeding the connection of Downtown to the water. It should be eventually removed and replaced with a depressed facility.

Nodes

Nodes are central points of activity within the physical environment which are visually identifiable concentrations of some particular characteristic or feature. Nodes are defined by interconnections between transportation modes; by a concentration of use and character, and by an accentuation of building heights. In the Northern Waterfront, however, a uniformly low height of development is necessary to establish the overall open character of the shoreline and to preserve vital views between the City and the Bay. Therefore, to identify nodes in the waterfront area, it is recommended that nodes be formed by significant shoreline parks and plazas upon which transit and pedestrian paths converge and either terminate or interconnect.
Nodes should be formed by Aquatic Park; Fisherman's Wharf Plaza; North Point Park; both Coit Tower and Pier 27 Overlook, which are linked by the Greenwich Street greenway; and Embarcadero Plaza and Ferry Building Plaza. Transportation facilities focus upon these public spaces. Examples include the Powell Street cable car terminus and the recreational ferry terminal at Fisherman's Wharf Plaza; the California Street cable car terminus, the commuter ferry terminal, and the heliport at Embarcadero Plaza and Ferry Building Plaza; the minirail terminals at shoreline open spaces; and the pedestrian paths which converge on these spaces and connect them along the shoreline.

Development Height and Coverage

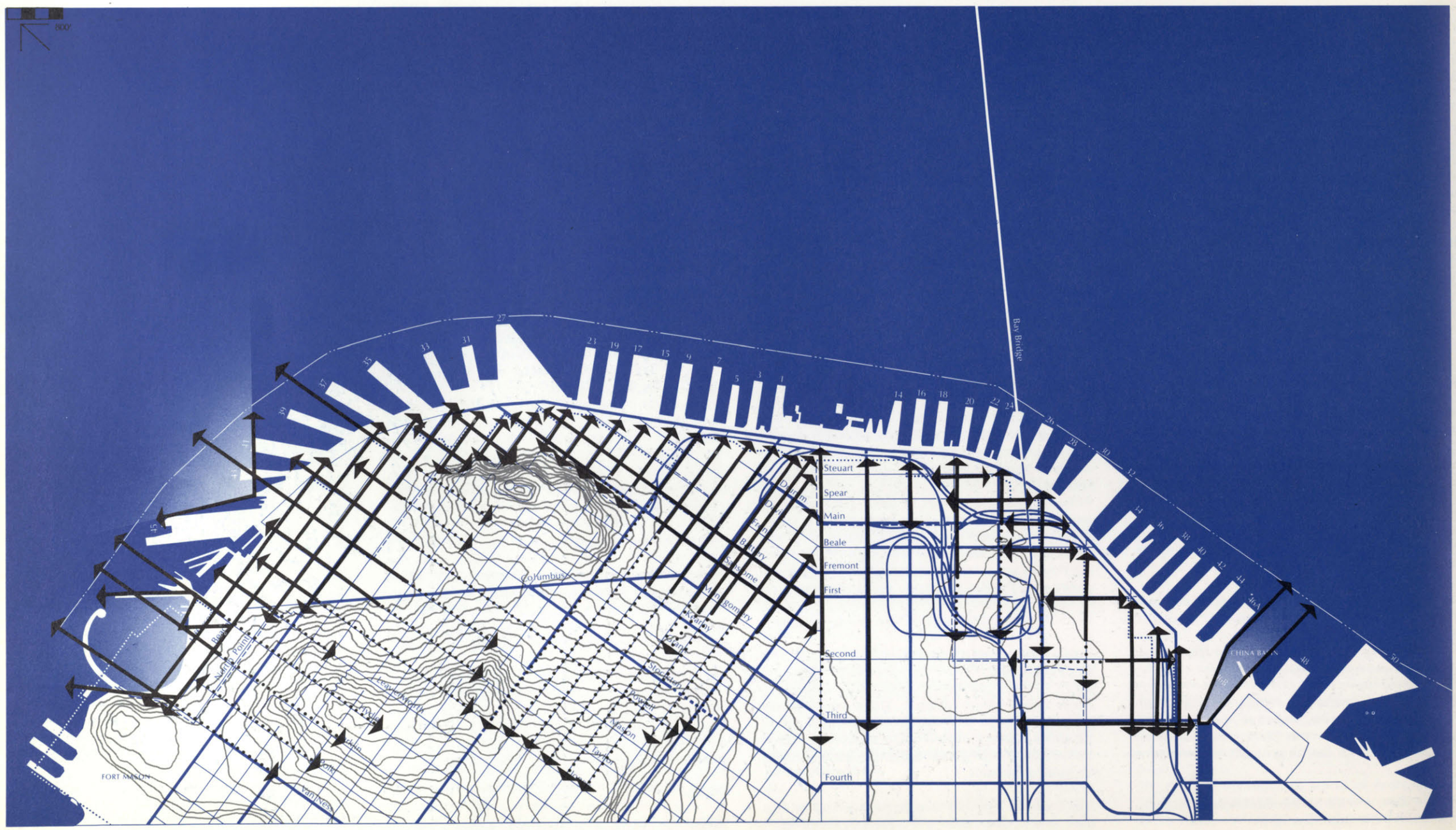
The height of development in the Northern Waterfront should protect and preserve important views, the dominance of significant landforms and landmarks, and other physical features of the City.
In the Fisherman's Wharf area, therefore, the existing 40-foot height limit should be maintained in order to preserve views between the Bay and adjacent hills and to protect the dominance of Coit Tower, Telegraph Hill, and Russian Hill. As noted earlier, however, it would be desirable to provide an observation tower to serve as a landmark at the center of the Fisherman's Wharf area. Such a landmark would necessarily be more than forty feet tall, as are the masts of the Balclutha.
In Sub-Area II, views between the waterfront and Telegraph Hill should be protected by (a) maintenance of the existing 40-foot height limit east of Embarcadero Boulevard and (b) modification of the

31 Existing View Corridors

View Corridor at Grade Level Down Street

Slot View from Hill Down Street

Ground Level Panoramic View from Shoreline
(Graded Tone)



32 Proposed View Corridors

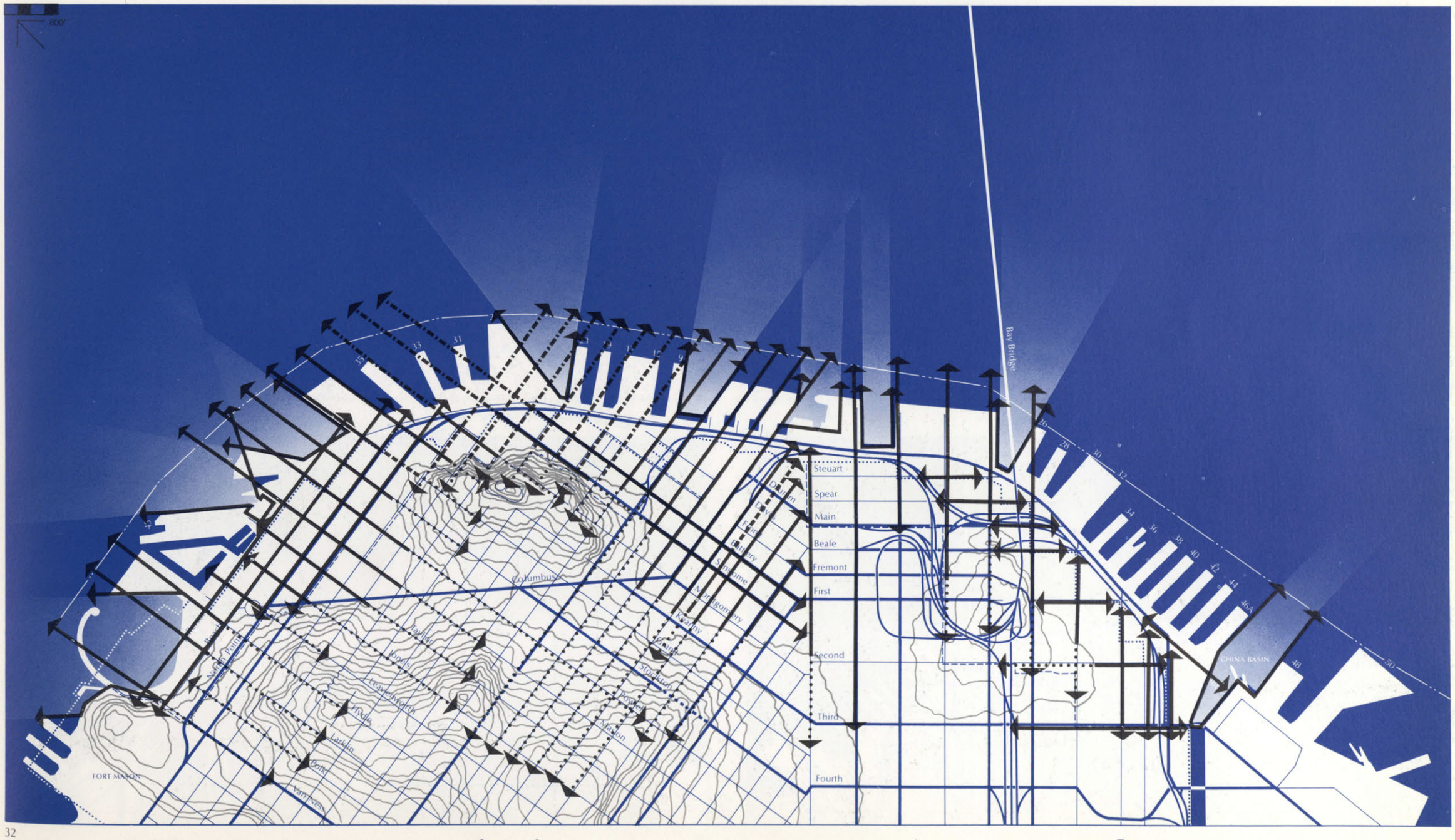
View Corridor at Grade Level Down Street

View Corridor from Hill Down Street

Slot View from Upper Level Above Street

View Corridor from Upper Level Above Street

Ground Level Panoramic View from Shoreline
(Graded Tone)



33 Existing Points of Entry

Freeway

Vehicle

Pedestrian

34 Proposed Points of Entry

Freeway

Vehicle

Pedestrian

35 Existing and Proposed Landmarks

Existing Primary

Existing Secondary

Proposed Primary

Proposed Secondary

36 Proposed Development Height and Coverage

1–2 floors

3–4 floors

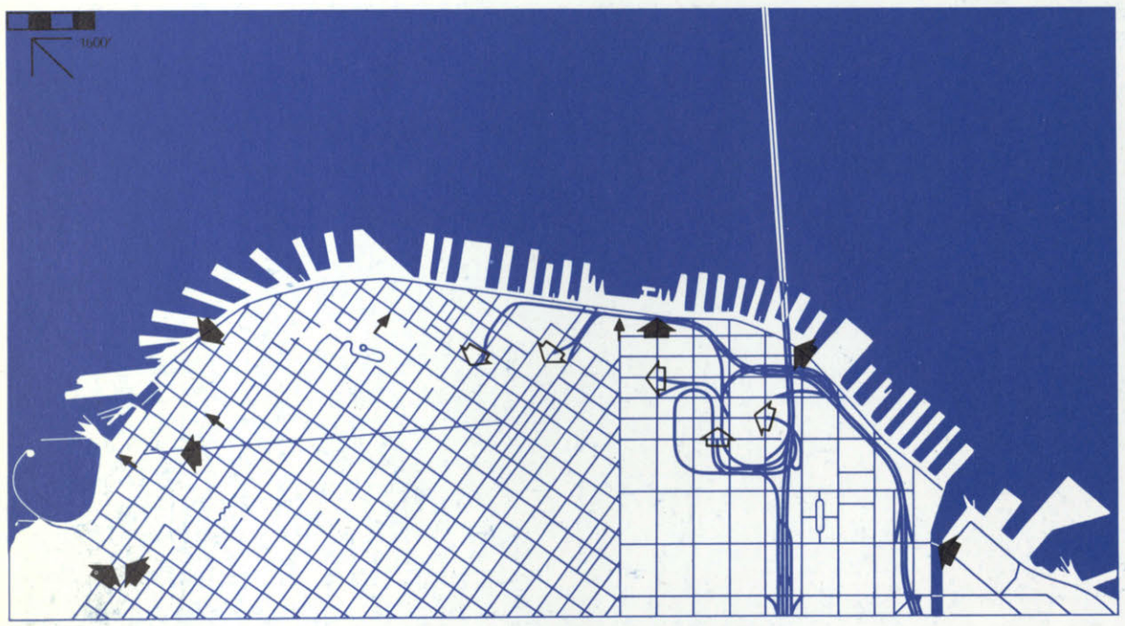
5–9 floors

10 or more floors

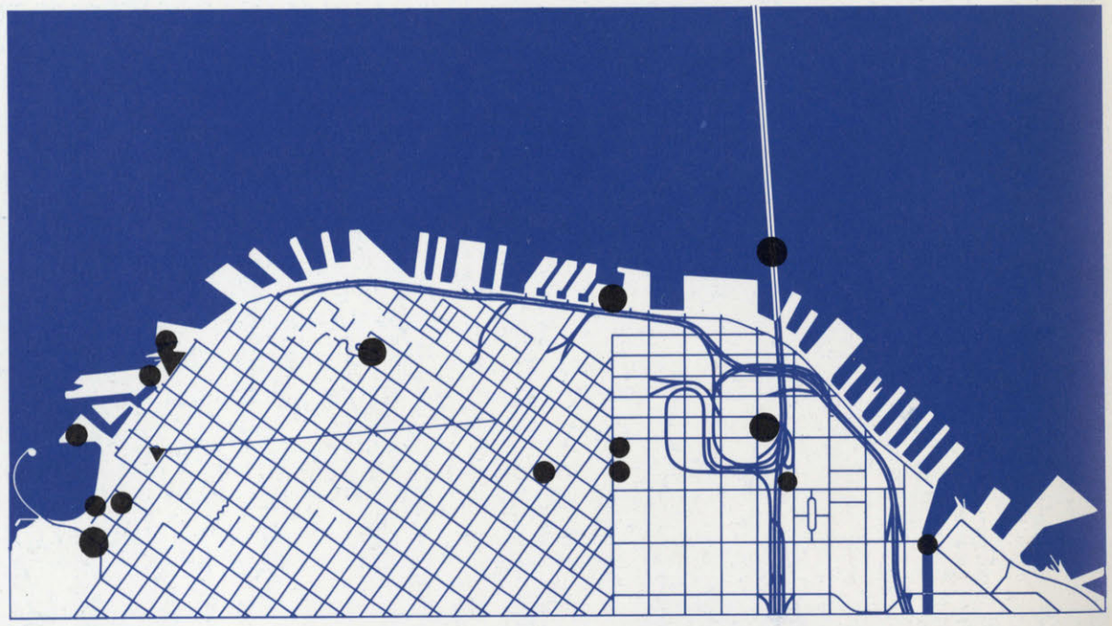
1–30% Coverage (sparse)

31–70% Coverage (medium)

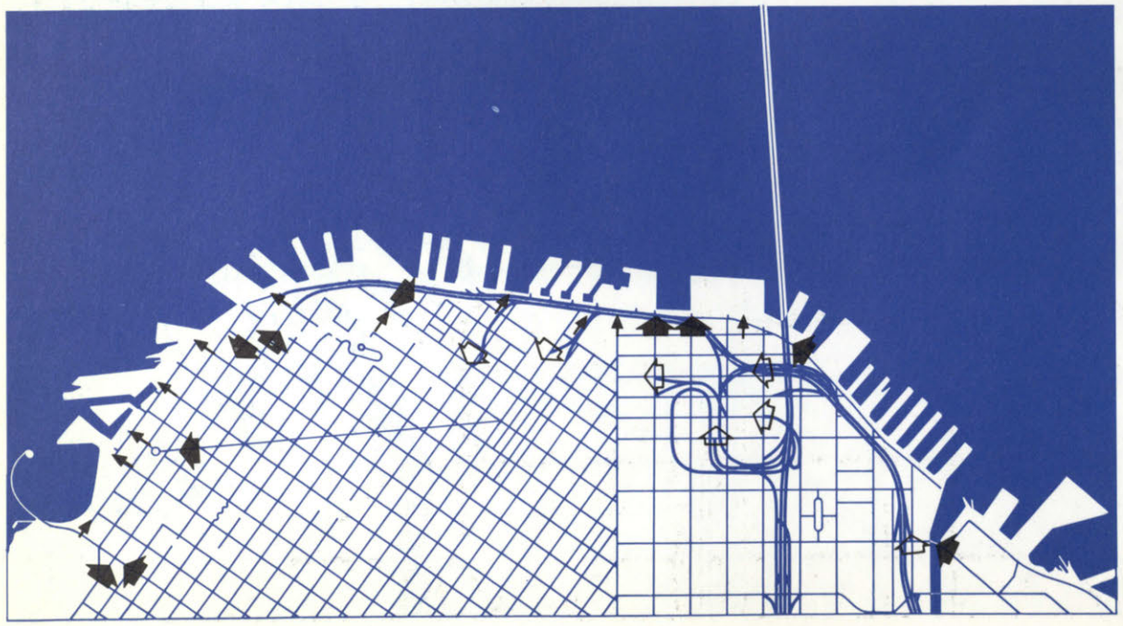
71%+ (dense)



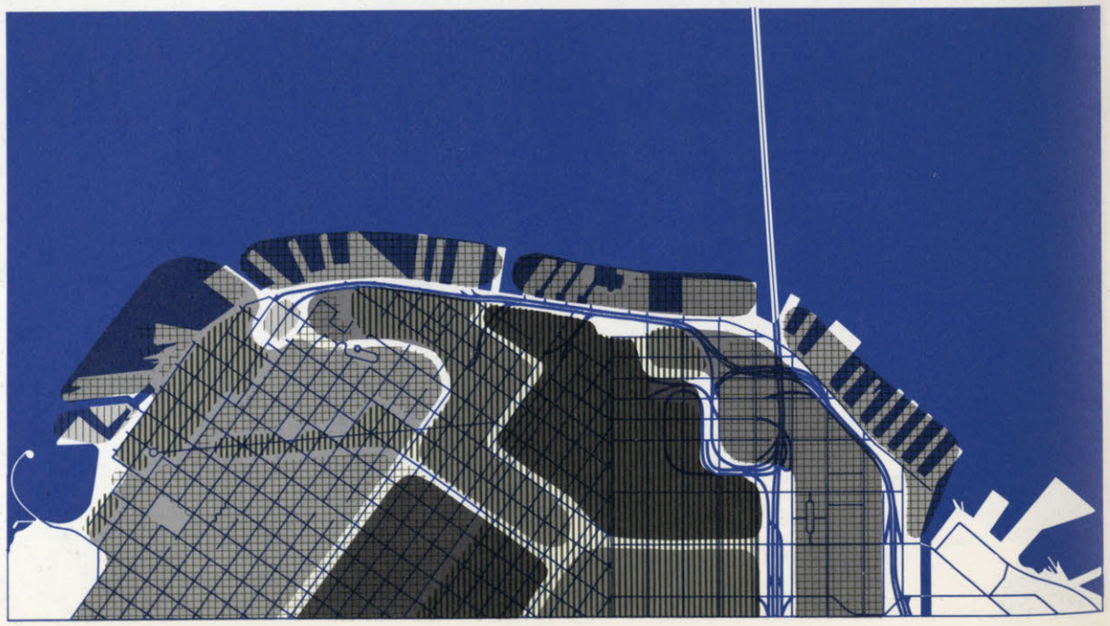
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35



34



36

37·Landscaping Plan

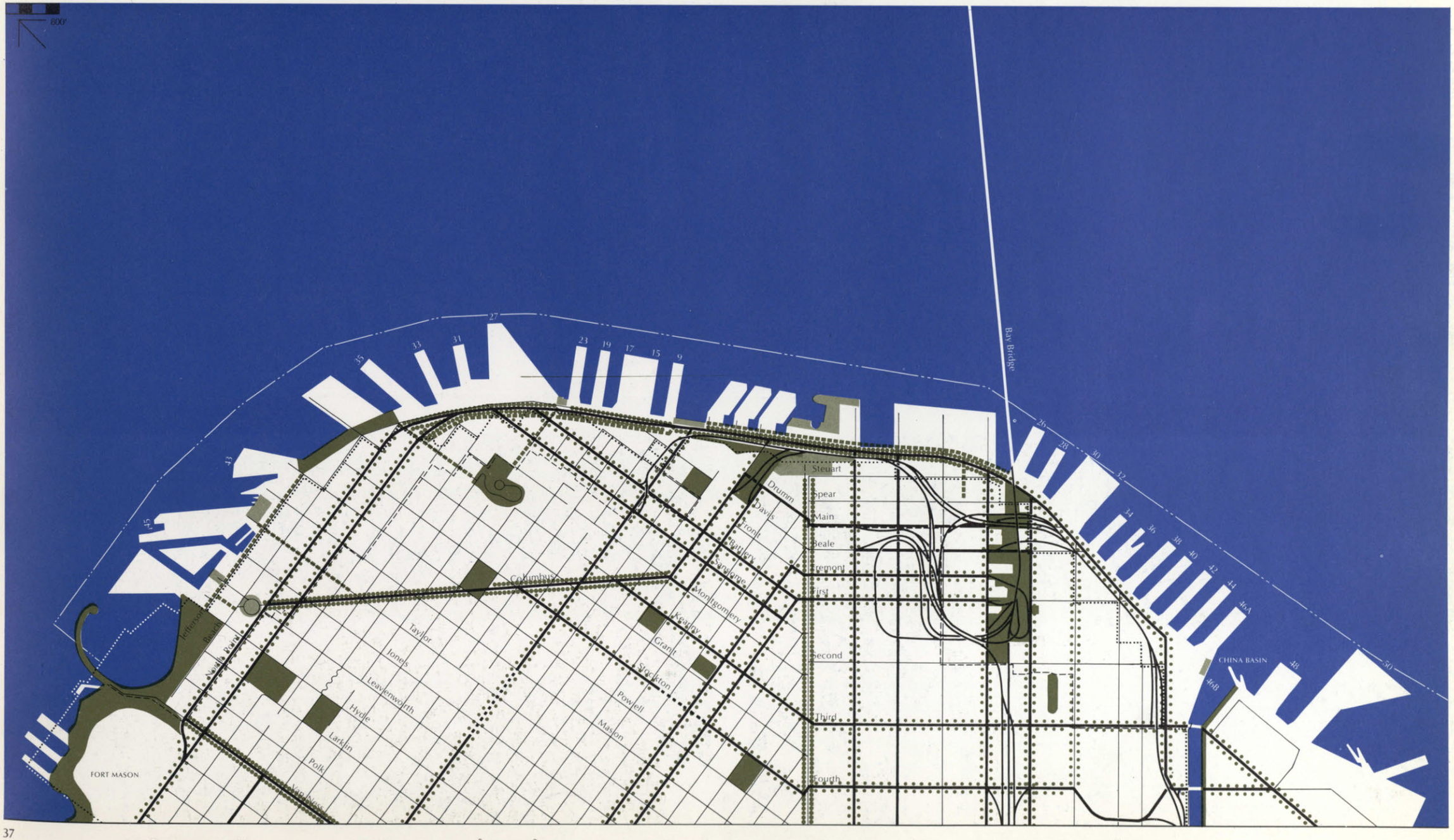
Park

Plaza

Pedestrian Promenade

Boulevard

Street Greenway



existing 84-foot height limit west of the boulevard to establish a sloping development envelope that would reflect the sight lines between hill and water as well as the physical form of the hill itself.

In the Ferry Building area, development east of The Embarcadero should preserve the dominance of the Downtown skyline and should protect the physical prominence of the Ferry Building and its tower. Between Broadway and Howard Street development height should be limited to 65 feet. However, exceptions to a maximum of 84 feet would be possible if development is terraced to increase the openness along view corridors. Development height between Howard Street and the Bay Bridge could be 84 feet without detracting from the significance of the Ferry Building and Downtown skyline or blocking views between the City and the Bay. The height of development west of The Embarcadero will be controlled by the floor-area-ratio provisions of the recently-adopted Downtown Zoning Study.

In general, the policies of this plan indicate that the amount of water covered by development should be consistent with the amount covered by existing piers and should at the same time provide an increase in the amount of truly-accessible open water. Land and platform coverage by structures is related to proposed open space, pedestrian movement, and district character. Thus, where open spaces and pedestrian pathways must occur at ground level, development coverage should generally be less than 100 percent; where open spaces and pedestrian movement can occur at upper levels, development coverage could be 100 percent at ground level and less than 100 percent at upper levels (for example, the Golden Gateway Center). Where district character is strongly pedestrian and physical scale is small, as in Fish Alley, development should be relatively open.

Landscaping

The Landscaping Plan indicates the proposed design treatment for important elements of the open space and movement system. Design of an *urban plaza* should emphasize formal arrangement of trees and functional elements, extensive pavement areas, fountains and outdoor sculpture, generally uniform landscaping materials, separation of planting and use areas (by the use of special plant containers, for example), and equipment and furniture forms which are consistent with the overall design of the plaza. The following plazas should be designed according to these principles: Columbus Circle; Fisherman's Wharf Plaza; Pier 27 Overlook; Pier 9 Plaza; Ferry Building Plaza; and China Basin Overlook.

Design of a *park* should emphasize a more informal arrangement of trees and elements, extensive planted areas which are easily usable, and a diversity of landscaping materials. Parks to be designed in this fashion include: North Point Park; Bay Bridge Park; and China Basin Park.

Boulevard design should include planted medians and sidewalk areas, uniform types and rhythmic spacing of street trees, provisions for the ease and safety of pedestrians, special paving materials in pedestrian areas and uniformly-designed street equipment and furniture. The following thoroughfares should be designed as boulevards: Columbus Avenue; Embarcadero Boulevard; and The Embarcadero. Market Street and Van Ness Avenue are now being developed in accord with these principles.

Pedestrian promenades should include a variety of elements: landscaping, pavement areas, kiosks and vendors, relaxation areas, fountains and sculpture, and information centers. Promenades should be developed where indicated in the Landscaping Plan.

Street greenways should include the planting of street trees along major thoroughfares and access routes. Greenways should be developed on those streets indicated in the Landscaping Plan.

Color and Materials

Color is usually a dominant factor in determining an individual's impression of an environment. San Francisco has historically been a lightly-hued city. Despite the recent construction of some large, darkly-hued structures, the distant view of the City—that from across the Bay—still retains the light character of the past. It is recommended that this general character of lightness be maintained, and that light colors be used on waterfront buildings. Dark colors should occur only where special emphasis is required or where an existing district quality is one of a dark color, such as a district which is comprised predominantly of brick buildings. Further, colors and materials should be used to improve the apparent warmth of outdoor use areas where climate conditions are cool and breezy during most of the year.

Street Furniture and Equipment

Street furniture and equipment are design elements that provide a unified and ordered appearance to a street. The appearance of such street equipment as fire and police call boxes, traffic signals, street lights, and telephones should be unified by a common design theme. For example, the Market Street Design Plan recommends a common modular pole upon which various kinds of street equipment could be mounted. Benches, flagpoles, drinking fountains, plant containers, and other items of street furniture add amenity to pedestrian areas and should also be consistent in form and appearance. In districts emphasizing an historic character, street furniture and equipment (such as gas lights) should be compatible with that character.

Information Systems

Signs and information centers are important elements that inform individuals of the nature and location of major activities and the occurrence of significant events. Signs are of two general categories: (a) those signs that identify the location and nature of activity areas and the routes of movement to, between, and within such areas; and (b) those signs that identify and advertise specific activities.

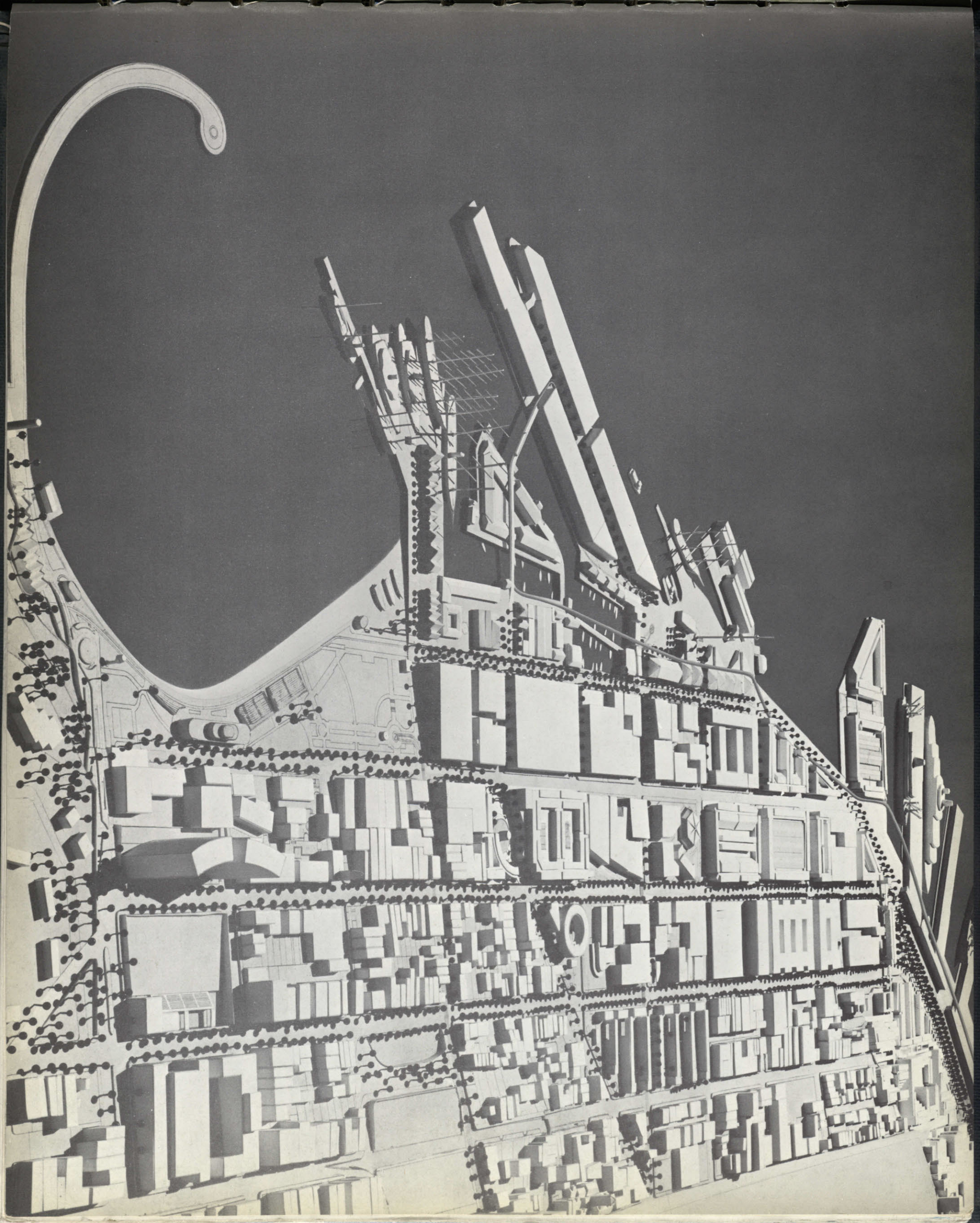
General identification signs, both public and private, should be given the most prominence. Private general identification signs should be limited to those that locate concentrations of activity, such as Ghirardelli Square and The Cannery. Private advertising and identification signs should conform to present zoning standards and, in addition, advertising signs that utilize light, color, and movement in excess of present standards should be limited to locations within the existing special sign district at Fisherman's Wharf. Large advertising billboards should not be located along Embarcadero Boulevard and The Embarcadero. Signs having irrelevant or redundant messages should be eliminated.

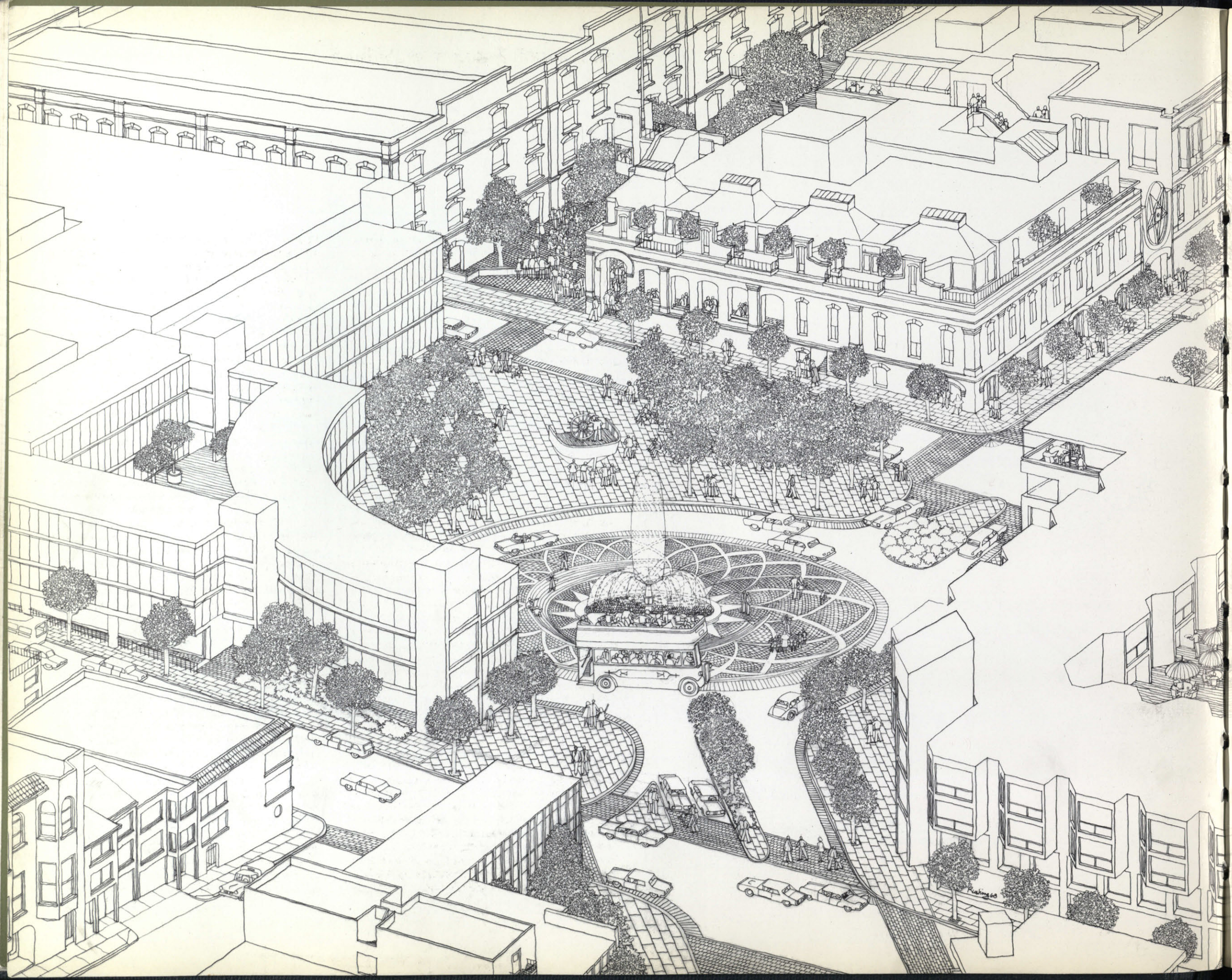
A system of public identification signs should be developed within the Northern Waterfront, and signs in other parts of San Francisco should direct individuals to major activity centers in the waterfront area. A special study should be initiated to develop a coordinated graphic system for public signs within the Northern Waterfront. Such a system should be considered as one part of a comprehensive sign system that would be used throughout the entire City. A coordinated graphic system of public signs would inform residents and visitors where to enter an activity area, how and where to park, how to find their way either by vehicular or pedestrian means, where to enter public spaces and buildings, and the nature of special events occurring within activity areas. The graphic system should be modular and should establish standard colors, lettering, sizes, and materials. Public identification signs should be placed at locations where they are easily visible and at points where people pass in large volumes (for example, along cable car routes and major thoroughfares) and where large numbers of people congregate (for example, at public plazas).

Information centers should be located in major public open spaces and buildings within important activity districts. Such centers should provide transit information and schedules, shipping data (for example, ships currently in port at various piers), and brochures outlining the nature of various activity districts and significant historical events pertaining to the waterfront. These centers could also provide convenient locations for telephones, toilets, mailboxes, and newspaper stands.

Primary information centers should be located at Fisherman's Wharf Plaza and Embarcadero Plaza; and secondary information centers should be incorporated in major private developments (as has been done in Ghirardelli Square) and in all minirail stations and transit terminals.

Sub-Area Plans





38 Fisherman's Wharf Area

39 Columbus Circle

Sub-Area I: Fisherman's Wharf

The plan for Sub-Area I envisions an area of intense activity in a setting characterized by pedestrian movement, diverse open spaces and dramatic views, close relationship between activities and water, and a scale of development that is in keeping with the historic maritime character of the area and which protects views of the City and Bay and accentuates the form of the City's hills.

The plan proposes the development of three districts within Sub-Area I, each of which differs in nature and general physical character. The central district focuses on an urban plaza at the foot of Taylor Street, and districts to the west and the east are each oriented around waterfront parks that feature access to the water and sweeping views of the Bay.

The western district centers around Aquatic Park and Hyde Street Pier. In this area where pedestrian-vehicular conflicts exist, pedestrian movement should be dominant, and activities serving pedestrians should be emphasized. Both the historic character and the land use pattern represented by the Maritime Museum, Ghirardelli Square, The Cannery, and the Haslett Warehouse should be expanded throughout this district. Hyde Street Pier should be used for expansion of the present ship museum, for marine and commercial uses characterized by a reconstructed clipper-ship wharf, and for berthing space for historic ships that would contain retail and restaurant activities. The existing structures of the rowing club should be removed to provide expansion space for the ship museum, to improve pedestrian movement to and from Hyde Street Pier, and to open the vista from Aquatic Park. These structures could be renovated and relocated to a site west of Van Ness Avenue near the Fort Mason railroad tunnel. A Transportation Museum or a San Francisco Municipal Railway Museum, possibly in the Haslett Warehouse, would greatly enhance the general historic character of this activity area.

Fish processing activities now located in Fish Alley along Jefferson Street between Hyde and Jones streets should be relocated to Pier 47. Construction of a breakwater to the west of Pier 45 is necessary to improve shelter for existing fishing boat berths and to expand the area available for boat berthing and fish unloading around Pier 47. Marine uses now located in this area which do not service the fishing industries should be relocated elsewhere, while marine uses which do serve the fishing industries, particularly fish processing, should be maintained.

The central activity district embraces the fishing boat basin and existing restaurant and entertainment uses at Taylor and Jefferson streets. The fishing boat character of this area should be maintained by encouraging the development of those retail and entertainment uses which relate to fishing or water-related activities. A major public plaza should be developed at the foot of Taylor Street as the focus of this district. This plaza—Fisherman's Wharf Plaza—should be oriented toward the water and framed by Pier 45, the existing restaurants, and additional shops and restaurants. This plaza with its cable car and minirail terminals would focus pedestrian activity and place emphasis on the very center of the entire Fisherman's Wharf area. Adjacent to the plaza, Pier 45 would be developed as a combined commercial and residential facility. Existing sheds on Pier 45 could be rehabilitated and renovated to provide space for a variety of shops, restaurants, fish markets, art galleries, import bazaars, studios, and apartments in such a way that the facility would complement the existing commercial uses and offer to the public the exciting and unique views of the Bay and City which are possible from this pier. Any totally new construction on Pier 45 should achieve these same ends. Open rail cars could run down the center of the pier on the existing rail to carry people from Fisherman's Wharf Plaza along the pier to the arch at the Bay's edge. Taylor Street should be designed as a primary pedestrian and transit linkage from Fisherman's Wharf Plaza to Columbus Avenue, and Jefferson Street should be designed as a primary pedestrian linkage between Aquatic Park and the areas to the east. The eastern portion of this central district should project an exposition and bazaar atmosphere through both the kinds and forms of its activities. Family-oriented commercial recreation activities, such as outdoor cafes, an aquarium, a band shell, and a wine museum and tasting area, should be provided at Pier 43 and Pier 43½; some of these activities could be located on ships and floating platforms. The Balclutha should be relocated to Pier 43½ to strengthen and enhance this exposition atmosphere. An observation tower should be constructed at the foot of Mason Street in order to provide a vertical element that would strongly identify the center of Fisherman's Wharf and complement its activity structure.

Existing piers between Pier 43 and 45 generally should



40 Illustrative Site Plan

41 Pier 45 Looking Toward the Bay

42 Pier 45 Looking Toward Coit Tower

43 Fish Alley Plaza

be retained, for they are in relatively good condition, can easily accommodate proposed recreational uses, and will permit the docking of tour boats, recreational boats, and display ships. The rail ferry slip at Pier 43 would be eliminated or relocated to a site south of the Bay Bridge, but the existing arch over the rail ferry slip should be preserved as it would contribute to the proposed character.

The eastern activity district centers on the area around Piers 37, 39, and 41. These piers should be removed to provide along the water's edge North Point Park around which surrounding development would focus. This park with sweeping vistas of Bay and hills would be a major element in the pedestrian promenade along the water's edge in the Fisherman's Wharf area. This eastern district should provide for the expansion of both retail and entertainment uses from Fisherman's Wharf and residential uses from Telegraph Hill. Because auto access in this district is much easier than in the other two districts, hotel and motel uses which are needed in the Fisherman's Wharf area should be located here. The plan envisions a hotel of 800-1,200 rooms located over the water immediately west of Pier 35 (the Matson passenger ship terminal) with smaller motels and shops located on the site of the present rail yard (between Grant Avenue and Powell Street) and on the easterly side of Pier 43; these facilities would all front upon North Point Park. The major waterfront hotel should have associated with it public facilities and shops commensurate with its role as the eastern terminating element of Fisherman's Wharf.

Sub-Area I should be characterized by a dominance of open space which would be achieved by increasing the amount of open waterfront and by developing a continuous pedestrian path along the shoreline. The plan includes two major plazas: Fisherman's Wharf Plaza, the focus of pedestrian activity in the central district, and Columbus Circle, a major entry point to the Fisherman's Wharf area at the confluence of two major thoroughfares, Columbus Avenue and the Bay-North Point couple. A secondary plaza, one edge of which would be formed by The Cannery, should be developed in Fish Alley at the focus of pedestrian movement from Columbus Avenue, Jones Street, Jefferson Street, and the open space between The Cannery and the Haslett Warehouse. The design character of these three urban plazas should emphasize the formal arrangement of elements, extensive pavement areas, fountains and outdoor sculpture, and equipment and furniture forms which are in keeping with the maritime atmosphere of the waterfront.

A new waterfront park—North Point Park—should be developed east of Pier 43, and the shoreline portion of Fort Mason should be acquired to increase further the amount of San Francisco's waterfront parkland and to connect Aquatic Park with the Marina Green. The design of these parks should create an informal character through the appropriate arrangement of elements, extent of planted areas, and use of diverse landscaping materials.

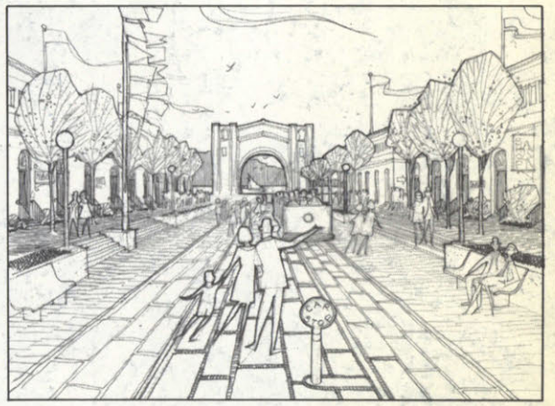
Development height should be kept low to preserve views of the City and the Bay and to accentuate the City's natural landforms. The present height limit of 40 feet should be maintained, therefore, but an exception should be made to permit a vertical landmark element at the foot of Mason Street. Coverage of water by development should be arranged so that extensive open views, spaces, and access to the water are provided at ground level. Open view corridors should be maintained along streets perpendicular to the shoreline, and focal points should be provided within activity districts to enhance the visibility and attractiveness of each district's center. Landscaping and development form should clearly identify and emphasize points of entry to the area from the major pedestrian and transit routes (Hyde Street, Columbus Avenue, and Taylor Street) and from vehicular routes (Van Ness Avenue, Columbus Avenue, and Kearny Street).

The proposed circulation and parking system for Sub-Area I virtually reserves the shoreline for pedestrians and proposes that major vehicular movement and parking be concentrated along inland corridors peripheral to the area. At the present time, intense pedestrian movement occurs in the central and western districts during periods of peak tourist activity. Moreover, the amount of future development programmed by the Land Use Plan insures that pedestrian movement will increase in the future to many times the present volume. Therefore, the plan provides that as one approaches the water, automobile traffic decreases and pedestrian traffic increases.

Jefferson Street should be re-designed to provide a continuous pedestrian-oriented pathway connecting all activity districts along the shoreline. Taylor Street

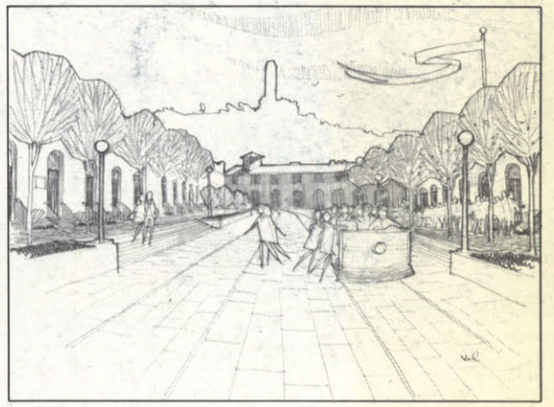


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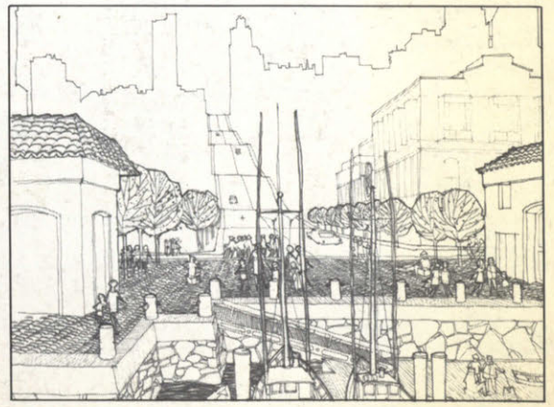


42





43




OMNIBUS
789
POWELL & TAYLOR
517

44 Fisherman's Wharf Plaza

45 North Point Park

46 Jefferson Street Looking Toward Aquatic Park

47 Jefferson Street Looking Toward North Point Park

should be designed as a major pedestrian way connecting Columbus Avenue and Fisherman's Wharf Plaza. Pedestrian routes from parking garages should converge upon Aquatic Park, Fisherman's Wharf Plaza, and North Point Park. New developments on Hyde Street Pier, Fish Alley, Pier 45, and Pier 43 should all provide sufficient internal pedestrian circulation, and these internal paths should be connected to major pedestrian routes. Development of continuous ground-floor activities should be encouraged along the south side of Jefferson Street; vehicular access to abutting uses should be prohibited, but access to interior pedestrian ways should be provided. The Belt Line Railroad track to the Presidio should be eliminated at the earliest possible date in order to improve the character of Jefferson Street and the entire Fisherman's Wharf area.

As outlined in the General Development Plan, the major thoroughfare system in Sub-Area I consists of Van Ness Avenue, Columbus Avenue and a one-way couple consisting of Bay Street (one-way to the east) and North Point Street (one-way to the west). Beach Street will function as a local street providing automobile circulation within the area and will connect the proposed public parking garages. Jefferson Street, although it would be designed to accommodate auto traffic, would be primarily a pedestrian, local (intra-area) transit, and service street.

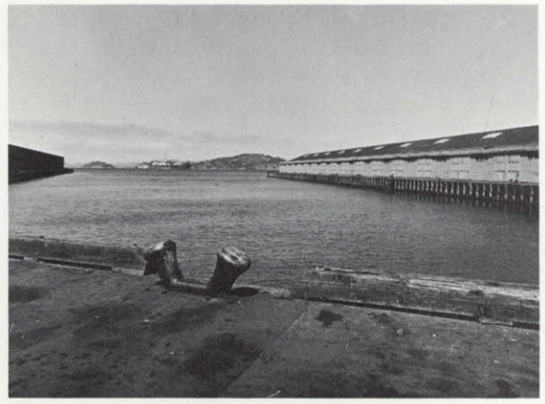
The primary function of north-south streets north of Beach Street should be to service activities and provide pedestrian access to the waterfront, while those south of Beach Street should function as local streets providing automobile access to the Bay-North Point streets one-way couple, activity districts, and parking garages.

A key element of the plan is a system of peripheral parking garages readily accessible to major thoroughfares and local activity districts to minimize automobile movement into and through the district centers. A substantial increase in the supply of off-street parking spaces is needed for two reasons: (a) to accommodate the increased parking demand generated by projected economic growth and (b) to eliminate many on-street spaces, thus permitting existing streets to be used at full capacity to move the increased volumes of traffic that will be attracted to the area.

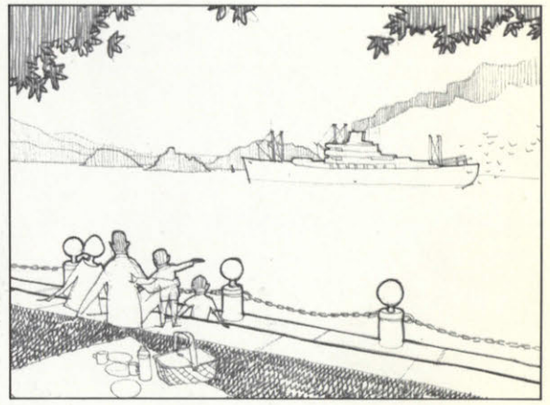
The establishment of this peripheral parking system is the single most important element necessary for the implementation of Fisherman's Wharf area plan, and it is recommended that the major parking garages be constructed through public action. Specifically, public authorities should provide four parking garages, strategically located at the major entry points into the Fisherman's Wharf area—at Van Ness Avenue, Columbus Avenue, and along the eastern portion of North Point Street.

A garage should be constructed beneath the foot of Van Ness Avenue north of North Point Street or beneath the Galileo High School playing field at Van Ness Avenue and North Point Street which would provide 700 parking spaces and service the Aquatic Park—Maritime Museum—Ghirardelli Square complex. A garage should be constructed at the termination of Columbus Avenue which would provide 1,625 spaces and serve activities at Hyde Street Pier, The Cannery, Fish Alley, Pier 45 and Fisherman's Wharf. As part of the development of this garage, a major open space—a grand circle—should be provided to terminate Columbus Avenue both physically and functionally while directing through-traffic away from the area. Motel, office, and retail uses around the circular plaza would delineate it and add activity to its periphery. A garage providing 300 spaces should be constructed beneath the present Longshoreman's Union parking lot on Taylor Street; this facility would serve Pier 45 and Fisherman's Wharf. A garage providing 1,600 spaces should be constructed on the site of the present Kirkland Bus Yard in conjunction with development of ground-floor commercial space. This facility would serve the retail, restaurant, and hotel uses near Pier 35 as well as the center of Fisherman's Wharf and Pier 45. Additional parking garages, if privately-built, should be located in the parking zone between Beach and Bay streets. Furthermore, land uses in blocks south of a line between Jefferson and Beach streets should be required to provide a minimum number of off-street parking spaces to accommodate some portion of their generated parking needs. Public parking north of that line should generally be discouraged, however, in accordance with the objectives of this plan.

Proposed transit facilities for Sub-Area I are designed to achieve three objectives: (a) to provide a means of local movement within the entire area that will greatly reduce the need for local automobile movement between activity districts; (b) to connect, along a shoreline route, activity districts within the area

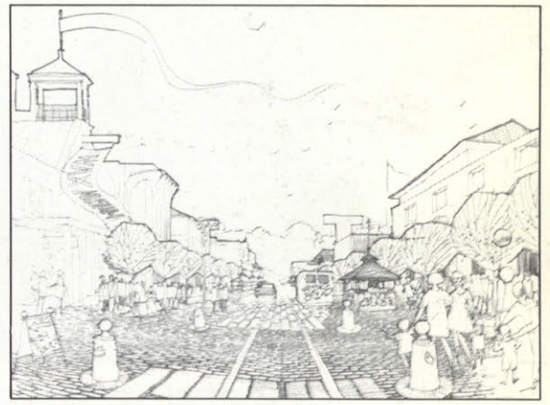


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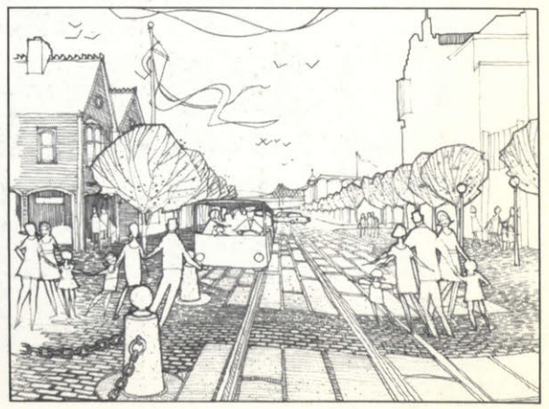


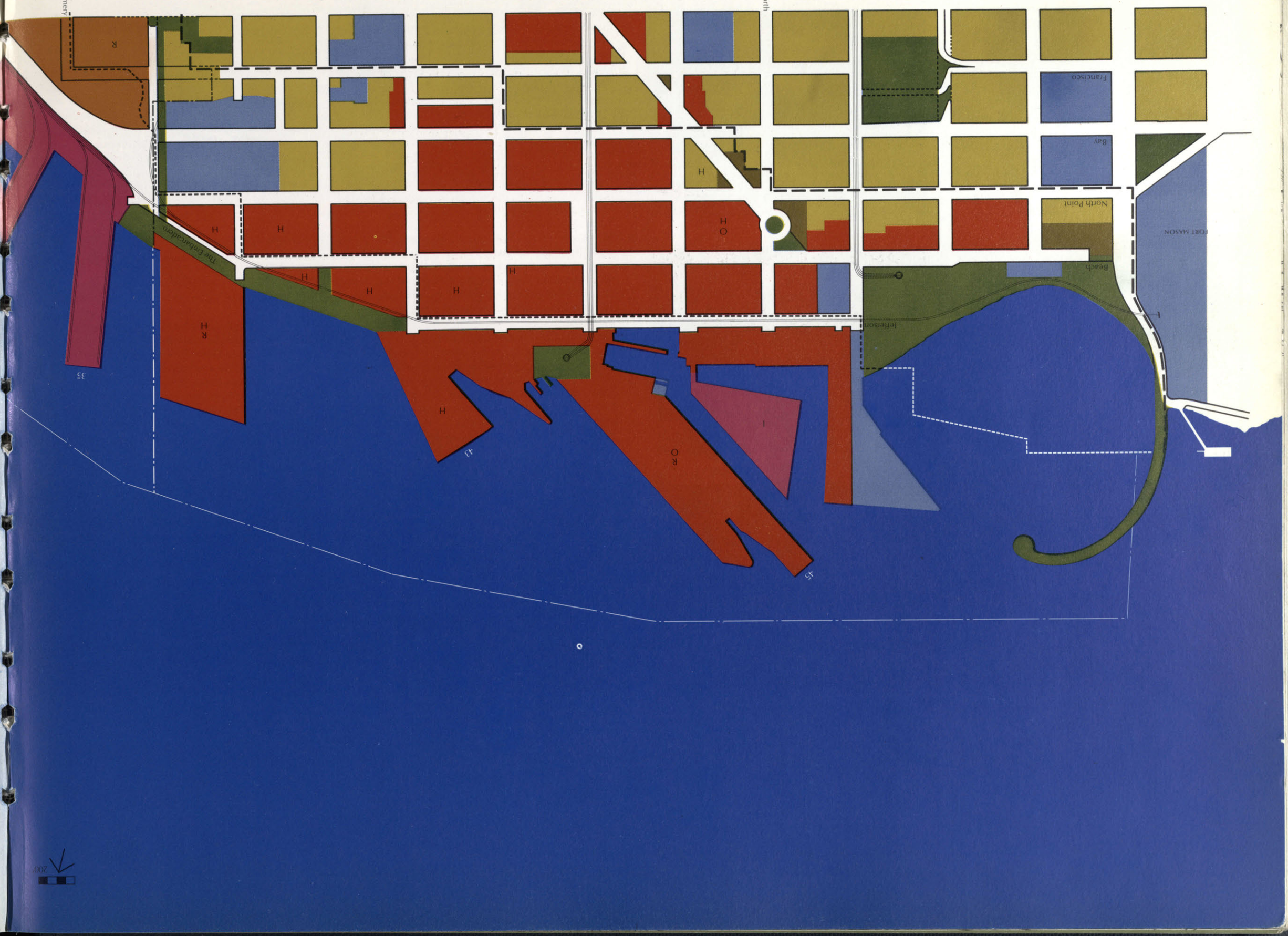
46





47




Montgomery
Kearny
Grant
Midway
Stockton
Powell
Mason
Columbus
Taylor
Jones
Leavenworth
Hyde
Larkin
Polk
Van Ness
Francisco
Bay
North Point
Beach
Jefferson
FORT MASON
The Embarcadero
H
R
O
35
43
45
200'

48 Proposed Land Use

Retail and Entertainment	
Office	
General Commercial	
Maritime	
Light Industry	
Residential	
Public Facilities and Institutions	
Public Open Space	
Water	
Other Permitted Uses:	
Residential	
Hotel	H
Retail, Commercial	C
Office	O
Fish Processing and Marine-Related Industry	I

to each other and to other portions of the waterfront; and (c) to connect intra-city transit systems with the centers of activity districts. The means by which these objectives are achieved include the establishment of a local intra-bus system within the area itself, the provision of the waterfront minirail, and the extension of the Powell Street cable car from Bay Street to Fisherman's Wharf Plaza.

The system of pedestrian movement within Sub-Area I can only be successful if an attractive and efficient system of local transit is provided. The plan proposes that a system of intra-area buses connect major activity districts with the four proposed public parking garages. These buses would be designed for slow-speed travel and easy ingress and egresss. Further, they would offer service at five-minute intervals, would be low in cost or free of charge, and have flexible routes depending on what best suited the current development pattern. Two separate intra-area bus routes are indicated in the plan; one would travel along the waterfront, primarily on Jefferson Street, and connect activity centers and parking garages, while the other would connect Pier 45 with the Columbus Street and Taylor Street garages.

Water-borne transit can play an important role in the development of Fisherman's Wharf. If the use of commuter ferries increases in the future, these ferries could carry people on recreational and shopping trips during non-commute hours between Fisherman's Wharf and Sausalito, Tiburon, Angel Island, and perhaps—depending upon its future use—Alcatraz Island. Water taxis could also connect various activity centers along the waterfront.

An information system throughout Fisherman's Wharf (signing, graphics, audio, etc.) should be developed to aid the public in orienting itself. Key locations where the public should come in contact with this would be the four public parking garages, the major landmarks, the major parks and plazas, the cable car and minirail terminals, and in major private development complexes.

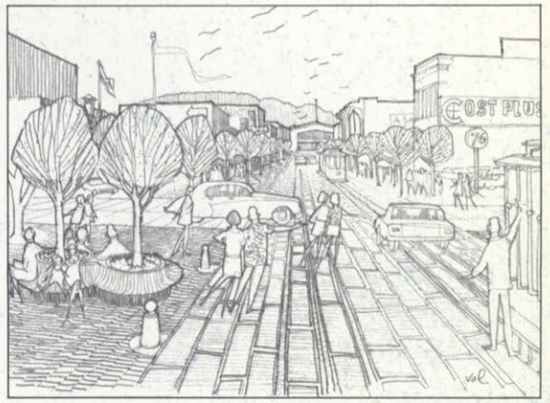
The Fisherman's Wharf area is now one of the prime attractions in San Francisco and the Bay Area. Implementation of the plan proposals would reinforce the area in its role as the major urban recreational area along San Francisco Bay.

49 Taylor Street Promenade

50 Bay Street Looking East

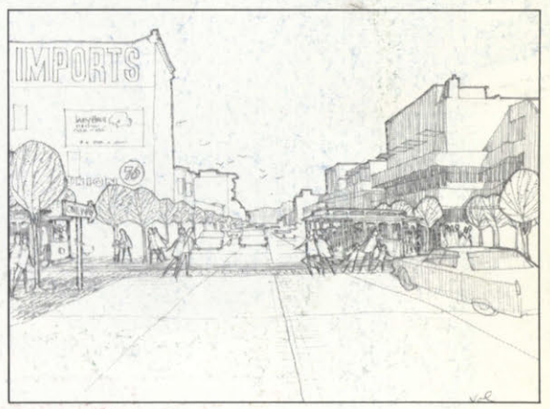


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51 Proposed Trafficways System and Parking

Major Two-Way

Minor Two-Way

Major One-Way

Minor One-Way

Service

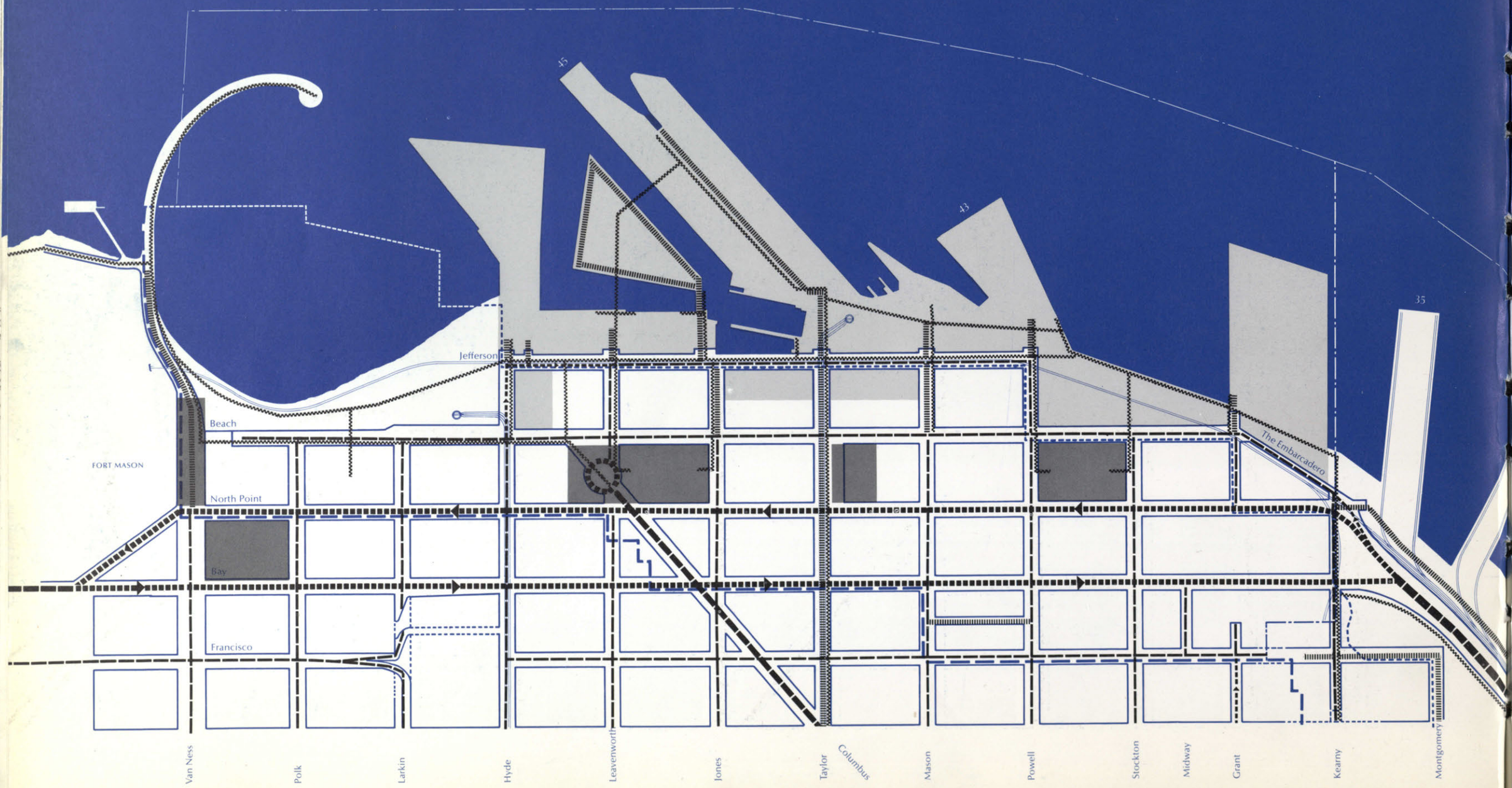
Pedestrian

Proposed Parking Garage

Accessory Parking Not Required

Accessory Parking Required

200'



Cable Car

Marin Bus

Recreational Ferry

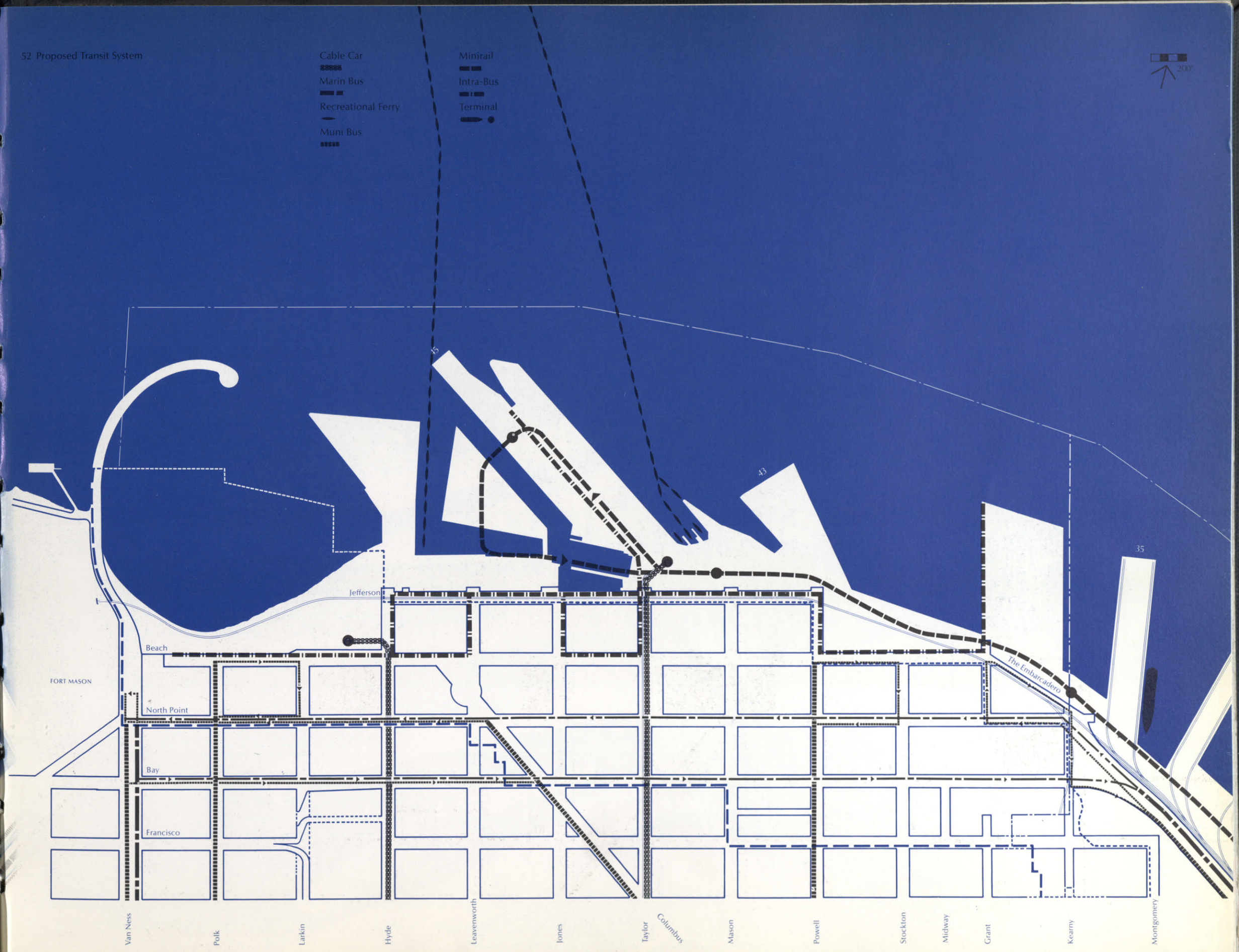
Muni Bus

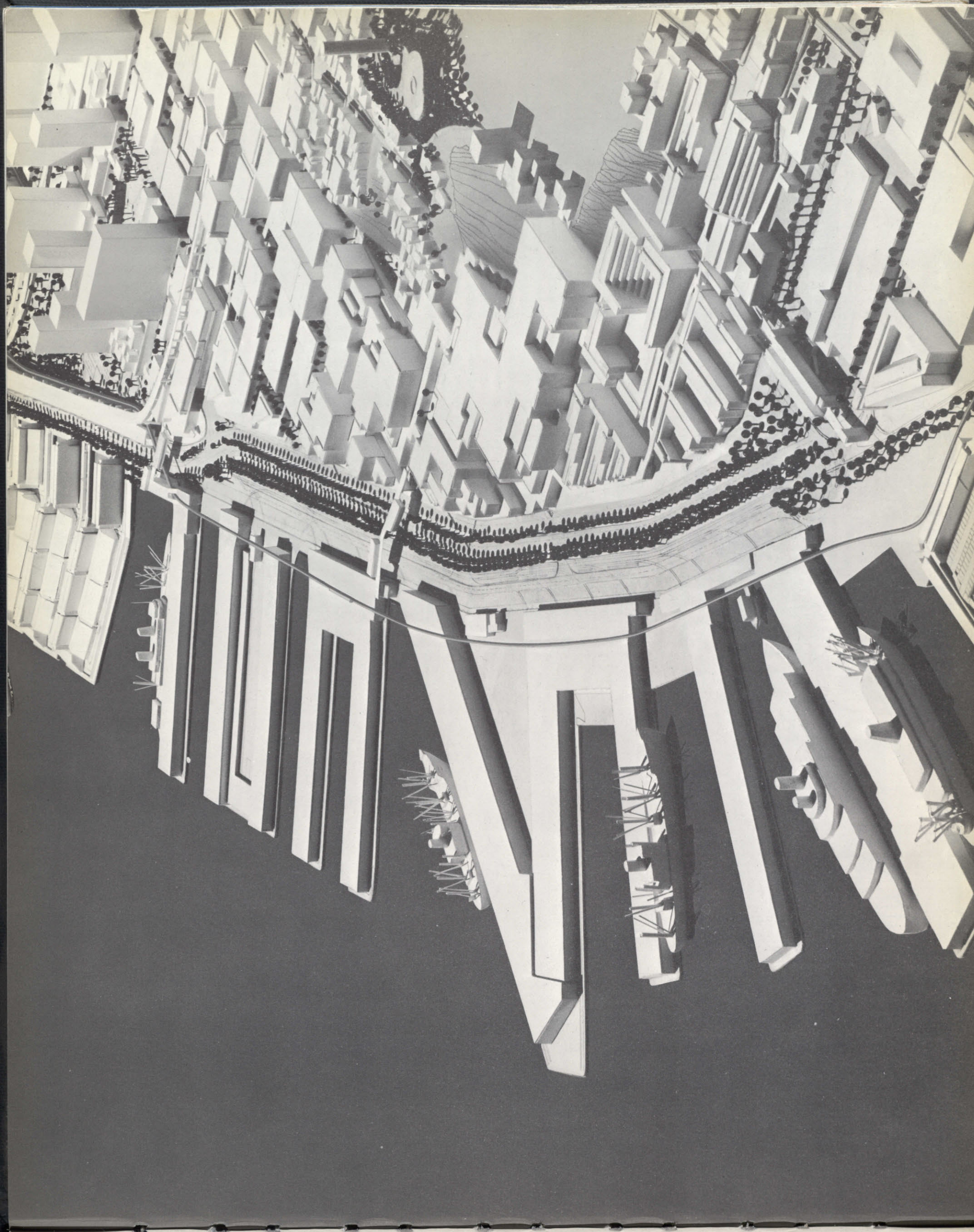
Minirail

Intra-Bus

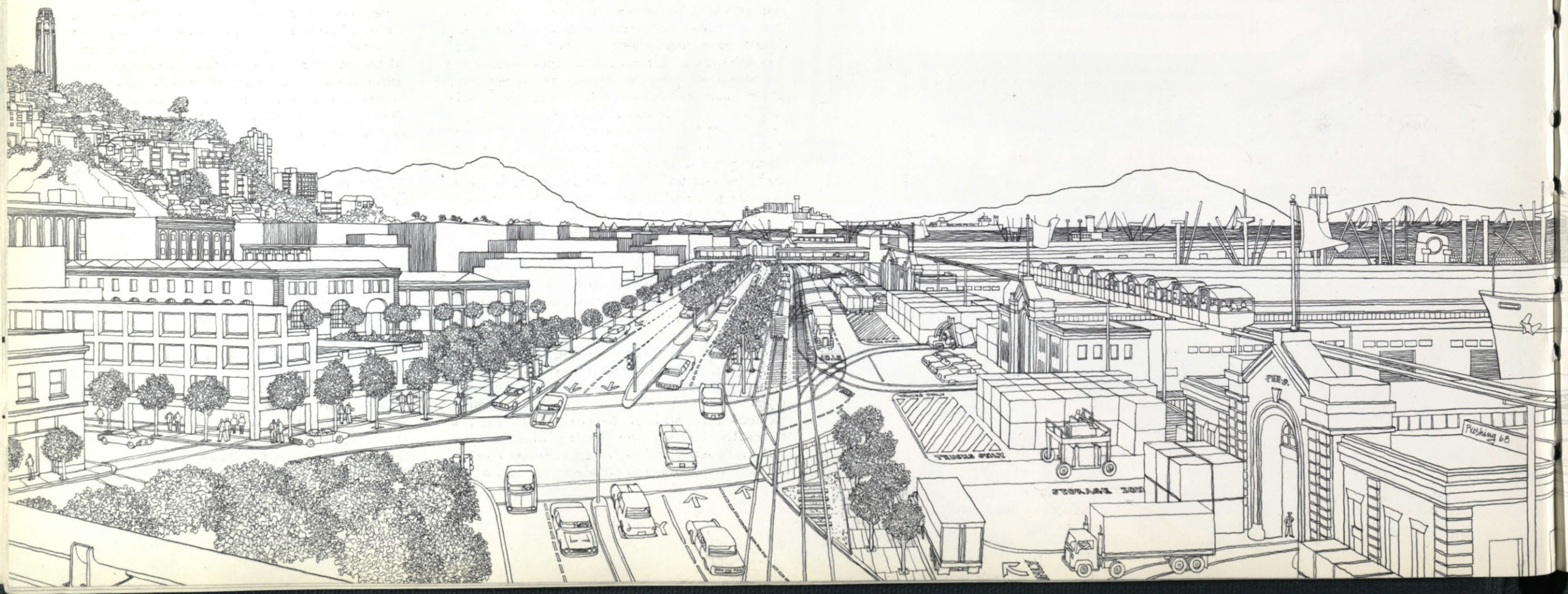
Terminal

200'








PIER 9
Pershing 68

53 Maritime Parkway Area

54 Embarcadero Boulevard

Sub-Area II: Maritime Parkway

The plan for Sub-Area II recommends expansion of commercial uses, especially those related to Downtown such as data processing and business services, and an increase in professional offices and wholesaling uses similar to those currently in the area of Jackson Square. In addition, the plan proposes that both of the above types of commercial uses be integrated with an expansion of residential use from Telegraph Hill to the waterfront. Port activity will remain on Piers 9 through 35, at least during the short-run and perhaps throughout the duration of the twenty-year planning period. At the present time the land use structure in Sub-Area II is changing as industrial and warehousing activities move out and are replaced by commercial uses. The plan recognizes the significance and importance of this trend and therefore establishes an overall activity pattern that integrates the "working port" with the adjacent commercial and residential land uses.

Both the open space and transportation systems in Sub-Area II create continuity along the waterfront and strong links between the waterfront and the interior of the City. The proposed Embarcadero Boulevard, for example, both improves the circulation through the area and expands the open sweep along the waterfront. This new roadway should be located immediately west of the Belt Line Railroad tracks and the existing Embarcadero should be used as a port service road. Consequently, all port traffic and railroad operations would occur east of the new roadway and would not interfere with the non-port traffic moving along the boulevard. Increased traffic capacity provided by this system will satisfy both through and local traffic needs in the short run, and will satisfy expanding local traffic needs in the long run.

In order to improve the traffic connection between the waterfront and Downtown, Battery and Sansome streets should be developed as a one-way couple, with Battery Street leading into Downtown and Sansome Street leading to the waterfront. If an adequate terminal system could be developed in the Financial District, the Marin Greyhound buses could use this couple and deposit their commuter passengers closer to their Downtown destinations. Off-street parking facilities in Sub-Area II should be concentrated along the Battery-Sansome and the Broadway corridors. Parking facilities in the Battery-Sansome corridor should serve visitors to Coit Tower and uses within Sub-Area II. Generally, such facilities should be privately developed, with parking capacities dependent upon the uses the developer chooses to serve. Parking facilities in the Broadway corridor should serve Sub-Area II, Jackson Square, and the Broadway entertainment district. In this case, some public investment may be required inasmuch as the facility will be serving uses outside its immediate area. Short-term parking should be developed at vista points along The Embarcadero to enable visitors to view ships and port activity. These parking areas should be easily visible and accessible from Embarcadero Boulevard.

A funicular railway system located in the Greenwich Street corridor is proposed in order to provide a transit connection between Coit Tower, the waterfront, and the parking garages in the International Market Center which will be constructed below Telegraph Hill. This facility will offer alternative means of reaching Coit Tower and will help alleviate traffic and parking congestion at the tower.

A pedestrian promenade should be developed along Embarcadero Boulevard at an upper level to provide a continuous platform from which to view activities of the working port. Pedestrian connections from inland areas to the waterfront should cross Embarcadero Boulevard via pedestrian overpasses at Pier 35 (Kearny Street), Pier 27 Overlook (Greenwich Street), and at Pier 9 Plaza (Broadway). The design of the overpasses should be in scale with the width of the traffic corridor that they span and therefore should be of generous size. The overpasses should also be capable of accommodating some commercial activities to serve pedestrians and people viewing ships and to enhance the character and attractiveness of these structures. The overpasses at Kearny Street and at Broadway are necessary to connect graciously the shoreline pedestrian systems in Sub-Areas I and III to the pedestrian promenade along Embarcadero Boulevard in Sub-Area II. Also, they will mark the transition points between Sub-Areas I, II, and III. Pedestrian pathways should be extended from Coit Tower and Telegraph Hill to the waterfront along Kearny Street, Greenwich Street, and Filbert Street. Thus, Telegraph Hill will be connected to pedestrian overpasses and the waterfront promenade.

Development along the shoreline should be low, and structures in Sub-Area II should be terraced down from Telegraph Hill to the shoreline so that the form



55 Illustrative Site Plan

56 Embarcadero Boulevard Looking North

57 Embarcadero Boulevard Looking South

58 Pedestrian Walkway—Commerce Street

of the hill is preserved and views between the hill and the Bay are unobstructed. Therefore, the present 40-foot height limit east of The Embarcadero should be retained while the present 84-foot height limit west of The Embarcadero should be modified to reflect the view envelope from Telegraph Hill to the water. The plan provides for the preservation of open view corridors from points of public access on the hill to the water's edge. The appearance of rooftops requires special design attention because many people view the waterfront from the hill above, and unsightly rooftops could greatly detract from the overall appearance of the area. An approved project —the International Market Center—is in substantial accord with these design policies.

Physical development in Sub-Area II should create two districts of differing character. The first of these districts is composed of three sectors, within all of which development units could be quite large. In the first sector bounded by Bay Street, Sansome Street, and the cliffs of Telegraph Hill, grades are flat, streets are short and end abruptly at the cliffs, and views down streets are frequently blocked by existing pier buildings. Consequently, the prescribed role of streets as pedestrian ways and view corridors at ground level could be modified if these same functions occurred at an upper level. Moreover, the local access function of these streets could be extensively changed and even entirely replaced by a new arrangement of local and service streets.

The second sector lies between Union Street and Embarcadero Boulevard in the Battery-Sansome corridor. For the same reasons outlined above, portions of Greenwich and Filbert streets could be vacated and that portion of the corridor treated as a single development unit. However, the visual linkages between Downtown and the waterfront along Battery and Sansome streets should be preserved. A third sector is bounded by Battery Street, Broadway, and Embarcadero Boulevard. In this sector, view corridors at ground level are terminated by the piers to the north and the Golden Gateway to the south; hence, portions of Front and Davis streets could be covered by development.

The height of any development on vacated or covered streets should be less than that on adjacent parcels in order to reflect the overall grid pattern of the City. This restriction will also protect view corridors between Telegraph Hill and the water, and encourage a scale of development that is appropriate to this area.

The second district is the area south of Union Street which includes many structures of historic and architectural merit. Indeed, this area is the last remaining district that recalls to a substantial degree the maritime character of the original waterfront. This district contains a significant cluster of old brick warehouses that can be and have been renovated. The National Ice Houses on Union Street are an example of how some of these old buildings can be rehabilitated for new activities. The historic character of this area should be preserved, and rehabilitation of meritorious structures located between Union and Jackson streets should be encouraged. By its nature this district offers opportunities for incremental change.

Guidelines for the Future Use of Piers 9 through 35

Projections by Arthur D. Little, Inc. of future port requirements indicate that Piers 9 through 35 in Sub-Area II will be needed for some time to serve conventional cargo ships. This study has accepted that finding and has assumed that it will hold over the next twenty years. One of the positive aspects of this finding is that continuation of shipping preserves an authentic maritime atmosphere which heightens the interest and attractiveness of this area. The "working port" is the dominant feature in the Maritime Parkway area. This colorful and genuine waterfront activity is integrated into the fabric of the City and reinforces the image of San Francisco as a great world port and a cosmopolitan City.

However, recognizing that shipping technology is now rapidly changing, and that it is impossible to estimate precisely the time period during which these piers (or any one of them) will be needed for shipping uses, the following guidelines are recommended concerning the future use of Piers 9 through 35.

1

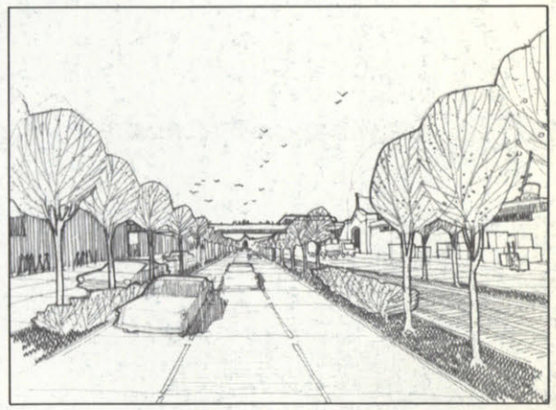
Residential use should expand into the Pier 9 through 35 area from both the north and south as extensions of the land use pattern which the plan proposes for those contiguous areas.

2

Commercial development should expand from the inland area to Pier 27. The Pier 27 overpass should function as a primary link back into the City. The nature of the commercial use, and the timing of its

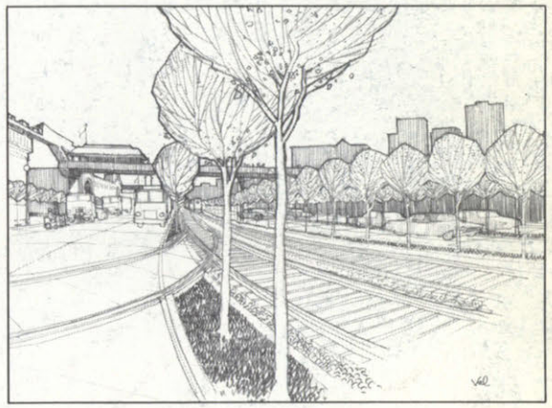


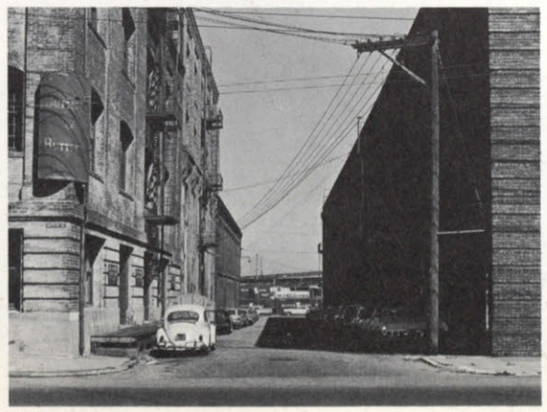
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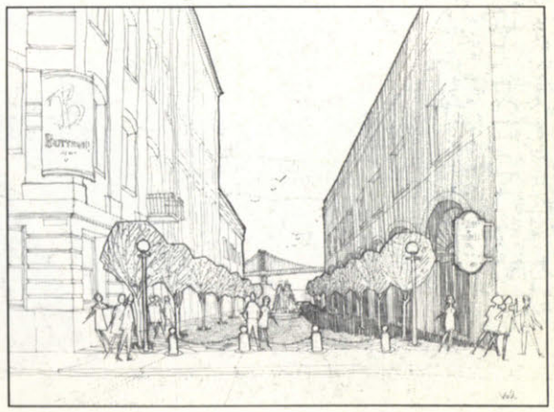


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58



200'

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C O
C O
R H
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H
H
R
Embarcadero Freeway
The Embarcadero
Davis
C
Front
Battery
C
Stockton
Midway
Grant
Kearny
Montgomery
Sansome
Beach
North Point
Bay
Francisco
Chestnut
Lombard
Greenwich
Filbert
Union
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Broadway
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Jackson
Washington

59 Proposed Land Use

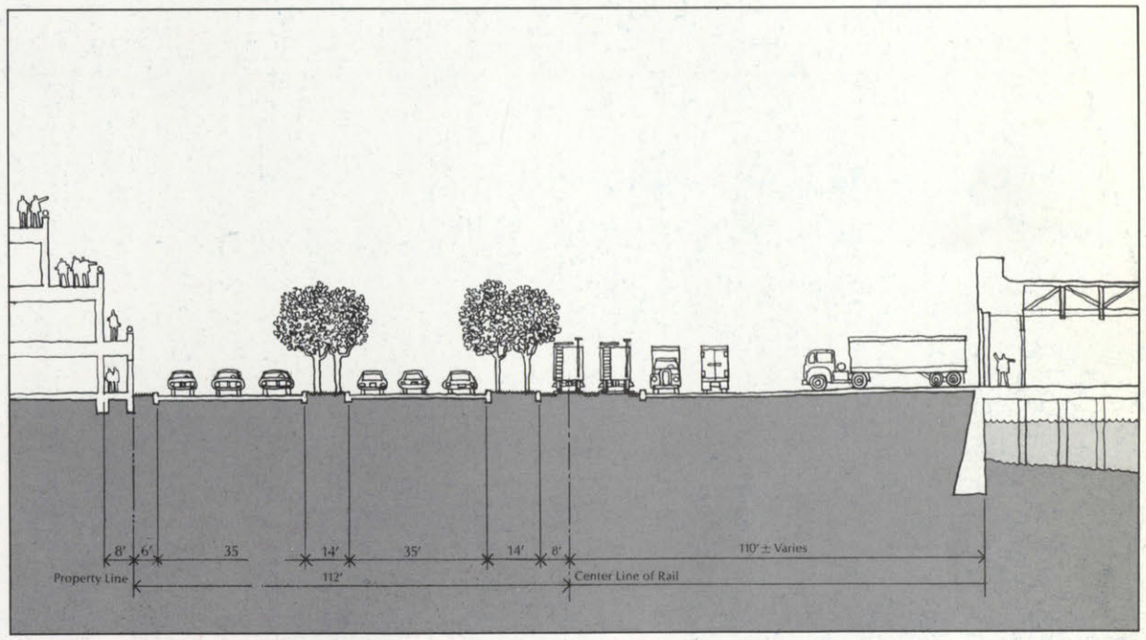
Retail and Entertainment	
Office	
General Commercial	
Maritime	
Light Industry	
Residential	
Public Facilities and Institutions	
Public Open Space	
Water	
Other Permitted Uses:	
Residential	R
Hotel	H
Retail, Commercial	C
Office	O

development, should be such as not to be detrimental to the growth of concentrated retail and commercial activities in both the Fisherman's Wharf area and the Downtown retail district; that is, this commercial growth should not attract uses which would normally locate in either Fisherman's Wharf or Downtown. Primary emphasis should be placed on developing water-oriented commercial recreation uses, such as Foreign Trade Fairs and Maritime Expositions. As noted in the *Special Study* of potential passenger ship terminal sites, Pier 27 could be used as an integrated ship terminal and commercial complex.

3

Expanded open space development should occur at the Pier 27 Overlook, and the shoreline pedestrian promenades in Sub-Areas I and III should be extended continuously along the shoreline from Pier 9 to Pier 35. The height of structures should be kept low, frequent viewing areas of diverse character should be provided, and substantial pedestrian access to the water should be developed. Vehicular access between future development and Embarcadero Boulevard should be concentrated at a limited number of points.

60 Embarcadero Boulevard, Typical Cross Section



60

61 Proposed Trafficways System and Parking

Freeway

Embarcadero Boulevard

Major Two-Way

Minor Two-Way

Major One-Way

Minor One-Way

Service

Pedestrian

Areas Accessible to Automobiles and Appropriate for New Parking Facilities

200'

27 23 19 17 15 9

35 33 31

Embarcadero Freeway
The Embarcadero

Davis

Front

Battery

Sansome

Montgomery

Kearny

Grant

Stockton

Midway

Beach

North Point

Bay

Francisco

Chestnut

Lombard

Greenwich

Filbert

Union

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Vallejo

Broadway

Pacific

Jackson

Washington

62 Proposed Transit System

Cable Car

Marin Bus

Muni Bus

Minirail

Coit Tower Transit

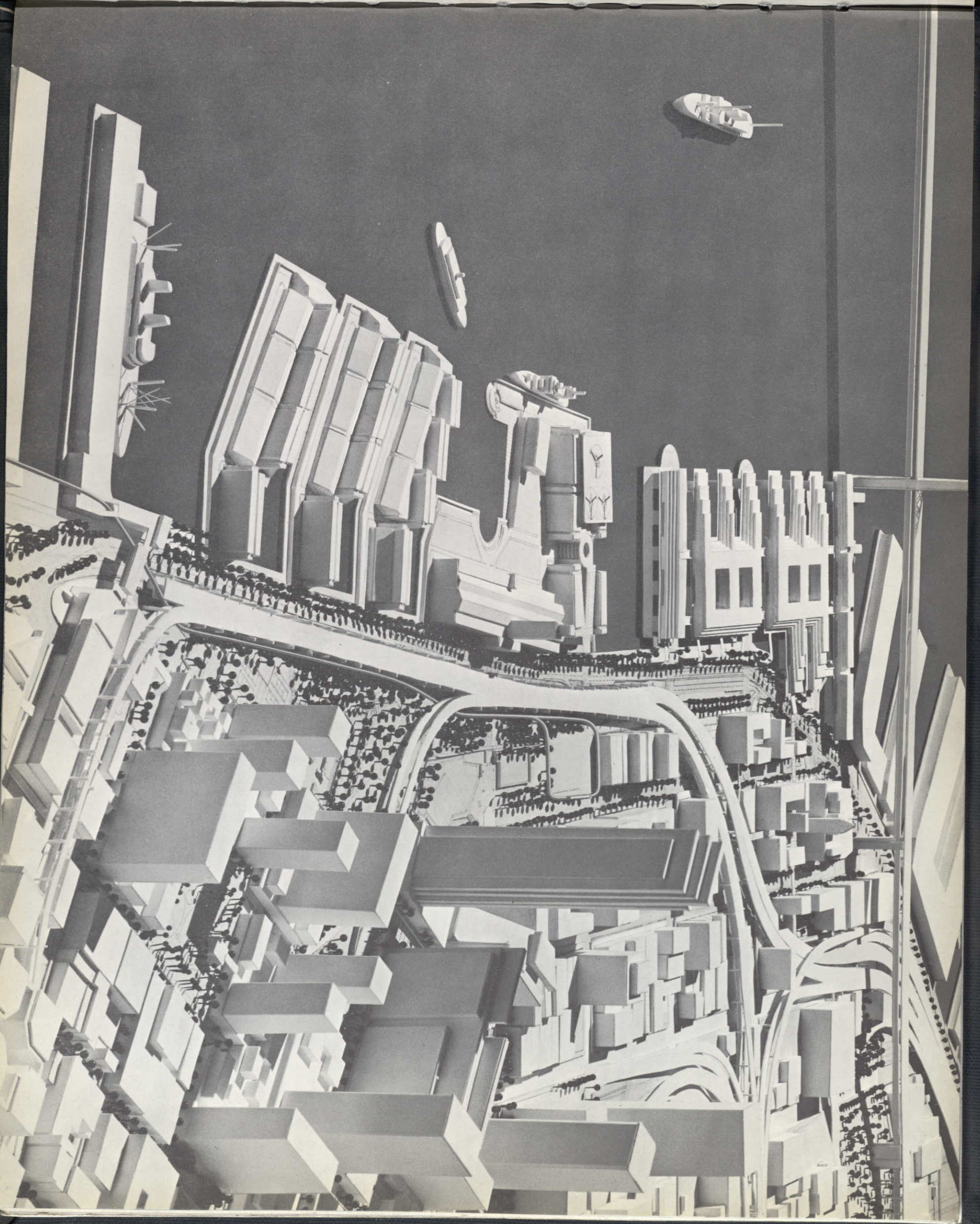
Terminal

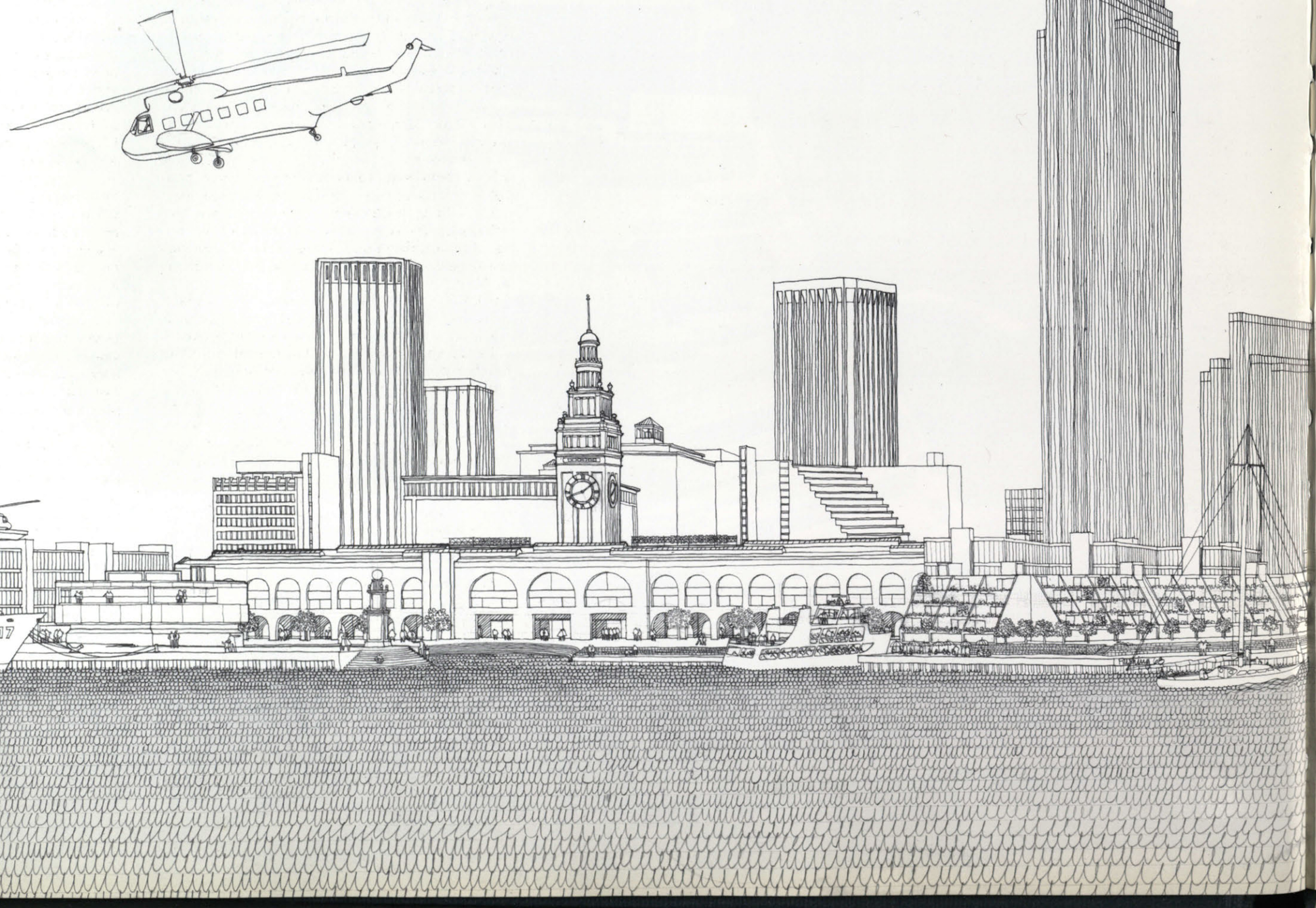
200'

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Embarcadero Freeway
The Embarcadero
Davis
Front
Battery
Sansome
Montgomery
Kearny
Stockton
Midway
Grant

Beach
North Point
Bay
Francisco
Chestnut
Lombard
Greenwich
Filbert
Union
Green
Vallejo
Broadway
Pacific
Jackson
Washington




COAST GUARD
717

63 Ferry Building Area

64 Ferry Building Plaza

Sub-Area III: Ferry Building

The plan for Sub-Area III recommends preservation and rehabilitation of the historically-significant Ferry Building and a development program designed to re-establish the Ferry Building area as an important and symbolic place in San Francisco. A key element in development of this area is effective utilization of the BARTD platform which is required to protect the underwater transit tube's ventilation structure at the rear of the Ferry Building. New buildings are proposed around the Ferry Building which are similar to it in height and which are arranged in such a way that a three-sided plaza is created that is open to the water. This new development can provide at the water's edge a focus of activity in the central area of the Northern Waterfront and at the terminus of Market Street. The activities in the immediate area of the Ferry Building should be an extension of Downtown office uses. The Ferry Building itself should be renovated to provide ground-floor arcades, an improved rear facade, and direct pedestrian access through the building from The Embarcadero to the water.

The BARTD platform should be designed as a major urban plaza defined by peripheral structures. Ground-floor spaces facing upon the plaza should house retail and commercial uses and a restaurant should be developed on top of the ventilation structure. The platform should be designed to include a terminal area for commuter and recreational ferry boats and a moorage at the Bay-side of the platform for "ceremonial" ships such as naval and scientific ships, and ships connected with holidays, military observances and other special events.

The Marin Greyhound terminal should be relocated to a site adjacent to the City bus turnaround at Embarcadero Plaza, and southbound lanes of The Embarcadero should be relocated and placed in an underpass. These actions will reduce the size of the traffic corridor that pedestrians must cross, and will permit expansion of Embarcadero Plaza to the west face of the freeway structure. Eventually, however, the rest of The Embarcadero should be depressed in front of the Ferry Building and then the Embarcadero Plaza should be extended at surface level directly to the Ferry Building.

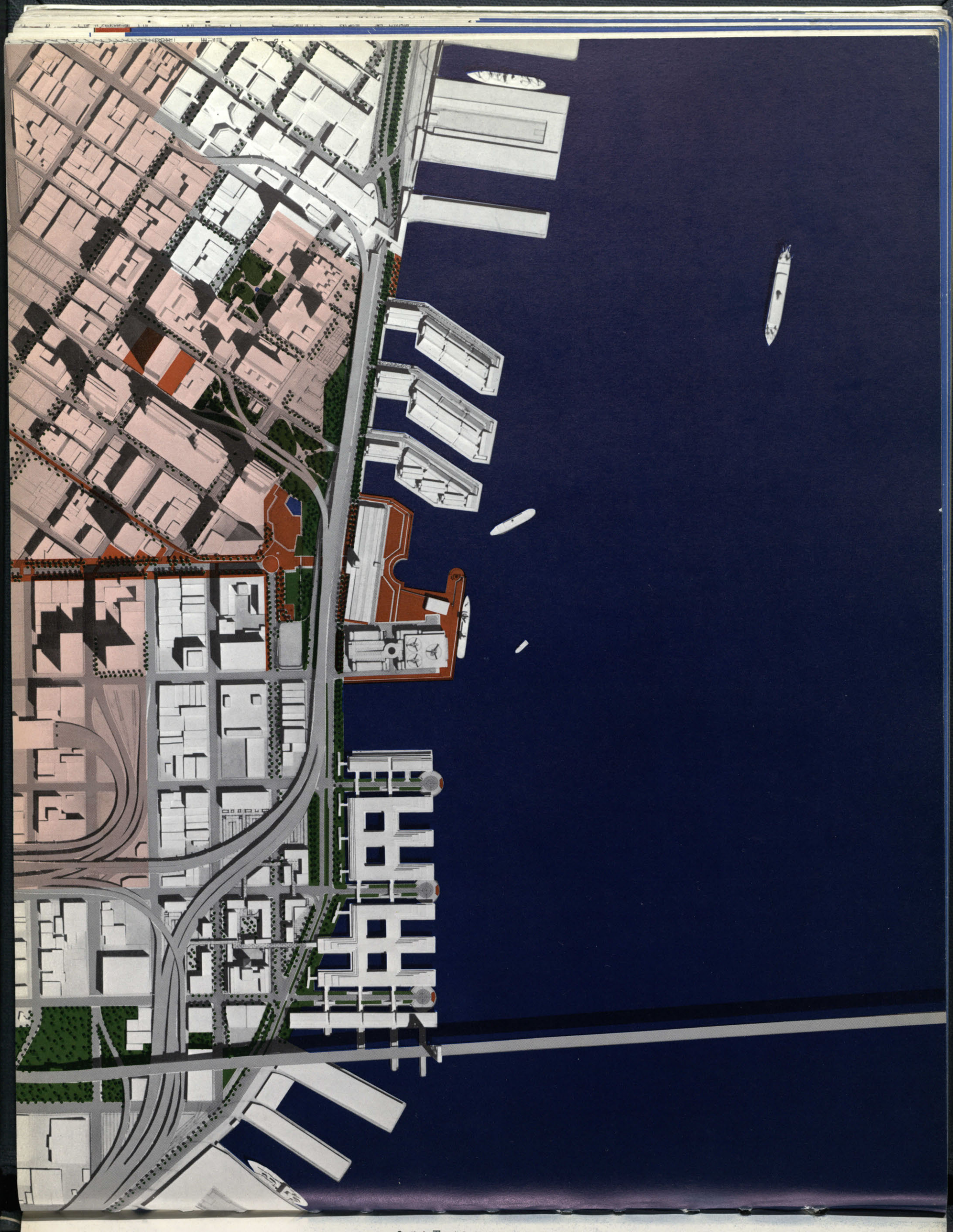
Extension of the California Street cable car line to Embarcadero Plaza and Market Street will provide a strong link between the Ferry Building and the interior of the City. In addition, the development of a BARTD and Muni subway station at Davis Street will enhance accessibility to the Ferry Building from both the City and the region. A permanent Downtown heliport could be constructed on the roof of a structure south of the Ferry Building.

To the north of the Ferry Building, the residential and commercial use pattern of the Golden Gateway area should be expanded to the waterfront. Commercial activities in this area should serve the needs of waterfront residents and complement the retail and commercial activities in both the Fisherman's Wharf and the Downtown areas. Some offices north of the Ferry Building and facing upon Ferry Building Plaza could be developed.

Several development alternatives are possible in the area south of the Ferry Building. This area could be developed in several individual units for low-density office uses that require extensive parking facilities and easy freeway access, or it could be developed as a large multi-use complex for either offices and commercial activities or for use by a single activity, such as an urban university. The latter alternative seems to offer many advantages and should be thoroughly investigated.

Development in the Ferry Building area should provide several large open spaces that afford distant and panoramic views of the Bay, Treasure Island, and the East Bay. In addition to Ferry Building Plaza, major plazas and open spaces should be developed at Pier 9 (Broadway), south of the Ferry Building (between Mission and Howard streets), and beneath the Bay Bridge. These open spaces should be connected by a continuous linear park and pedestrian promenade along the shoreline from Broadway to the Bay Bridge. Development both north and south of the Ferry Building should be designed to bring water back to the seawall and to provide open channels of visual and physical access to the water along streets and walkways which focus upon the Ferry Building area. Public access to the water should be provided in all new developments.

Parking facilities in Sub-Area III should be concentrated in the Mission Street parking corridor that has been proposed in previous studies. However, this parking corridor should be extended to the waterfront to encourage development of parking facilities south of the Ferry Building that would not only provide parking needed by new development but would also eliminate the need for existing parking lots in the vicinity of the Ferry Building and beneath the



65 Illustrative Site Plan

freeway structure.

New structures on the shoreline in Sub-Area III should be of limited height, and those on either side of the Ferry Building should be in scale with it. However, development height could vary if, for example, structures were terraced to increase the openness of view and sky along major view corridors from the City to the water. Thus, although the height of development should be limited to 65 feet, it could be increased up to a maximum of 84 feet in cases where views between the City and Bay are not blocked and where open views and sky are substantially increased. Numerous buildings of historic and architectural merit are found in that portion of Sub-Area III which is located south of Market Street. Many are constructed of brick and in the style of early waterfront warehouses. Preservation and rehabilitation of these structures should be encouraged in order to enhance the historic value of the physical environment and to add interest and variety to this portion of the Northern Waterfront.

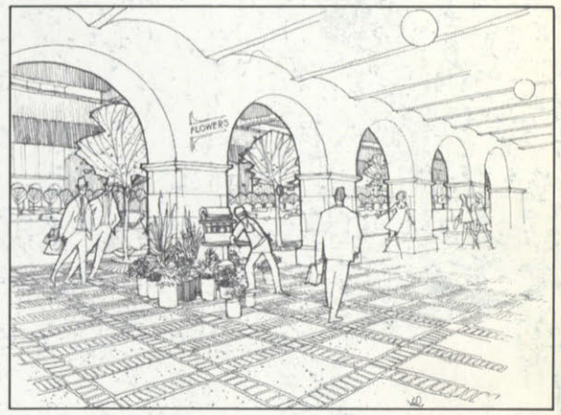
The Ferry Building area is an area of much latent potential for the creation of a major activity center at the foot of Market Street, and implementation of these plan proposals would do much to capture and develop that potential.

66 Ferry Building Arcade

67 Broadway View Corridor

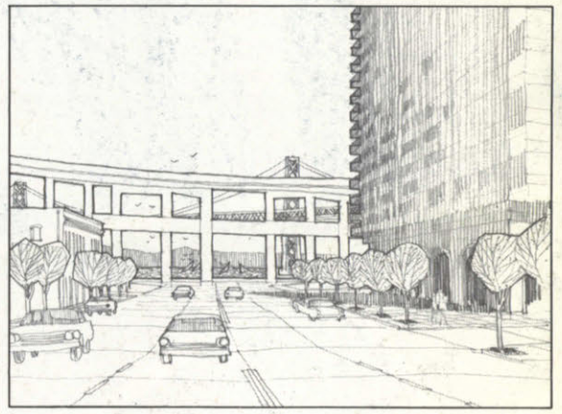


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200'

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28

Embarcadero

Bryant

Harrison

Folsom

Howard

Mission

Market

Pine

California

Sacramento

Clay

Washington

Jackson

Pacific

Stewart

Spear

Main

Beale

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Embarcadero Freeway

The Embarcadero

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Retail and Entertainment	
Office	
General Commercial	
Maritime	
Light Industry	
Residential	
Public Facilities and Institutions	
Public Open Space	
Water	
Other Permitted Uses:	
Residential	R
Hotel	H
Retail, Commercial	C
Office	O

69 Proposed Trafficways System and Parking

Freeway

Embarcadero Boulevard

Major Two-Way

Minor Two-Way

Major One-Way

Minor One-Way

Service

Pedestrian

Areas Accessible to Automobiles and Appropriate for New Parking Facilities

200'

19 17 15 26 28

The Embarcadero

Embarcadero Freeway

Drumm

Davis

Front

Battery

Sansome

Montgomery

Broadway

Vallejo

Steuart

Spear

Main

Beale

Embarcadero

Pacific Jackson Washington Clay Sacramento California Pine Market Mission Howard Folsom Harrison Bryant

70 Proposed Transit System

Cable Car
AC Bus
Marin Bus
Helicopter
Commuter Ferry
Muni Bus
BARTD
Minirail
Terminal

200'

19
17
15
9
26
28

The Embarcadero
Embarcadero Freeway
Drumm
Davis
Front
Battery
Broadway
Montgomery
Sansome
Steuart
Spear
Main
Beale
Embarcadero

Pacific
Jackson
Washington
Clay
Sacramento
California
Pine
Market
Mission
Howard
Folsom
Harrison
Bryant

Sub-Area IV: China Basin

The desirable direction of future land use development in Sub-Area IV depends upon a number of broad and city-wide considerations including the overall structure of housing, industry, and jobs and the total development program for maritime shipping uses in both the Northern and Southern waterfronts.

The inland portion of Sub-Area IV now contains a wide variety of industrial uses that could not be easily relocated and some buildings that are being rehabilitated for use by offices and commercial distribution activities. Approximately 1,900 persons are now employed by firms located in the area, although construction of the southern extension of the Embarcadero Freeway will reduce this number by about 200.

A number of alternative future land use patterns could be developed in this inland portion of Sub-Area IV:

1

One alternative is to retain and expand its present industrial nature. Sites in Sub-Area IV now have good access to transportation facilities needed for the movement of goods and materials and attraction of employees. Railroad, ship, and freeway facilities are located within the area itself, while regional rapid transit stations are only a few blocks away. These sites are also generally level and consist of parcels quite large in size. Thus, the area does possess many physical attributes necessary for industrial development and, one alternative is to retain and expand its present industrial nature.

2

A second alternative is to develop this as a residential area. The close proximity of Sub-Area IV to Downtown provides easy access to Downtown employment opportunities as well as to regional employment centers via the regional rapid transit system and its Downtown stations. High-rise buildings could be developed in the area because preservation of views from the interior of the City is less important here than elsewhere. Furthermore, the area enjoys weather conditions that create a warm and sunny environment that is normally free of fog. Finally, the close proximity to the water affords good access to potential waterfront recreation activities. All of these factors create the opportunity for development of new housing, perhaps for low- and middle-income residents. However, it may be necessary to designate the area as an urban renewal project in order to effectuate a change from industrial use to residential use and to provide the necessary neighborhood facilities, such as schools, which are lacking in the area.

3

The third alternative is to develop a combination of residential and industrial activities designed to create a total neighborhood possessing working and living opportunities for unskilled persons. Thus, low rent housing, job training and appropriate employment opportunities would all be available within easy access to some of San Francisco's finest amenities. An imaginative redevelopment program combining a broad range of private and public actions could offer many social and economic benefits to the people of San Francisco.

These alternatives, along with the alternative of maritime shipping activity, are also feasible for the waterfront area now occupied by Piers 26 through 46. These piers will apparently be needed for maritime uses for some time, although, as was the case with future utilization of Piers 9 through 35, changes in shipping technology and the development of new maritime facilities in the Southern Waterfront may cause them to become obsolete sooner than is presently expected at this time.

The evaluation of these alternatives, and possibly others, thus depends upon the following considerations:

1

The extent and nature of future port development in the Southern Waterfront, and the implications of those developments for continued use of existing port facilities in Sub-Area IV.

2

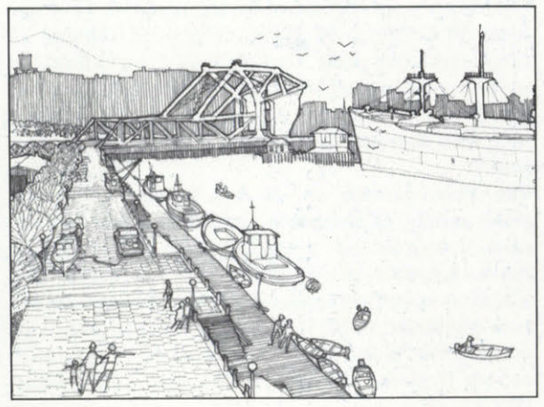
City housing policies, particularly for low- and middle-income residents. This requires a comparative evaluation of the costs and benefits of low-rent housing sites elsewhere in the City with those of Sub-Area IV.

3

City policies regarding industrial expansion and job promotion. Again an examination must be made of the relative costs and benefits of industrial development in Sub-Area IV in comparison to industrial expansion in other areas of the City. For example, the Butchertown industrial redevelopment project may lessen the need and desirability for industry in Sub-



71



Area IV, or it may have no effects whatsoever.

4

The nature of, and opportunities for, private investments. Because of the changes which have taken place up to the present time and a preoccupation with other portions of the waterfront, it is unclear how market forces will respond to new development opportunities in Sub-Area IV.

The analysis of broad considerations such as those outlined above are beyond the scope of this study. Therefore, no land use changes in Sub-Area IV are recommended at this time. However, as time passes, changing economic and social forces may well reveal opportunities for development. Further study of Sub-Area IV in relation to overall City housing and industrial needs and opportunities is needed to definitely determine desirable public policy directions for future development.

The General Development Plan recommends a number of improvement projects within Sub-Area IV which would be necessary regardless of which alternative land use pattern is eventually developed. Street improvements to improve the flow of traffic include: the construction of a vehicular overpass across the Southern Pacific Railroad yard on Fourth Street; the designation of Third and Fourth streets as a one-way couple between Market Street and China Basin; and the designation of Berry and Brannan streets as a one-way couple between The Embarcadero and Fourth Street. In addition, Third, Fourth, Berry, and Brannan streets, The Embarcadero, and the Bay Bridge approach area, should all be landscaped. Construction of long-range improvements include an overlook at Pier 46 and a linear park along the southern edge of China Basin. If Piers 26–46 are removed from maritime use, a shoreline linear park and pedestrian promenade should be developed from the Ferry Building area to China Basin. A number of buildings of historic and architectural merit are clustered together near Third Street and preservation of these structures should be encouraged.

The southern extension of the Embarcadero Freeway, and the railroad yards over which it will be built, will create a visual and physical barrier between the waterfront and interior areas of Sub-Area IV. Therefore, any future redevelopment of the pier area should create open views to the water from Bryant, Brannan, and Townsend streets. Eventually, in order to develop a physical link between the waterfront and the interior of the sub-area, the railroad tracks beneath the freeway should be eliminated.

Sub-Area IV is an important resource for San Francisco in that it is an area with a number of development potentials which can still respond to future City needs.

Implementation

Context for Implementation

The realization of the Northern Waterfront Plan will occur if public commitments and decisions can be coordinated with private investments. The Implementation Plan, then, is designed to integrate various public actions with each other while simultaneously relating total public involvement to private development decisions.

Factors Influencing the Approach

The Northern Waterfront area possesses many unique characteristics which have greatly affected and influenced the proposals set forth in this implementation plan. These important factors have been divided into two general groups:

1
The pattern of land ownership

2
The activity structure and development potentialities envisioned by the plan.

Land Ownership

The most significant feature of the Study Area is the unique pattern of land ownership—nearly two-thirds of the land, or 312 acres, is publicly owned. This situation places the primary responsibility for future development upon public agencies. Moreover, it creates the opportunity for the public to determine to a large extent what the future will be through positive programs rather than negative controls.

Private developers own about 38 percent of the land, or 189 acres, in the Study Area. Of this amount, approximately 12 percent is included in one development unit which is located in Sub-Area II and is owned by one developer—North Waterfront Associates. Several large privately-owned parcels are located in Sub-Area I: Ghirardelli Square, the International Longshoremen's Union, the Travelodge Motel, and the Golden Gate Disposal Company each occupy a complete block (about 2.6 acres), and The Cannery and the North Point complex occupy about 3.5 and 6.75 acres, respectively. The remaining land in Sub-Areas I and II is divided into numerous parcels of various sizes, none of which is larger than one acre. South of Market Street, parcels are somewhat larger than those in Sub-Areas I and II; the Southern Pacific Railroad, the Santa Fe Railroad, and Hills Brothers Coffee each occupy an entire block (4.5 acres).

Land Ownership in the Northern Waterfront

Ownership	Land Area	
	Acres	Percent
Port Authority	151.0[a]	30.1%
City Streets	111.6	22.3
Other City Property	20.8	4.2
State of California	20.2	4.0
U.S. Government	8.7	1.7
Sub-Total	312.3	62.3
Private	189.0	37.7
Total	501.3	100.0%

[a]Includes only land and existing piers—does not include water areas out to the pierhead line (the actual limit of Port Authority property).
Source: John S. Bolles Associates.

Activity Structure and Development Potentialities

The Northern Waterfront is distinguished from other areas in the City and the Region by a unique combination of its port activities and its exceptional development potentialities. The following four elements contribute to the uniqueness of these two characteristics.

Development Area. The development area is unique—it interrelates both land and water, hills, and unusual amenities such as views and authentic maritime activities.

Public Concern About Development. The uniquely attractive and irreplaceable waterfront is highly valued by residents and visitors; these values are so strongly held that the public feels an obligation to become involved and participate in all discussions concerning future waterfront development. Consequently, it is essential that these public concerns are codified into effective public policies.

Development Units. The Northern Waterfront lends itself to development by areal units which are not

72 Existing Land Ownership

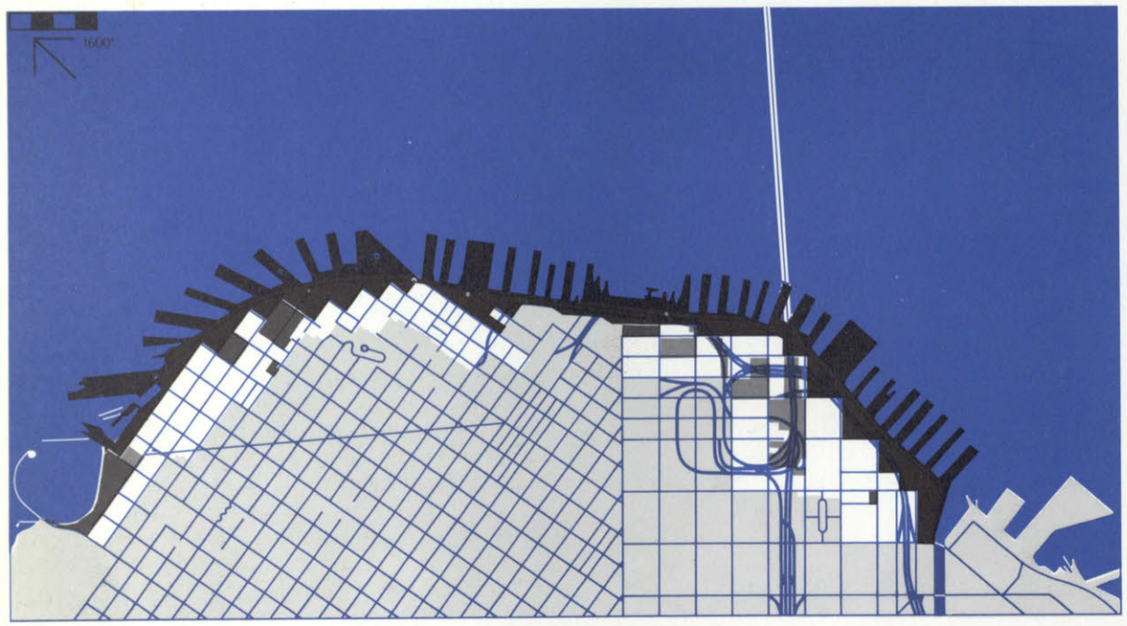
San Francisco Port Authority

City and County of San Francisco

State and Federal

Private

114



72

traditional in the sense that the unit of development is normally dictated by established streets, recorded parcel lines, and utility easements. In contrast, development in the Northern Waterfront outside of the seawall is free of these types of constraints; hence, new and fresh approaches to development and implementation are necessary. An example of a similar situation is the development of the air rights over property owned by the Illinois Central Railroad on Chicago's lakefront; here, development will be governed by planned unit development regulations and programmed according to a number of clearly defined stages and time intervals.

Investment Opportunities. It is clear that the unique potential of the Northern Waterfront will create a broad range of significant opportunities for private investment. While it is impossible to predict all of the future opportunities at this time, the implementation strategy can and should stimulate private action and imagination.

Conclusion

The context for a design of an implementation plan has been conditioned by the points briefly mentioned above. The opportunities afforded by these unique factors create a situation that is different from what may be found elsewhere in the City. Extensive public ownership of land offers the opportunity for the public to influence positively future development rather than attempting to achieve public objectives through sanctions and negative control mechanisms. This is indeed a rare situation—public ownership of land, extensive citizen involvement and participation, vast private investment opportunities, unique physical development possibilities, and all of these elements existent on a site which possesses great natural and man-made amenities. For all of these reasons, then, public policies and programs should be the key mechanisms for determining the future of the Northern Waterfront.

Implementation Strategy

General Approach

In keeping with the above recommendations of achieving greater flexibility and offering incentives and stimuli to private development, the implementation strategy should place primary emphasis upon public commitments and public action, and secondary emphasis upon establishment of zoning controls and regulations. However, there are certain public values which can and should be protected by controls such as height regulations which have been incorporated into the zoning proposals.

Public Commitments

The nature, extent, and timing of public commitments and public actions—both by the City and the Port Authority—provide the foundations and directions of the implementation plan.

Criteria for Public Improvements

The following criteria have been used to determine appropriate combinations of public improvements (both City and Port Authority):

1
Relationship between public investment and the generation of opportunities for private investment. For example, improved access to a particular location or the improvement of a particular pier can serve as the necessary precondition for private investment. One of the implications of this criterion, however, is the precise nature of the partnership between the public and private sectors. Therefore, in some cases it is likely that some public actions will have to be formulated in close coordination with the private developer.

2
Financial limitations and development priorities of the City and the Port Authority. Both the City and the Port Authority are faced with many demands, and yet each possesses limited resources with which to satisfy public needs. Hence, public improvements in the Northern Waterfront will have to be viewed within this context. The situation is further complicated by the fact that the performance standard applied to the Port Authority is that it should operate as a solvent economic enterprise. Consequently, the use of port land for a recreation use may not be justifiable if the above standard is the one that is used.

3
The interdependency among improvements. This criterion gives priority to those projects which must be developed in conjunction with others, both public and private. Frequently, the significance of a specific improvement can only be realized if the improvement is made as part of a number of interrelated projects. In addition, improvement combinations range from those most crucial for stimulating immediate development to those which may prove essential over the long-run.

4
Administrative structure. One of the most important determinants of a public improvements program is the administrative structure and related processes for attaining goals. More specifically, it is essential that proposed improvements can be implemented by the appropriate governmental agencies and that these efforts can be coordinated. Hence, the process of coordinating the functional responsibilities of the City and the Port Authority will influence the nature of public commitments.

Extent of Public Participation

The extent of public participation in waterfront development can vary widely. Four alternative levels of public-private participation are presented as possibilities, recognizing that actual public involvement may vary depending on the development programs.

1
A public agency can lease areas to private developers and operators; the public agency would establish the detailed development criteria, and the private developer would assume responsibility for all development costs. This has been essentially the role of the Port Authority with respect to many of the existing activities on Fisherman's Wharf.

2
A public agency can invest public funds in preparation of a site preliminary to development by private interests; that is, public funds can be used to provide access, utilities, platforms, open space, and other public facilities. This level of participation is comparable to that followed in normal urban renewal operations.

3
A public agency can construct an entire development

and lease the facility to a private investor for operation. An example of this form of participation is the Alcoa parking garage in the Golden Gateway Redevelopment Project.

4

A public agency can construct, operate, and maintain a development exclusive of any private involvement. Examples include municipal swimming pools, national parks, and the Ferry Building.

This description is at best a simplification of public-private involvement in development, as many variations exist with the exact form dependent upon specific circumstances and situations. In the case of the Northern Waterfront, it is anticipated that the respective role of the public and private sectors will vary from total responsibility for streets and recreation spaces to situations where a private developer might lease an unimproved pier and assume responsibility for its rehabilitation and its subsequent improvement.

In general, this study has found that in the short-run it will be desirable for the Port Authority to raise its level of involvement in developing non-maritime activities from the first alternative to at least the second alternative level; the bases for this recommendation are that initially a higher level of involvement is required in order to stimulate the rate and amount of private investment, establish the direction and quality of development, to lower the investor's risk, to concentrate development so that it is reinforcing and produces maximum possible revenue to the Port, and to facilitate the integration of Port Authority improvements with those made by the City. The City should strengthen Port Authority actions by increasing the City's participation in Northern Waterfront development, particularly in the provision of transportation (trafficways and transit) improvements, street landscaping, and the development of pedestrian paths connecting the City and the shoreline.

Coordination of Public Improvements

At the present time, the City Charter requires that each city officer, board and commission file annually with the Department of City Planning a schedule describing all proposed capital improvement projects that are to be included in the budget for the ensuing fiscal year, together with a schedule of all capital improvements that should be undertaken in the five succeeding years. The City Planning Commission then determines each project's conformity to the master plan and assigns general priorities, and recommends to the Capital Improvements Advisory Committee the adjusted total capital improvement program for the ensuing six years.

The Capital Improvement Advisory Committee consists of the Chief Administrative Officer, the Controller, the Director of Public Works, the Director of Planning, the Manager of Utilities, the General Manager of the Recreation and Park Department, and the Coordinator of Housing, Planning, and Development. The Committee is responsible for recommending to the Mayor and the Board of Supervisors (a) priorities of projects funded by property taxes and a financing plan for projects classified as capital improvements, replacement and reconstruction, and maintenance and repair, and (b) priorities for proposed bond issues. The Mayor changes or approves the recommendations and incorporates them in his annual budget proposal. The Board of Supervisors either accepts or modifies the recommended budget and then adopts the final six-year capital improvements program. The Charter prohibits the Board of Supervisors from appropriating money for any capital improvements project which has not been referred to and reported upon by the Department of City Planning.

Therefore, a system now exists that could be used to coordinate effectively City and Port Authority actions. The City Planning Commission and the Capital Improvements Advisory Committee are logical instruments to use in coordinating City and Port Authority actions because they now have this function with respect to other City agencies and because improvements by the Port Authority are directly related to improvements by City agencies.

Zoning

The zoning proposals are aimed at achieving the following objectives:

1

Establishment of an overall land use pattern that emphasizes and encourages the integration of waterfront and inland activities by proposing flexible use districts on waterfront properties.

2

Establishment of sub-areas containing dominant land uses, while at the same time permitting the land use mixes to vary, by flexible treatment of the conditional uses category and by the use of planned unit developments.

3

Coordination among various public agencies and private investors by channeling development proposals through the Department of City Planning and the City Planning Commission for recommendation and approval.

4

Protection of waterfront amenities and aesthetic qualities by establishing the shoreline character through control of development height and water coverage.

5

Development of land use zones that permit accommodating the dynamics of waterfront development without necessitating subsequent amendments to the zoning regulations.

Proposed zoning regulations for the Northern Waterfront emphasize future development within the context of present land use trends and commitments; therefore, every effort was made to use existing zones with changes proposed only when absolutely necessary. In the latter case, the following circumstances did seem to justify creating some new zoning provisions. Specifically, present parking regulations do not include the flexibility needed to implement the proposed system of off-street parking, particularly the system proposed for Sub-Area I. Zoning controls do not deal adequately with the problem of development over water areas, since site coverage is based upon traditional set-back and floor-area-ratio standards, and these standards do not apply in areas of open water. Present regulations do not adequately consider key aesthetic values, such as views and view corridors, that are so basic in the development of the Northern Waterfront. Finally, existing use districts do not permit the full range of mixtures of land use types that are possible and, in fact, highly desirable in portions of the Northern Waterfront. Therefore, present zoning provisions of the City Planning Code should be revised in order to permit control of the coverage of water by development and to protect aesthetic values; they must also be made more flexible in order to control the location of off-street parking facilities and to permit desirable land use mixtures.

Public Improvements

The feasibility of proposed improvements depends upon the anticipated costs and benefits associated with each proposal. The total costs and benefits may accrue over a lengthy time period, and as this time period extends into the future, the ability to predict the consequences and how they are valued diminishes. Thus, although this is a twenty-year plan, it is difficult at this time to foresee all of the important consequences associated with each plan proposal. The proposed schedule of public improvements then focuses upon those improvements which can be provided over a short-range period, which are significant in establishing the direction of subsequent development, and for which it is possible to predict with reasonable accuracy the generated consequences. Some improvements are recommended for the distant future, but final decisions on these proposals should be deferred until detailed feasibility studies have been completed.

Immediate Action

The following improvements should be undertaken immediately to alleviate the present traffic condition which is seriously congested during hours of peak use, hazardous to both drivers and pedestrians, and tends to frustrate the development of some activities.

1
Install a traffic light at Taylor and Jefferson streets. This facility will greatly alleviate conflicts between pedestrians and vehicles at this congested intersection.

2
Extend the present one-way direction of traffic flow on Taylor Street so that Taylor Street is one-way southbound between Pier 45 and Bay Street. In conjunction with this action, Powell Street should be designated as one-way northbound between Bay and Jefferson streets. These improvements will ease traffic movement into and out of Fisherman's Wharf.

3
Install a traffic light at Bay Street and The Embarcadero to facilitate left-turn movements from The Embarcadero to Bay Street during evening peak hour traffic.

Stage One

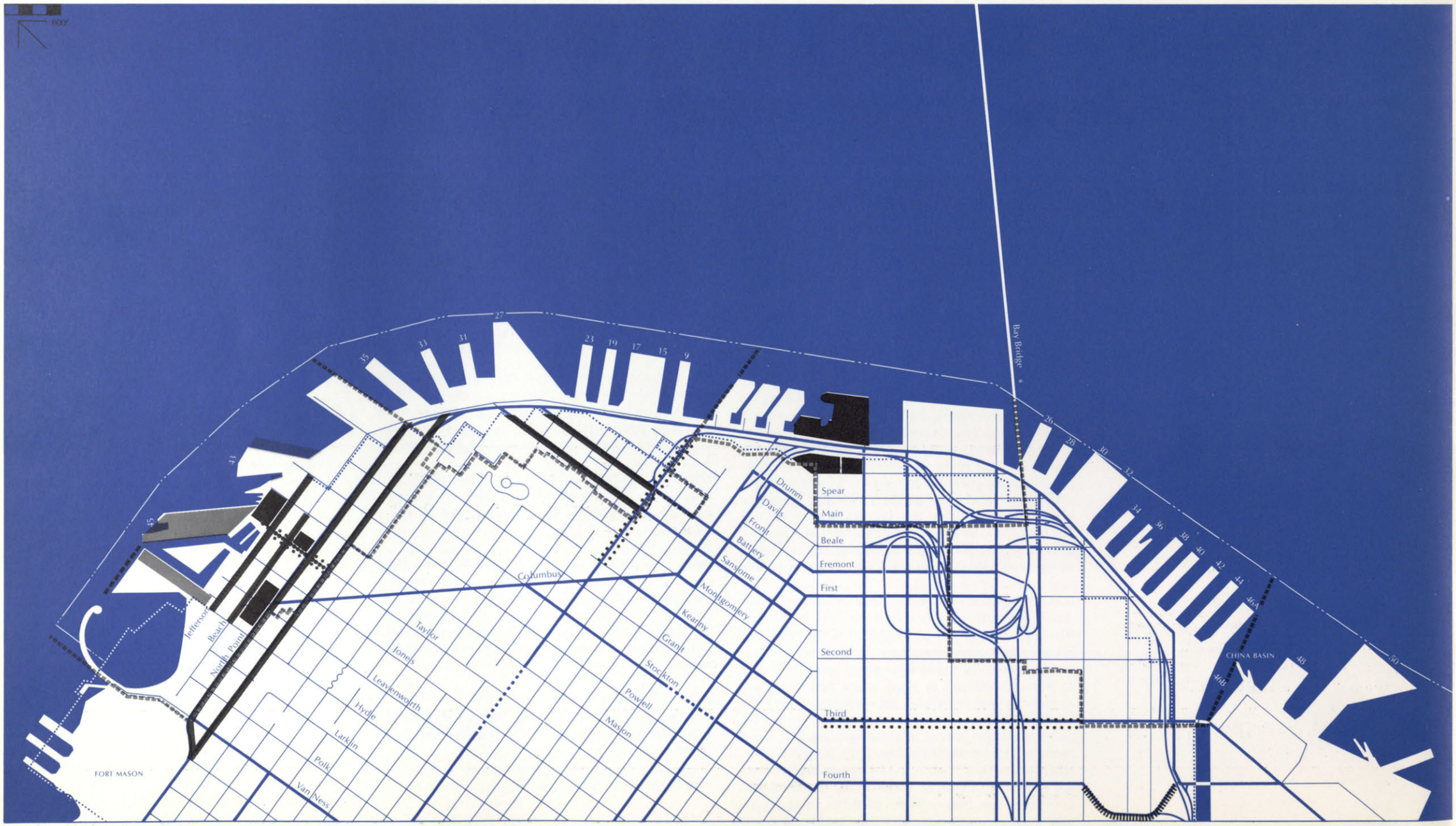
The improvements recommended during Stage One emphasize a sequence of proposals involving coordination of City and Port Authority improvements which would collectively be integrated with private development. The time period for Stage One is recommended to occur within five to six years; the actual period depends upon final scheduling and funding in relation to overall capital improvements programming for the City and may be somewhat shorter or longer.

The schedule of Public Improvements in Stage One is presented according to sub-area location and the phasing within Stage One. In addition, each proposal is briefly described with estimated costs and potential source of financing indicated. In general, the Port Authority's recommended level of participation is higher in Sub-Area III than in Sub-Areas I, II, and IV.

73 Stage 1—Phase 1 Improvements

Site Development
Site Preparation
Facility Demolition
Trafficways
Overpass
Cable Car Extension
Breakwater
Street Landscaping

118



73

Sub-Area 1

Bay and North Point streets one-way couple. Includes street reconstruction, coordinated signal system, new signs and pavement markings, acquisition of portion of Fort Mason and construction of diagonal connector between Bay and North Point streets, and engineering.

Estimated cost: $1,770,000 Financing: Gas Tax

Associated actions include (a) provision of Muni overhead trolley wires on North Point Street, and (b) removal of present restriction of truck traffic on Bay Street between Van Ness Avenue and Columbus Avenue.

Beach Street reconstruction. Improvement and reconstruction of Beach Street between Hyde and Mason streets.

Estimated cost: $152,000 Financing: Gas Tax

Columbus Circle parking garage. Development of approximately 1645 parking spaces in a mixed-use structure containing a 310-unit motel, 132,000 square feet of office space, and 37,000 square feet of commercial space. Requires acquisition of about 54,000 square feet of improved land and 90,000 square feet of partially-improved land.

Estimated cost (parking facilities only): $12,855,000 Financing: Revenue Bonds

Taylor Street parking garage. Provision of approximately 280 parking spaces in an underground parking structure beneath existing Longshoreman's Union parking lot.

Estimated cost: $1,700,000 Financing: Revenue Bonds

Extension of Taylor Street cable car line. Extension of cable car line on Taylor Street from Bay Street to Fisherman's Wharf Plaza, including purchase of two additional cable cars.

Estimated cost: $473,000 Financing: Ad Valorem

Taylor Street pedestrian promenade. Development of a landscaped promenade on Taylor Street between Bay Street and Fisherman's Wharf Plaza.

Estimated cost: $135,000 Financing: Gas Tax

Intra-bus system. Purchase of 12 vehicles to provide local public transit within the Fisherman's Wharf area.

Estimated cost: $142,000 Financing: Included with revenue bonds for parking garages.

Fisherman's Wharf Plaza. Development of a major public plaza at the center of Fisherman's Wharf.

Estimated cost: $289,000 Financing: Lease Revenue

Jefferson Street. Re-design and beautification of Jefferson Street to provide landscaped pedestrian and vehicular way.

Estimated cost: $165,000 Financing: Lease Revenue

Rail ferry facility. Relocation or elimination of the rail ferry slip at Pier 43 and attendant rail storage facilities.

Estimated cost: $1,200,000 Financing: Revenue Bonds

Demolish Pier 41.

Estimated cost: $300,000 Financing: Revenue Bonds

Hyde Street Pier and westerly portion of Fish Alley. Construction of platform, provision of access and utilities, and general preparation of site preliminary to development.

Estimated cost: $1,965,000 Financing: Revenue Bonds

Pier 45. Rehabilitation of platform and general preparation of site preliminary to development.

Estimated cost: $500,000 Financing: Revenue Bonds

Boat basin breakwater. Construction of a breakwater to protect the fishing boat basin between Hyde Street Pier and Pier 45 from tidal and wave action. (Federal government)

Sub-Area II

Battery and Sansome streets one-way couple. Development of a one-way couple on Battery and Sansome streets between The Embarcadero and Broadway; this is a northward extension of the present one-way system on Battery and Sansome streets south of Broadway. (Note: this action will require the elimination of the present northbound turning movement from the Embarcadero Freeway off-ramp at Battery Street.) Includes some pavement reconstruction, new signs and pavement markings, etc.

Estimated cost: $350,000 Financing: Gas Tax

Broadway street landscaping (portion within Study Area).

Estimated cost: $23,000*

Public Parking. Construction of the International Market Center will provide parking available to the public.

Sub-Area III

Embarcadero Plaza and bus turnaround. Development of a plaza and bus turnaround at Market Street and The Embarcadero. (San Francisco Redevelopment Authority.)

Ferry Building platform. Construction of platform at rear of the Ferry Building to protect the BARTD ventilation structure. (Bay Area Rapid Transit District.)

Estimated cost: $3,000,000

Sub-Area IV

Fourth Street overcrossing. Construction of an overcrossing on Fourth Street over the Southern Pacific Railroad tracks.

Estimated cost: $840,000* (An additional $840,000 to be provided by the Southern Pacific Railroad.) Financing: Gas Tax

Third Street landscaping. Landscaping of Third Street between Market and Brannan streets.

Estimated cost (portion in Study Area)*: $58,000 Financing: Gas Tax

*This project included in *San Francisco Capital Improvement Program, 1967–68 through 1972–73,* Department of City Planning, October, 1967.

Site Development

Site Preparation

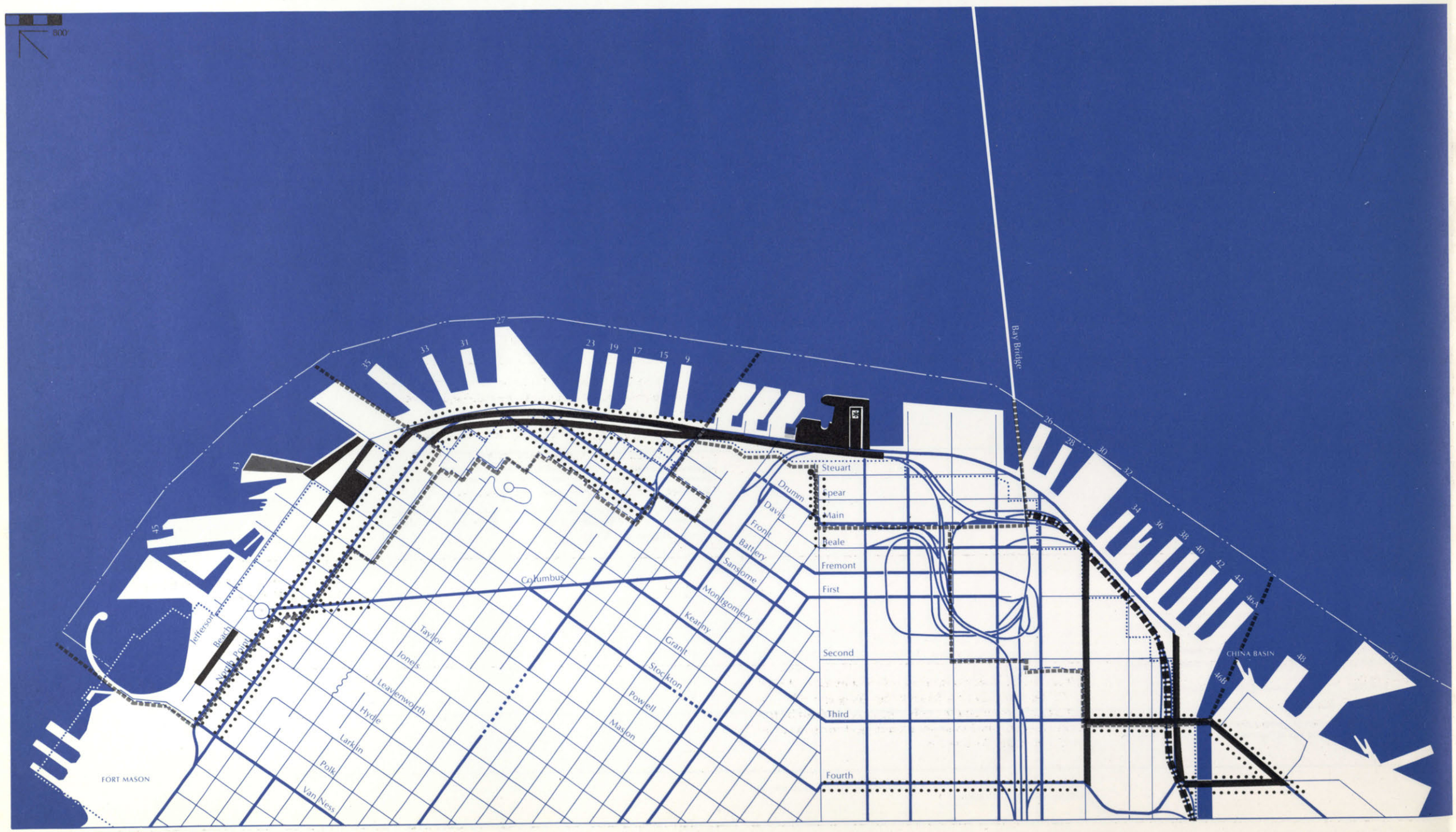
Freeway

Trafficways

Cable Car Extension

Heliport

Street Landscaping



Sub-Area I	Sub-Area II	Sub-Area III	Sub-Area IV
Beach Street reconstruction. Improvement of Beach Street between Polk and Hyde streets* and between Mason Street and The Embarcadero. Estimated cost: $190,000 Financing: Gas Tax *Kirkland parking garage.* Development of up to 2000 parking spaces in a mixed-use commercial and parking structure on the present site of the Kirkland Bus Yard. This project would require relocation of the Municipal Railway bus storage and maintenance facility. Estimated cost: $9,200,000 Financing: Revenue Bonds *Street landscaping.* a) Bay Street–$68,000* b) North Point Street–$84,000 c) Columbus Avenue (portion within Study Area): $7,000* Estimated cost: $154,000 Financing: Gas Tax	*Embarcadero Boulevard.* Construction of a new 6-lane divided roadway, with semi-parkway design treatment, between The Embarcadero at Broadway and the Bay-North Point streets one-way couple; this road will be located inland of the Belt Line Railroad tracks and The Embarcadero will function as a service road for maritime activities between Pier 9 and 35. This action will require acquisition of approximately 31,000 square feet of improved private property. Estimated cost: $9,320,000 Financing: Gas Tax *Street landscaping.* a) Battery Street (portion within Study Area)–$32,000 b) Sansome Street (portion within Study Area)–$31,000 Estimated cost: $63,000 Financing: Gas Tax	*Downtown heliport.* Construction of a permanent Class III heliport on the roof of a mixed-use office and parking structure (including sound-proofing of office areas). Demolish temporary heliport platform located immediately north of the Ferry Building. Estimated cost: $819,000 Financing: Proposed Bond Issue *California Street cable car.* Extension of the California Street cable car line to a terminus in Embarcadero Plaza, including purchase of two additional cable cars. Estimated cost: $352,000 Financing: Ad Valorem *Embarcadero relocation.* Relocate southbound lanes of The Embarcadero, and the Marin Greyhound bus terminal, to permit expansion of Embarcadero Plaza to west line of the existing freeway structure. Estimated cost: $2,105,000 Financing: Gas Tax *Market Street beautification* (portion of project in Study Area). Estimated cost: $85,000 Financing: Approved Bond Issue	*Third-Fourth streets one-way couple.* Extension of existing Third-Fourth streets one-way couple from Brannan Street to the intersection of Third and Fourth streets south of China Basin. No major reconstruction is proposed in Stage 1. Includes street landscaping. *Brannan-Berry streets one-way couple.* Development of Brannan and Berry streets as a one-way couple between Fourth Street and The Embarcadero. No major reconstruction is proposed in Stage 1. *Fourth Street landscaping.* (Note: this project is located outside of the Study Area.) Landscaping of Fourth Street between Market and Brannan streets.
Pier 43. Rehabilitation of existing platform, enlargement of platform, and general preparation of site preliminary to development. Estimated cost: $2,890,000 Financing: Revenue Bonds *North Point Park.* Site development and landscaping of waterfront park between Powell and Grant streets. Estimated cost: $225,000 Financing: Lease Revenue		*Office and parking structure.* Construction of a mixed-use office and parking structure providing 100,000 square feet of office space and 1,000 parking spaces. Estimated cost: $5,420,000 Financing: Revenue Bonds *Platform landscaping.* Landscaping of the Ferry Building platform. Estimated cost: $711,000 Financing: Lease Revenue	
			Southern extension of the Embarcadero Freeway. (California Division of Highways.)
Development of Pier 45. *Demolition of Piers 37 and 39.* *Development of Hyde Street Pier and Fish Alley (westerly portion).*	*Coit Tower Funicular.* Construction of the International Market Center will provide a funicular up Telegraph Hill connecting Coit Tower and the public parking provided by the Market Center. (Final route location subject to approval by the City Planning Commission.)		

*This project included in *San Francisco Capital Improvement Program, 1967–68 through 1972–73,* Department of City Planning, October, 1967.

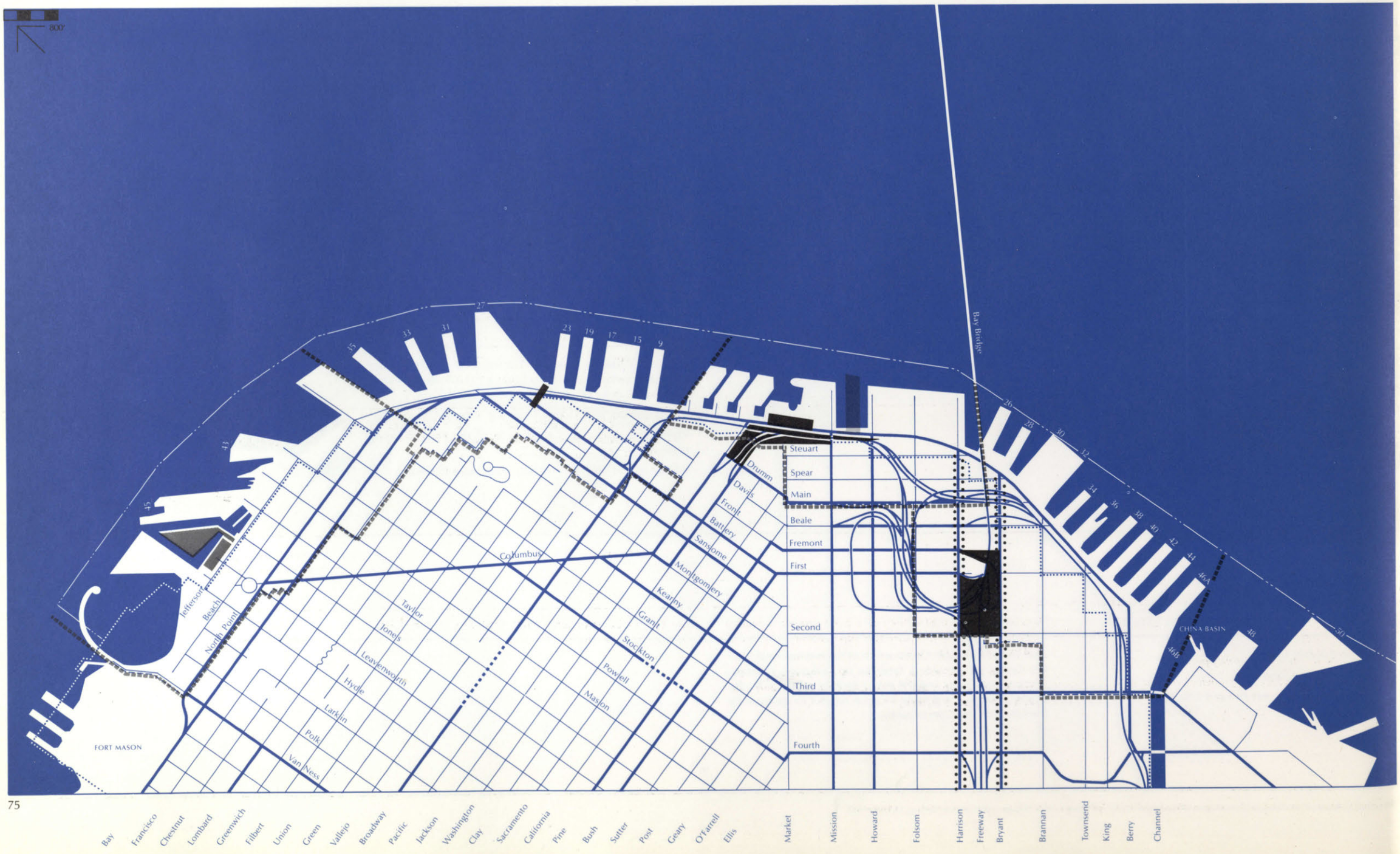
75 Stage 1—Phase 3 Improvements

Site Development

Site Preparation

Facility Demolition

Street Landscaping



122

75

City

Port Authority

Other

Private

Sub-Area I	Sub-Area II	Sub-Area III	Sub-Area IV
		Embarcadero Plaza expansion. Landscaping of area between Embarcadero Plaza and the west line of the existing freeway structure. Estimated cost: $296,000 Financing: Ad Valorem	*Street landscaping.* a) Harrison Street (portion within Study Area)–$47,000* b) Bryant Street (portion within Study Area)–$47,000* Estimated cost: $94,000 Financing: Gas Tax
Fish Alley (easterly portion). Construction of platform, provision of access and utilities, and general preparation of site preliminary to development. Estimated cost: $135,000 Financing: Revenue Bonds *Pier 47.* Construction of new platform and fishing boat berths, provision of access and utilities, and preparation of site for development of fish processing activities. Estimated cost: $1,975,000 Financing: Revenue Bonds, Lease Revenue	*Viewing platform and pedestrian bridge.* Development of a viewing space and platform at Pier 27, and construction of a pedestrian bridge over The Embarcadero and Embarcadero Boulevard to connect the viewing platform and the International Market Center; commercial activities should be developed on the bridge. Estimated cost: $150,000 Financing: Revenue Bonds, Lease Revenue	*Ferry Building renovation.* Renovation of the ground floor, rear, and ends of the Ferry Building to develop pedestrian ways and space for commercial activity. Estimated cost: $410,000 Financing: Revenue Bonds *Demolish Pier 14.* Estimated cost: $300,000 Financing: Lease Revenue *Embarcadero landscaping, Pier 1 to Pier 16.* Estimated cost: $57,000 Financing: Lease Revenue	
		Washington-Clay corridor landscaping. Landscaping of the Washington-Clay streets corridor east of the Alcoa Building platform. (California Division of Highways.)	*Landscaping of Bay Bridge approach area.* (California Division of Highways.)
Development of Pier 37 site. *Development of Pier 43.* *Development of Fish Alley (easterly portion).* *Development of fish processing activities on Pier 47.*	*Rooftop parks.* Construction of the International Market Center will provide extensive roof top parks and plazas that will be open to public use. *Pedestrian ways.* Construction of the Market Center will also provide pedestrian ways connecting Coit Tower and Telegraph Hill with the waterfront.	*Restaurant.* Construction of a restaurant on top of the BARTD ventilation structure.	

*This project included in *San Francisco Capital Improvement Program, 1967–68 through 1972–73,* Department of City Planning, October, 1967.

City
Port Authority
Other
Private

The following public improvements are recommended for development after Stage One. However, it is possible that some of these proposals might be incorporated into concluding phases of Stage One. The following improvements are listed in their order of priority.

1

Ferry systems and terminals. This plan has recommended the development of an integrated and comprehensive transportation system, and one of the elements included and proposed is the use of ferryboats for commuter and recreational purposes. Although there are many unresolved questions associated with the development of this transportation mode, the plan deals in a general way with this matter.

The plan proposes a terminal for commuter and recreational ferries at the Ferry Building and terminals for recreational ferries at Hyde Street Pier, Fisherman's Wharf Plaza, and China Basin. Before the specific location, size and quantity of ferryboat terminals can be proposed, additional study must be made of the design and locational requirements of terminals and the way in which ferryboat traffic would be integrated with other elements of the transportation system. The San Francisco–Marin Water Transportation Study Committee is presently examining the feasibility of a commuter ferry system between Marin County and San Francisco.

2

Broadway historic preservation district. The district located between the Golden Gateway and the International Market Center is the last remaining area that reflects the character of the original San Francisco waterfront. The plan recognizes this and recommends that the character of this district be maintained and preserved. Although many existing structures can be physically rehabilitated, it is not clear that they can function economically. Therefore, this area should be studied in detail to determine the best means for preserving its historic character and for integrating it with new development to the north and south. The feasibility of urban renewal treatment in the form of historic preservation should be explored.

3

Waterfront transit. A waterfront transit system should be constructed in order to connect Fisherman's Wharf and the Ferry Building. Additional study of this proposal should include its economic feasibility, its potential relationship to other existing and planned transit facilities in San Francisco, and the aesthetic impact of such a facility. At present, a form of mini-rail system seems most promising, although other alternatives may emerge as the study progresses.

4

Passenger Ship terminal. The plan recommends that passenger ship activity be concentrated at Pier 35. This location is closely related to Fisherman's Wharf, the International Market Center, and proposed hotel development. However, in the long-run other locations may emerge as more desirable. There has been much interest in developing a regional terminal that would service all passenger ship operations in the Bay Area. Therefore, it is recommended that before the spatial requirements and a specific waterfront location for a terminal are established, further examination be made of potential methods of financing a terminal and of potential development that could include a terminal.

5

Broadway parking corridor. The plan recommends that public parking facilities be located and concentrated in a corridor bordered by Vallejo Street and Broadway. In order to determine capacities, economic feasibility, and possible means of financing, further analysis of this proposal should examine present and anticipated parking demands in Sub-Area II, the Broadway entertainment area, and Jackson Square.

Zoning

It was previously indicated that the unusual conditions in the Northern Waterfront require some changes in the present zoning code. The following discussion describes proposed changes in existing use districts and parking regulations, height limits, and provisions for review of development proposals.

Use Districts and Parking Regulations

If the existing zoning regulations are applied to the proposed development of the Northern Waterfront, two major problems develop. First, the existing use districts do not adequately permit and encourage the kinds of land use mixtures which are both possible and desirable in the Northern Waterfront. Second, the present code does not permit adequate control over the location of major parking facilities which are a key element in structuring the general direction of future development. Therefore, the recommended changes to the existing zoning regulations permit a rather broad mixture of use types while controlling the location of parking facilities.

Proposed Changes to Present Use District Boundaries

Proposed modifications to the boundaries of use districts are relatively minor—changes are recommended in only two areas, both of which occur within the Fisherman's Wharf area. These modifications are recommended in order to eliminate undesirable industrial uses in these areas and to bring the zoning map into conformance with the Land Use Plan. First, it is proposed that existing C-M and M-1 use districts in the area bounded by Bay, Midway, Chestnut, and Mason streets by eliminated and replaced with R-4 and C-2 use districts. Second, it is proposed that the existing C-M use district in the area bounded by Beach Street, Hyde Street, North Point Street and Van Ness Avenue be rezoned to C-2.

Northern Waterfront Special Use Districts

It is proposed that two new Northern Waterfront Special Use Districts be established. In Northern Waterfront Special Use District Number 1 and Number 2, hotels, motels, and residential uses should be Conditional Uses within M-1 districts.

In Northern Waterfront Special Use District Number 1, off-street parking should not be required; indeed, it is recommended that parking lots and storage garages open to the public be designated Conditional Uses subject to approval by the City Planning Commission.

In Northern Waterfront Special Use District Number 2, off-street parking should be required in accordance with present requirements of the City Planning code. However, once the system of public parking garages is established, the Zoning Administrator could grant exceptions to the parking requirement for uses developed in this special use district. Other conditions which could also justify exceptions to the parking requirement are: (a) the development as a primary use of parking lots and structures available to the public and provided by private interests; and (b) the availability during periods of peak use in Sub-Area I of parking facilities which are located outside of Sub-Area I but which are within easy walking distance of Fisherman's Wharf or are connected to Sub-Area I with an attractive and convenient transit system.

The proposed Special Use Districts extend only to the boundaries of the Study Area; the City may want to consider extending them further to include additional areas contiguous to the Study Area.

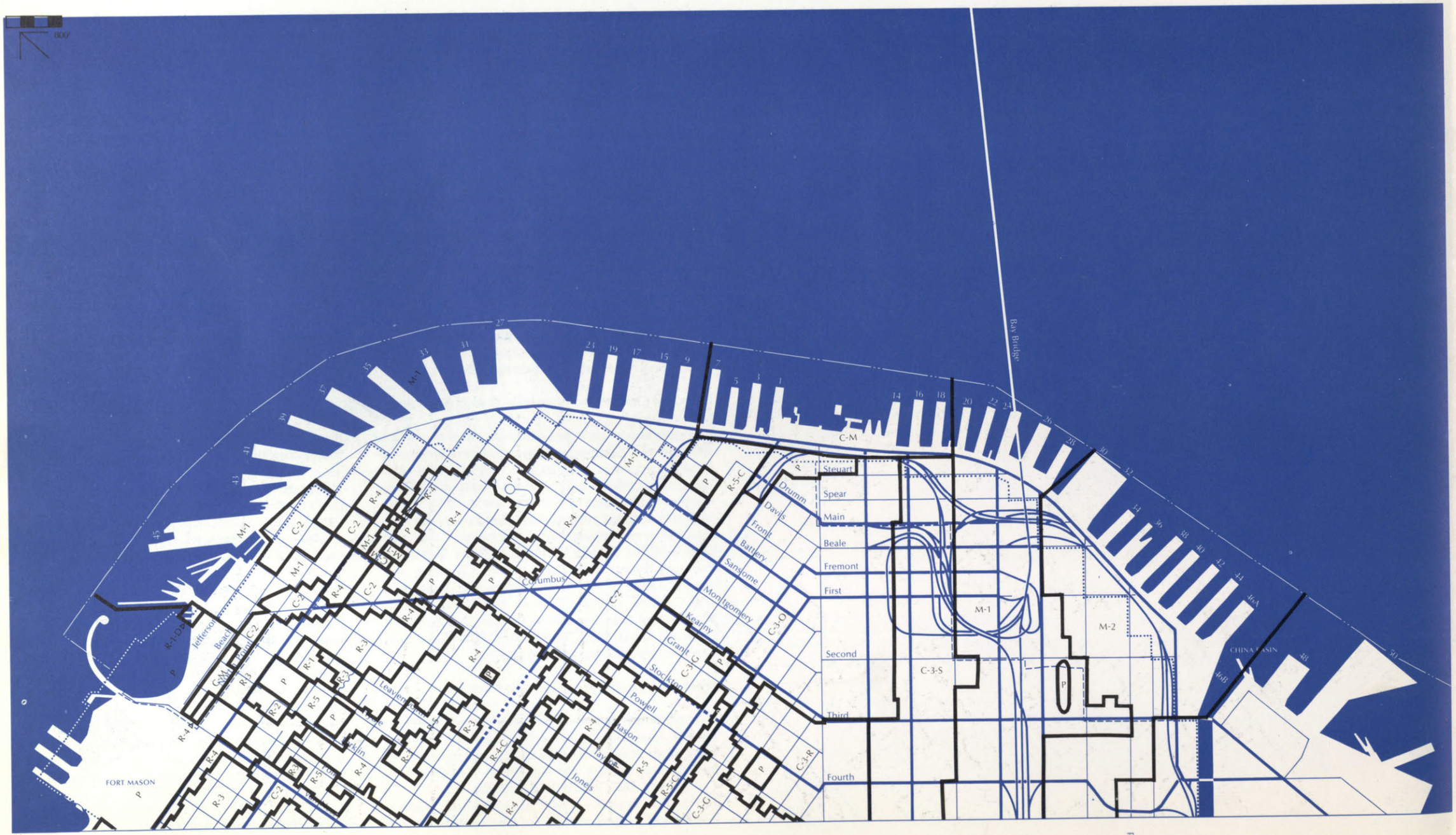
Height Limits

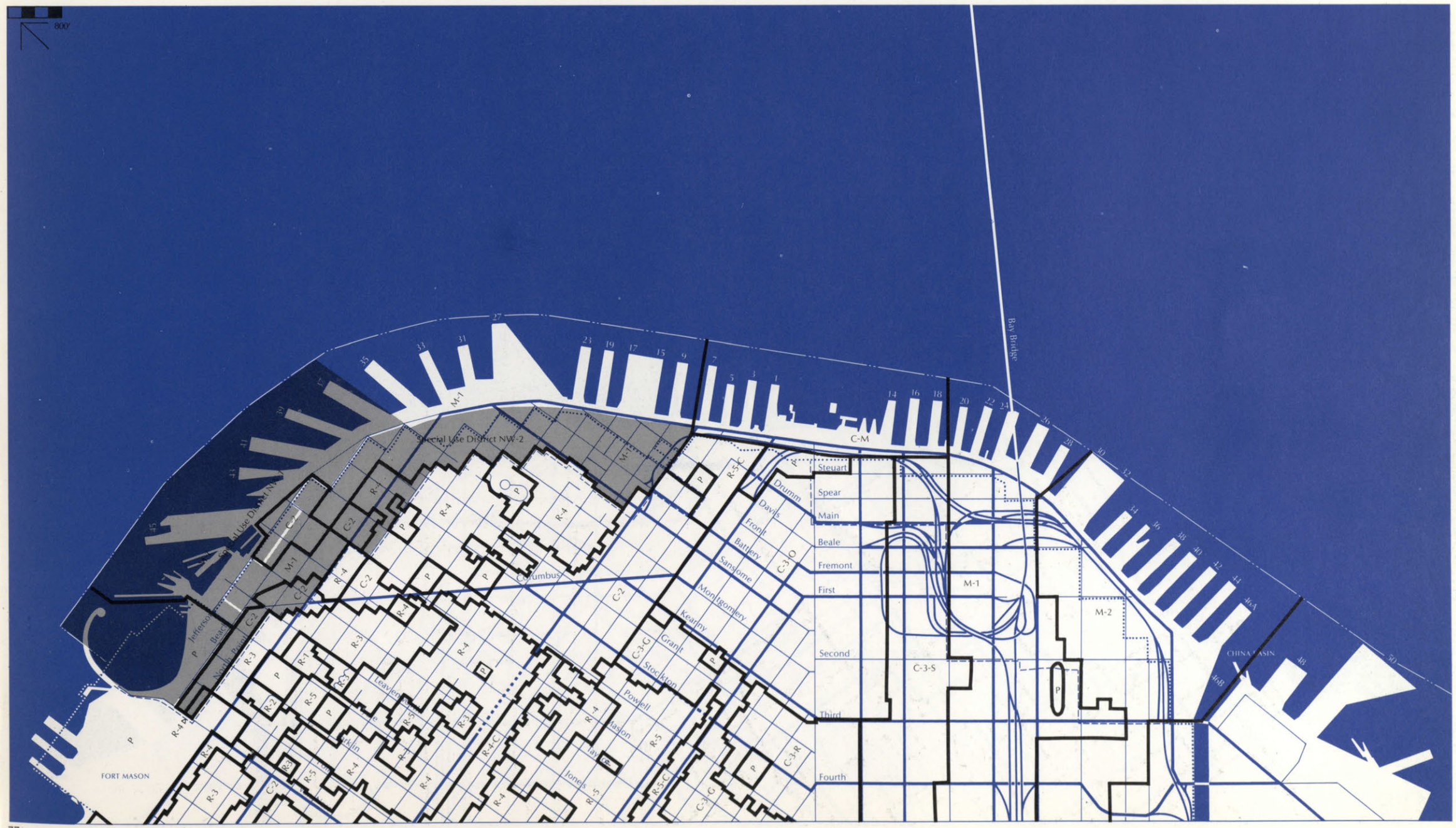
The control of structure height is an important factor in establishing the character of the shoreline, protecting views of and from the City and the Bay, and enhancing the physical image of the City. Because of these considerations, some changes in existing height limits are recommended.

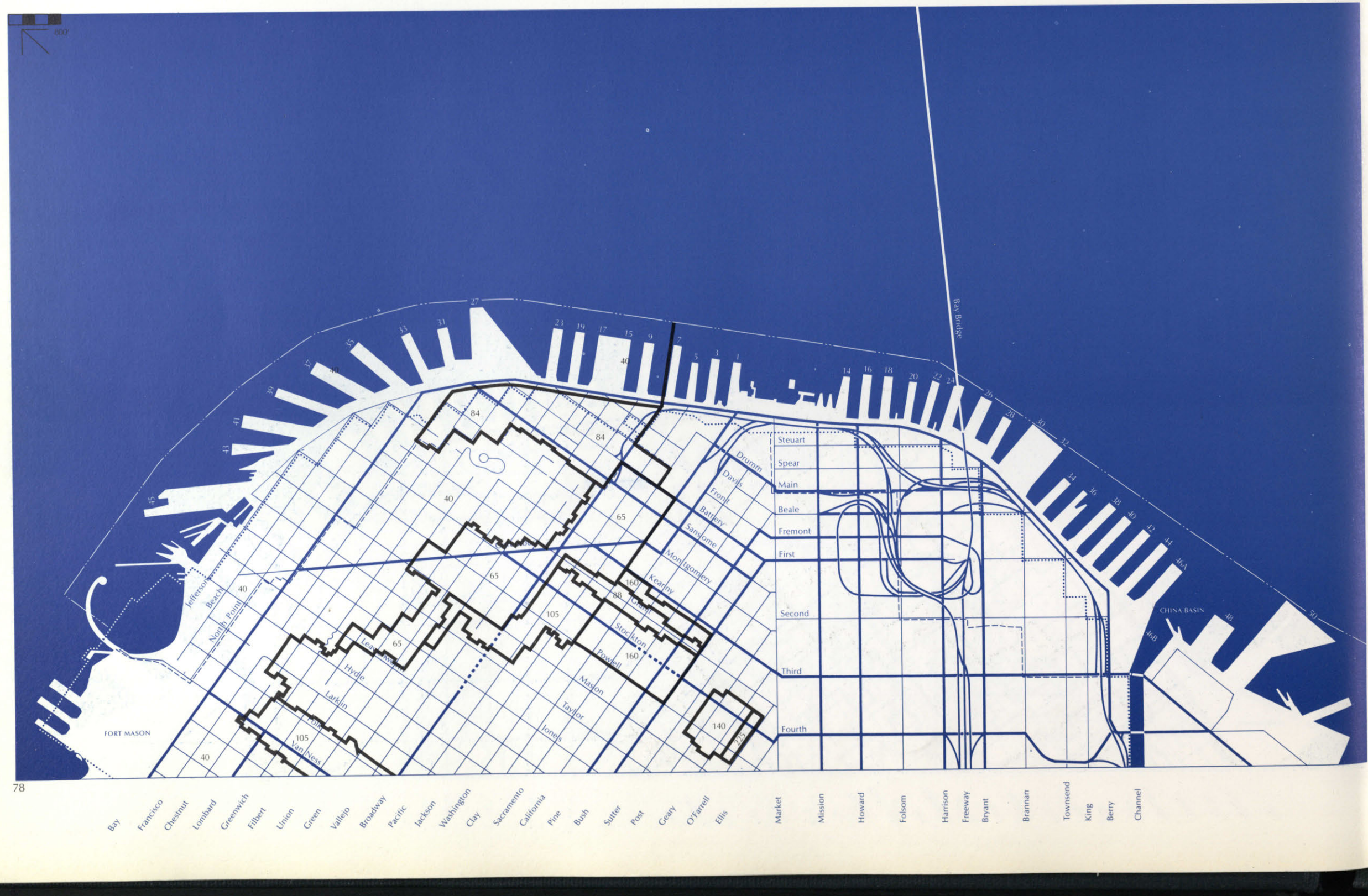
Sub-Area I. The present 40-foot height limit on land and water areas should be maintained with the exception of the site for the proposed observation tower at Fisherman's Wharf Plaza.

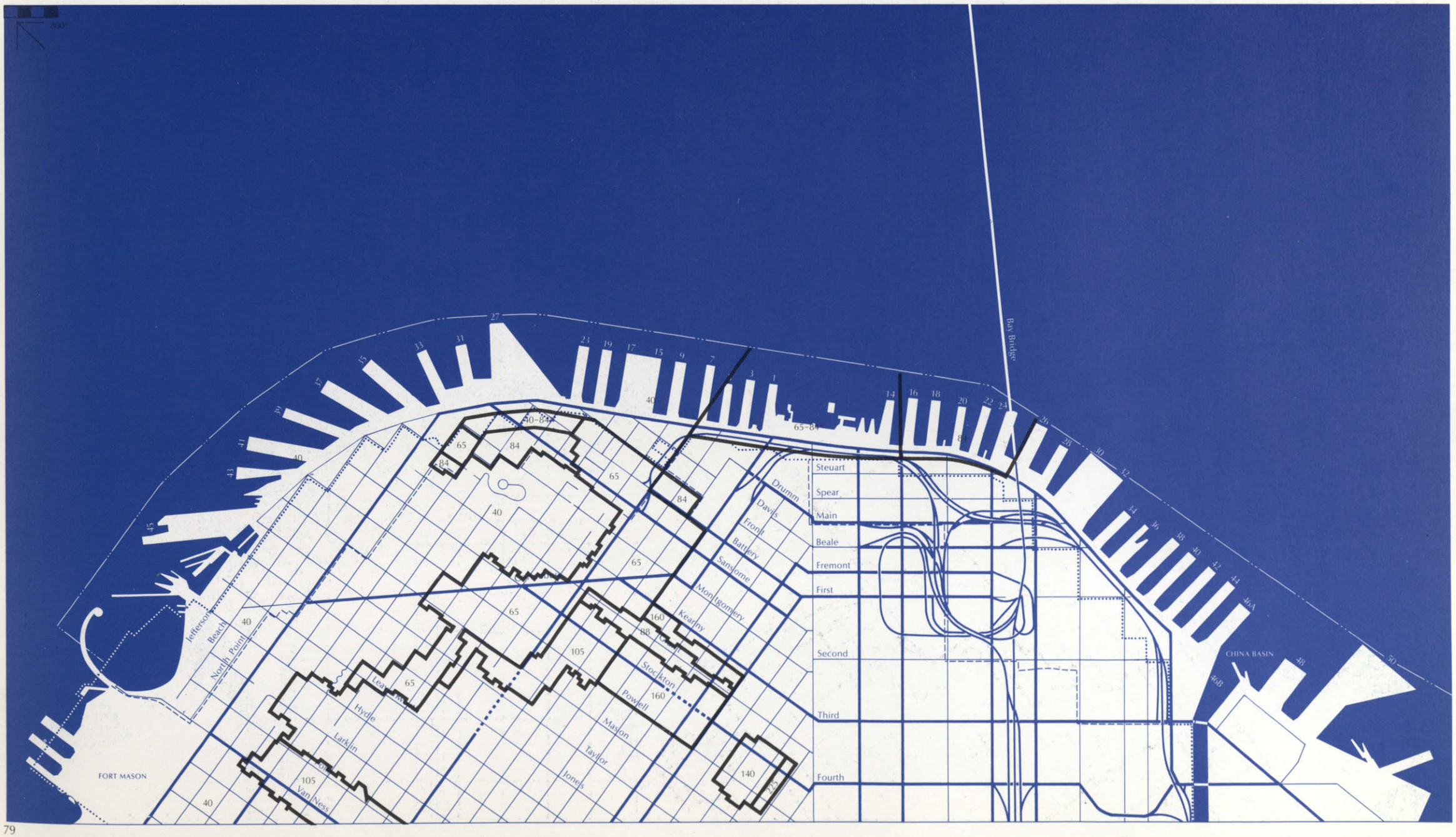
Sub-Area II. The present 40-foot height limit east of The Embarcadero should be maintained. The existing 84-foot height limit should be revised to protect more adequately views between Telegraph Hill and the Bay; the revisions should reflect a sloping envelope from the hill to the shoreline.

The height limit in the northern-most portion of Sub-Area II should reflect a stepping down towards The Embarcadero. In the center portion of the area, part of the flat 84-foot limit should be maintained, and a sloping height limit should be established in


800'
Bay Bridge
C-M
M-1
M-2
C-3-S
C-3-O
C-3-R
C-3-G
R-5-C
R-4-C
R-5
R-4
R-3
R-2
R-1
R-1-D
C-2
P
FORT MASON
CHINA BASIN
Steuart
Spear
Main
Beale
Fremont
First
Second
Third
Fourth
Drumm
Davis
Front
Battery
Sansome
Montgomery
Kearny
Grant
Stockton
Powell
Mason
Taylor
Jones
Leavenworth
Hyde
Larkin
Polk
Van Ness
Franklin
Gough
Octavia
Laguna
Buchanan
Webster
Fillmore
Steiner
Pierce
Scott
Divisadero
Broderick
Baker
Lyon
Jefferson
Beach
Columbus
Bay
Francisco
Chestnut
Lombard
Greenwich
Filbert
Union
Green
Vallejo
Broadway
Pacific
Jackson
Washington
Clay
Sacramento
California
Pine
Bush
Sutter
Post
Geary
O'Farrell
Ellis
Market
Mission
Howard
Folsom
Harrison
Freeway
Bryant
Brannan
Townsend
King
Berry
Channel


800'
Special Use District NW-2
Special Use District NW-1
Bay Bridge
C-M
M-1
M-2
C-3-S
C-3-O
C-3-G
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Sacramento
California
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Bush
Sutter
Post
Geary
O'Farrell
Ellis
Market
Mission
Howard
Folsom
Harrison
Freeway
Bryant
Brannan
Townsend
King
Berry
Channel


128
800'
Bay Bridge
Steuart
Spear
Main
Beale
Fremont
First
Second
Third
Fourth
Drumm
Davis
Front
Battery
Sansome
Montgomery
Kearny
Grant
Stockton
Powell
Mason
Taylor
Jones
Hyde
Larkin
Polk
Van Ness
Leavenworth
Jefferson
Beach
North Point
FORT MASON
CHINA BASIN
84
65
40
105
160
140
225
88
Bay
Francisco
Chestnut
Lombard
Greenwich
Filbert
Union
Green
Vallejo
Broadway
Pacific
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Clay
Sacramento
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Channel



79

*Special Conditions

a strip along Embarcadero Boulevard. In establishing design criteria for the International Market Center proposal, the Department of City Planning's interpretation of this recommendation was stated in the following terms:

...the slope line should be determined by projecting a line from a point 40 feet vertically above grade at the building line along Embarcadero Boulevard to intersect with the 84-foot height limit line at a horizontal distance inland from that building line of 250 feet, except that the slope line could be exceeded in specific instances, upon approval of the City Planning Commission, to enhance the architectural quality of development, as long as the overall visual intent of the stepping down from the hill and views and view corridors to and from Telegraph Hill are substantially maintained.

That interpretation is in agreement with plan objectives and should be incorporated in the final provisions for this sloping height limit district. Any special exceptions to this height limit should not exceed 84 feet.

The height limit in the southern-most portion of the area should be revised to 65 feet because the greater horizontal distance between Telegraph Hill and the water decreases the view slope between hill and water. A height limit of 84 feet in the two blocks south of Broadway was just recently adopted; that height limit should be maintained.

Sub-Area III. West of The Embarcadero, development height will be governed by floor-area ratios as determined by the Downtown zoning districts. Development east of The Embarcadero and north of Howard Street (extended) should respect the height of the Ferry Building and should thus be limited to a height of 65 feet, except that this height limit could be exceeded to a maximum height of 84 feet in specific instances. Exceptions should be granted only upon approval of the City Planning Commission in order to enhance the functional and architectural quality of development and to protect views and view corridors between the City and the Bay. Shoreline structures should be terraced or arranged so as to increase the openness to the water along the view corridors. Development east of The Embarcadero and south of Howard Street should be limited to a height of 84 feet.

Sub-Area IV. Development height in Sub-Area IV will be governed by present floor area ratios.

Sign Controls

It is important that advertising and identification signs complement and not detract from the waterfront environment. Advertising signs which identify firms and activities located within the Northern Waterfront should be in keeping with the proposed character of the district in which they are located. Therefore, it is recommended that the designs of advertising signs which are to be located in Sub-Area I, II, and III be submitted to the Department of City Planning for review and comment.

Existing signs controls, and recommended changes to them, are as follows:

1

Wind signs are now prohibited in any commercial or industrial use district; that prohibition should be maintained in the Northern Waterfront.

2

Moving, rotating, or otherwise physically animated signs are permitted, under certain conditions, in C-2, C-M, and M-1 use districts. These controls should be revised so as to prohibit such signs (with the exception of time and temperature signs and barber poles) in C-2, C-M, and M-1 use districts which are located in Sub-Areas I, II, and III.

3

Signs in C-M and M-1 districts are not limited in any manner as to type of illumination. These controls should be modified to prohibit signs having any flashing, blinking, fluctuating, or otherwise animated illumination in C-M or M-1 districts in Sub-Areas I, II and III. Signs of this nature are currently prohibited in C-2 use districts, except within an existing Special Sign District in the vicinity of Fisherman's Wharf, where signs with animated illumination are now permitted. This exception is in keeping with the proposed character of expanded development in the central district of the Fisherman's Wharf area.

Zoning regulations currently permit the location of general advertising signs and billboards in commercial and industrial districts within the Northern Waterfront. These controls should be modified to prohibit general advertising billboards within Sub-Areas I, II, and III. Furthermore, in Sub-Areas II and III, Embarcadero Boulevard and The Embarcadero should be designated as scenic streets; signs along this portion of the shoreline would then be regulated by the sign ordinance that includes special districts for scenic streets.

Development Review Provisions

This plan foresees that the size of development units may be quite large, because the very nature of the Northern Waterfront seems to encourage and create opportunities for planned developments. Therefore, all waterfront zoning districts should permit planned unit developments to occur. However, it may be desirable to lower the present minimum size of a planned unit development from three acres to approximately one acre so that a single pier could be redeveloped under the planned unit development provisions.

One of the most important considerations requiring public policies is the extent and form of new development over the water. There is no easy solution to this problem because of the variable scale of potential development, the absence of traditional street and parcel lines, and the great importance placed upon increasing accessibility to the water in the Northern Waterfront. Although there are different ways of coping with this problem, this study recommends that any proposed change in existing pier configuration be submitted to the City Planning Commission for review and approval. This alternative was selected because it provides the maximum flexibility for adapting to future possibilities.

Special Studies

Embarcadero Freeway Extension

The plan proposes that the major thoroughfare system in the Northern Waterfront be significantly improved in order to increase traffic capacity to accommodate local and through traffic during a short-range period. However, it is clear that over the long run the capacity of the proposed major thoroughfare system will be needed for local area traffic generated by new development, and the system will not easily accommodate through traffic. At the same time, commuter traffic between Downtown San Francisco and Marin County will be increasing. It is apparent, then, that some facility must be developed between San Francisco and Marin County which will service these future traffic volumes. In general, two possible alternatives are either to construct a freeway to the Golden Gate Bridge or to divert a significant portion of the auto travelers to a new rapid transit system. The present regional freeway system encircles the Bay entirely from Novato and Vallejo to San Jose, with the major exception of a missing link between San Francisco and the Golden Gate Bridge. However, the present policy of San Francisco is that no such freeway should ever be constructed. But if this policy should change in the future, the Northern Waterfront will likely be considered as a potential freeway corridor. Extension of the Embarcadero Freeway may hence be viewed as one means of developing the freeway link between San Francisco and the Golden Gate Bridge. Although the plan does not recommend construction of any freeway through the Northern Waterfront, it does recognize that this may become an issue at some future date, and therefore some evaluational criteria have been formulated and included in this study.

First, the Embarcadero Freeway should not be extended unless the present elevated structure is removed from Mission Street north and replaced with a depressed or tunnel facility. To do otherwise would be to accept the permanency of the existing elevated structure. A double-decked tunnel facility would facilitate replacement of the Broadway and Washington-Clay access ramp, although it is recognized that construction would be expensive and technically difficult because of the high water table in the shoreline area.

Second, extension of the system from Broadway to the Golden Gate Bridge should occur largely in tunnel sections beneath Embarcadero Boulevard in Sub-Area II and beneath Bay and North Point streets in Sub-Area I. Previous studies by the City have proposed a number of alternative designs for the freeway section between Van Ness Avenue and the bridge.

Third, access to and from a freeway extension should occur only at the west end of Sub-Area I—in the vicinity of Fort Mason and Van Ness Avenue—and at the juncture of Sub-Areas I and II—in the vicinity of the North Point Sewage Treatment Plant. Freeway access should not occur directly in the center of the Fisherman's Wharf area.

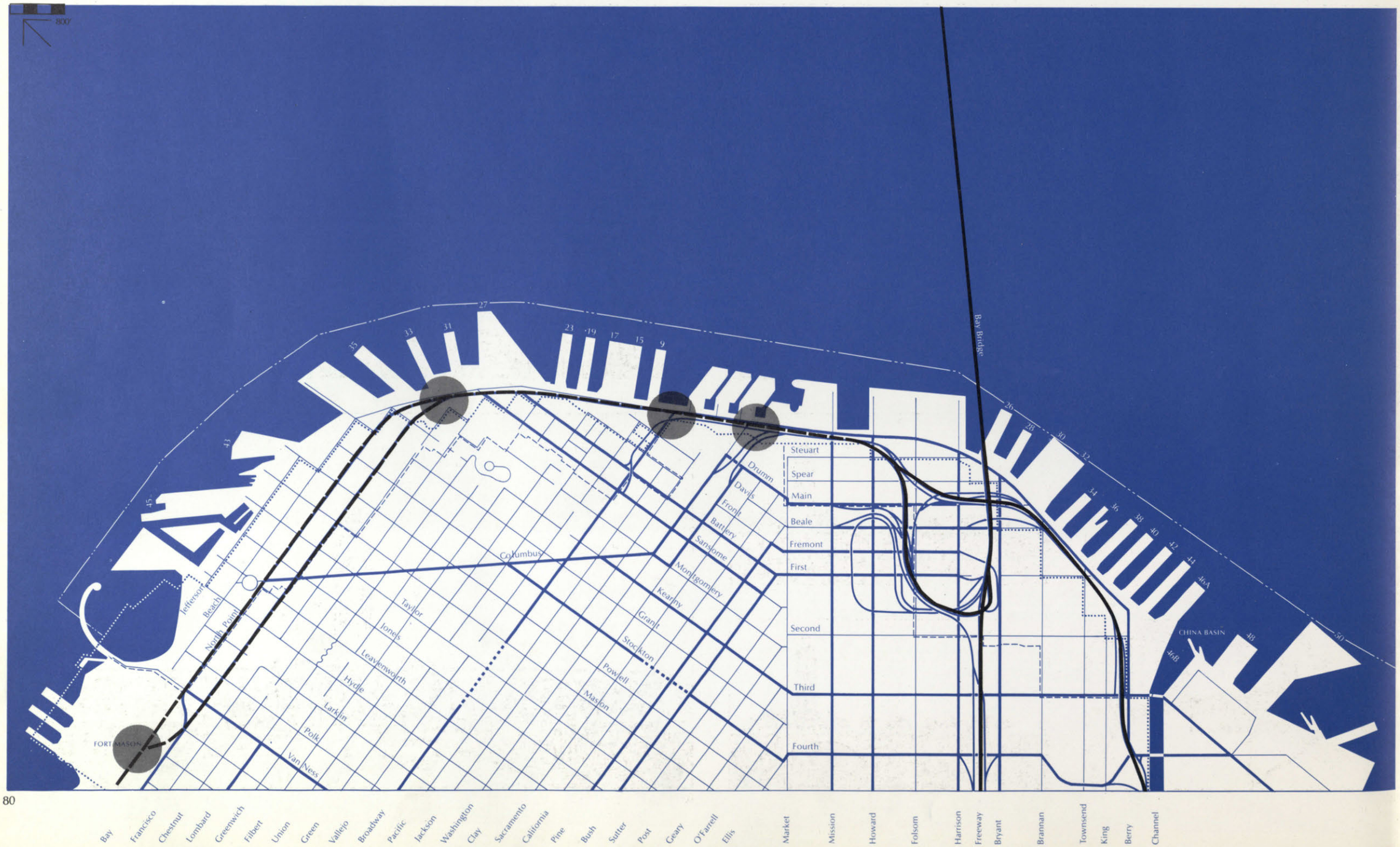
Fourth, the construction of a depressed Embarcadero Freeway in front of the Ferry Building should facilitate direct pedestrian movement between Embarcadero Plaza and Ferry Building Plaza, and allow vehicular access to Market Street to be re-established. Depression of both the freeway and The Embarcadero can be accomplished in a three-phase program. Phase 1 would develop Embarcadero Plaza at the foot of Market Street as presently programmed. Phase 2 would relocate the Marin Greyhound Terminal and place the southbound lanes of The Embarcadero in an underpass, thus allowing Embarcadero Plaza to expand to the east while leaving a service lane for buses at the surface. This would materially increase the ease of pedestrian access from the Ferry Building to the Plaza by confining major vehicular traffic movement to one three lane section to the east of the elevated freeway. Phase 3 would place the northbound lanes in an underpass with a surface service lane and would depress the freeway below grade along its present alignment. In front of the Ferry Building there would then be an opportunity to create a vehicular terminus between Market Street and the northbound and southbound service lanes. This terminus would be at a scale commensurate with its symbolic role in the structure of the City. Vehicles and people would mingle together, but at a reasonable pace as major vehicular traffic bypasses the terminus below grade.

80 Depressed Freeway Route

Depressed Freeway Structure

Elevated Freeway Structure

Point of Access to Freeway

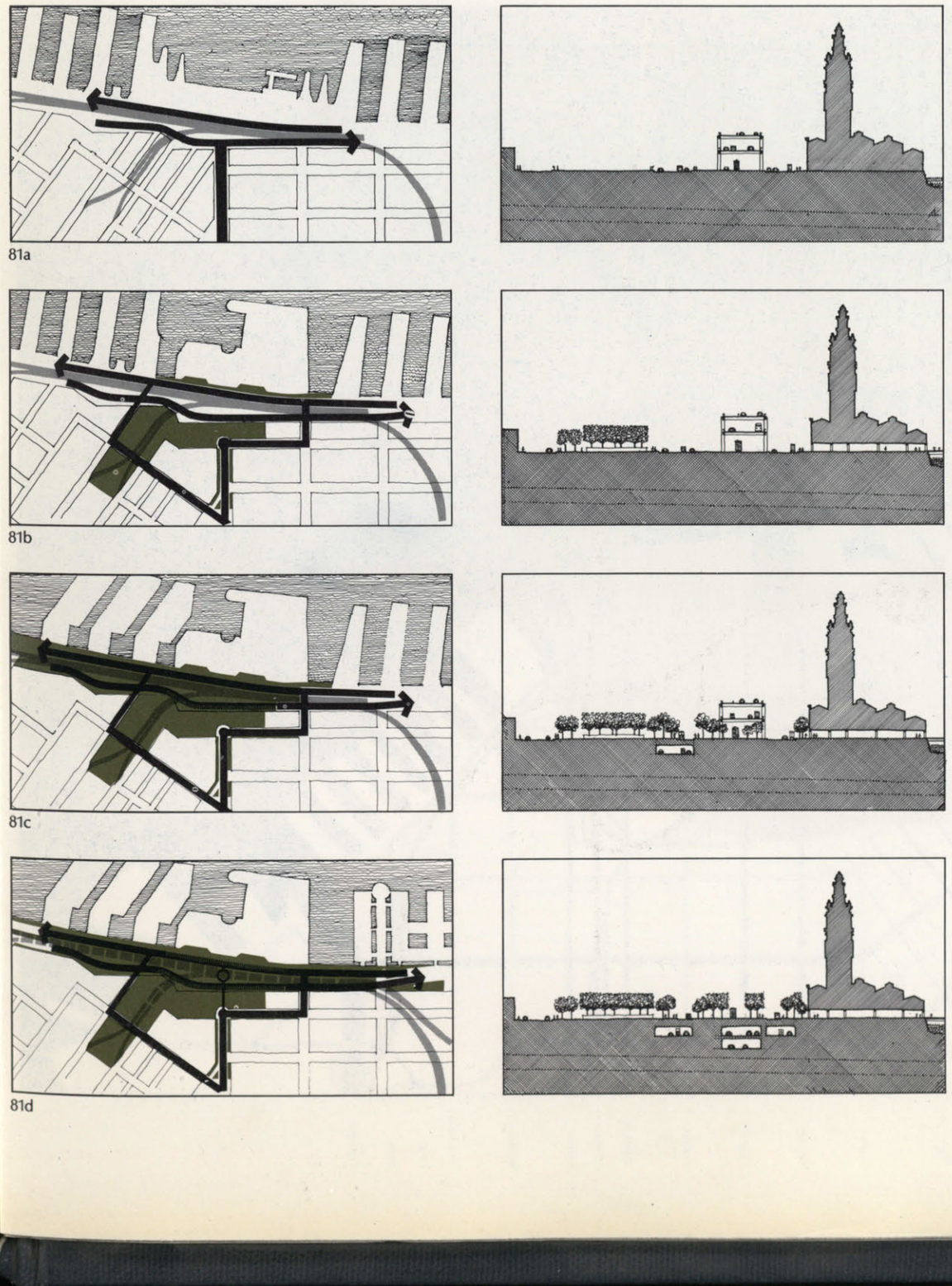


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81 Depression of Embarcadero Freeway

81a Existing Condition
81b Phase 1
81c Phase 2
81d Phase 3



81a

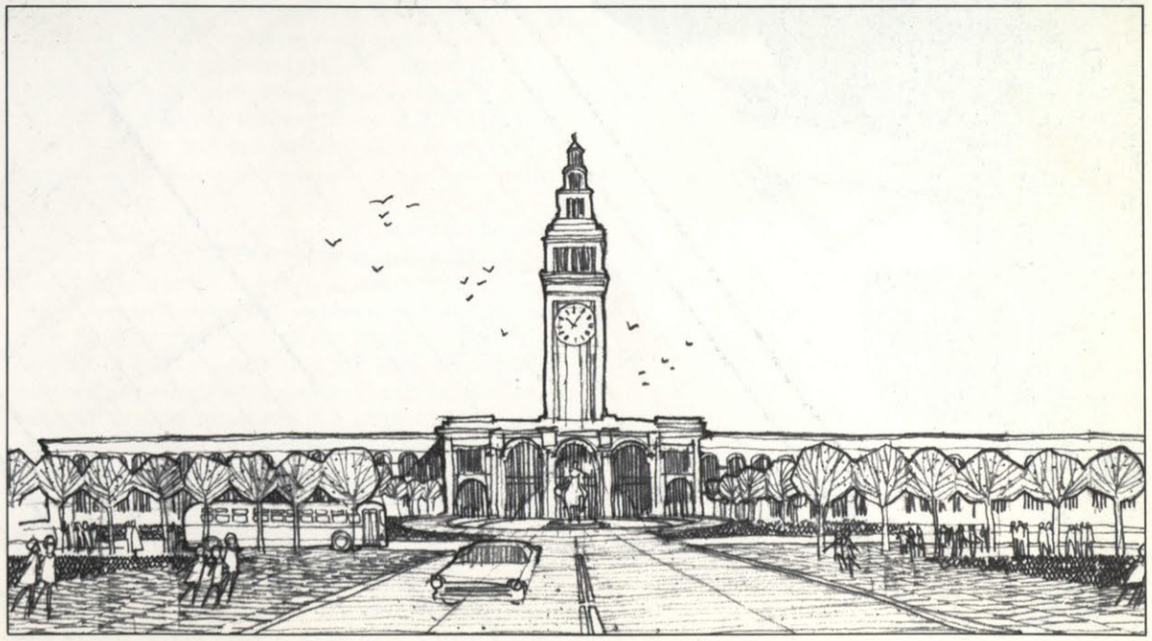
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82 Future Market Street Terminus





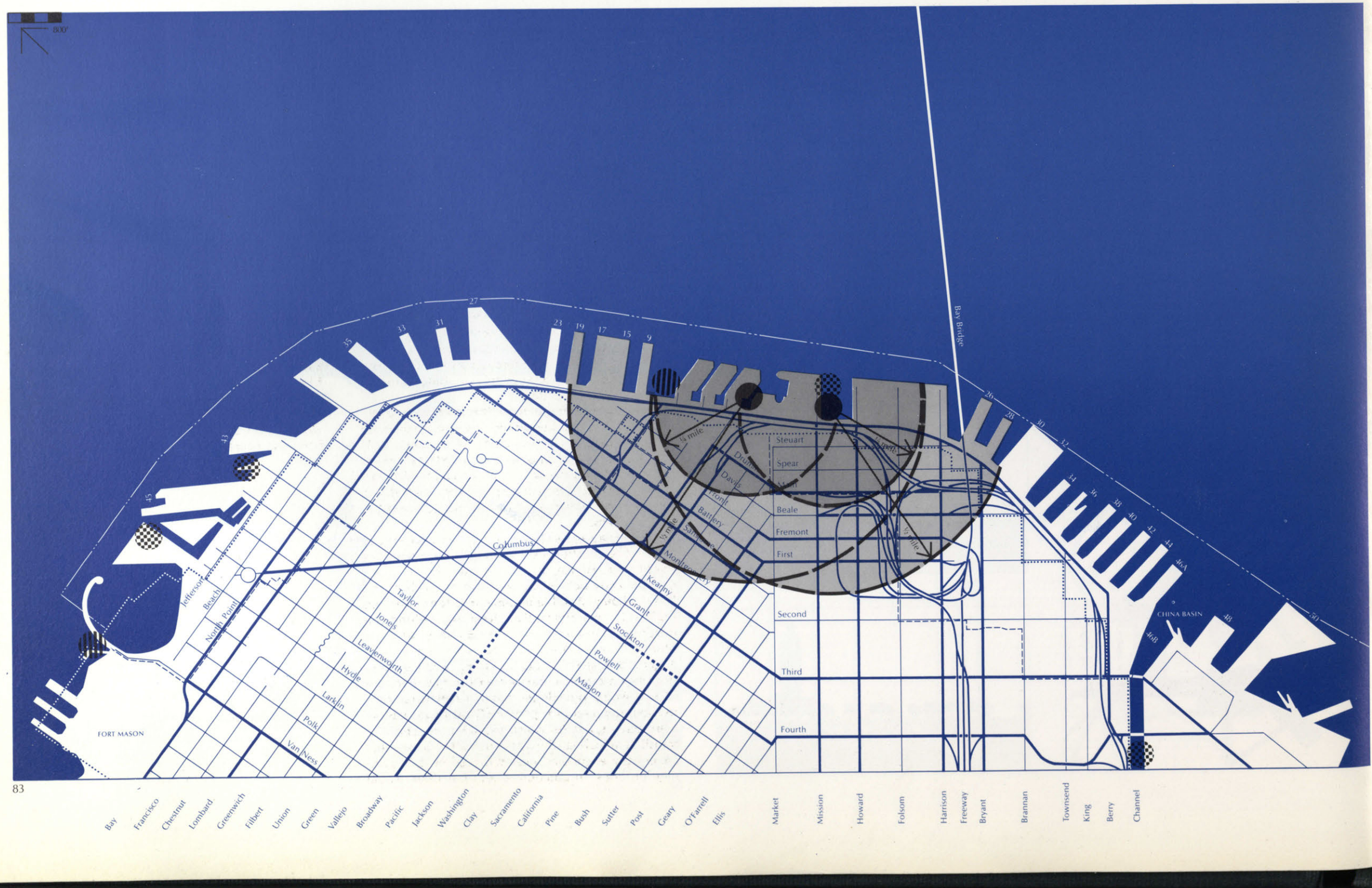
82

83 Ferry Terminal Locations

Alternative Sites for Commuter Ferry Terminal
(passenger only)

Alternative Sites for Commuter Ferry Terminal
(bus ferry)

Recommended Sites for Recreational Ferry Terminal



Ferry Terminals

During the past several years there has been increasing interest in using ferry boats as one means of alleviating the commuter traffic problem between San Francisco and Marin County. Indeed, a recent study of potential new bridge crossings assumed development of a water transportation facility. Furthermore, the San Francisco - Marin Water Transportation Study Committee is presently studying the feasibility of a commuter ferry system.

If a commuter ferry system is developed, the type of vessel used will influence both the design and locational requirement of terminals. Two types of vessels appear possible—boats that carry buses which are used for landside collection and distribution, and boats that only carry passengers.

If bus ferries are utilized, the San Francisco terminal should be directly connected with the major thoroughfare system of Downtown. There are three alternative sites for such a terminal: at Broadway and The Embarcadero, at Mission Street and The Embarcadero, and at Fort Mason. Development of the latter site, which is not directly related to Downtown but which is connected to it by the thoroughfare system, would depend upon the U.S. Army relinquishing its use of the Fort Mason shoreline.

If a passenger ferry is utilized, the San Francisco terminal should be located within easy walking distance of Downtown employment centers, and should facilitate interchange with other transit systems such as cable cars, Municipal Railway buses, and BARTD and Muni subways. The general criteria indicate that a ferry terminal should be located in the vicinity of the Ferry Building.

BARTD, however, prohibits vessels from docking at a shoreline location over the transbay underwater transit tube. Hence, a ferry terminal cannot be located directly behind the southern one-half of the Ferry Building. Possible terminal locations, then, are limited to two alternative sites: one behind the northern one-half of the Ferry Building, and the other at Mission Street and The Embarcadero.

A general analysis of distances and walking times from each alternative site indicates that the northern site (a) would provide more direct pedestrian connections to present and pending Downtown employment centers, and (b) would provide connections to transit terminals at the base of Market Street that are equally as good as those provided by the southerly locations. In addition, a location there would re-establish the Ferry Building in its historic role. Therefore a terminal location at the northern one-half of the Ferry Building is proposed.

At the present time, a bus ferry system appears to be undesirable from the point of view of potential users and because of the traffic it would introduce into waterfront development and therefore, this plan assumes that a passenger ferry system will be developed. Preliminary studies indicate that the probable maximum size of the vessel would be about 60 by 300 feet, with a passenger capacity ranging between 2,000 and 6,000 persons. These criteria were used to design schematically the Ferry Building terminal for the illustrative site plan, however, detailed design of the terminal will depend on more specific information about the type of vessel used and its operating characteristics.

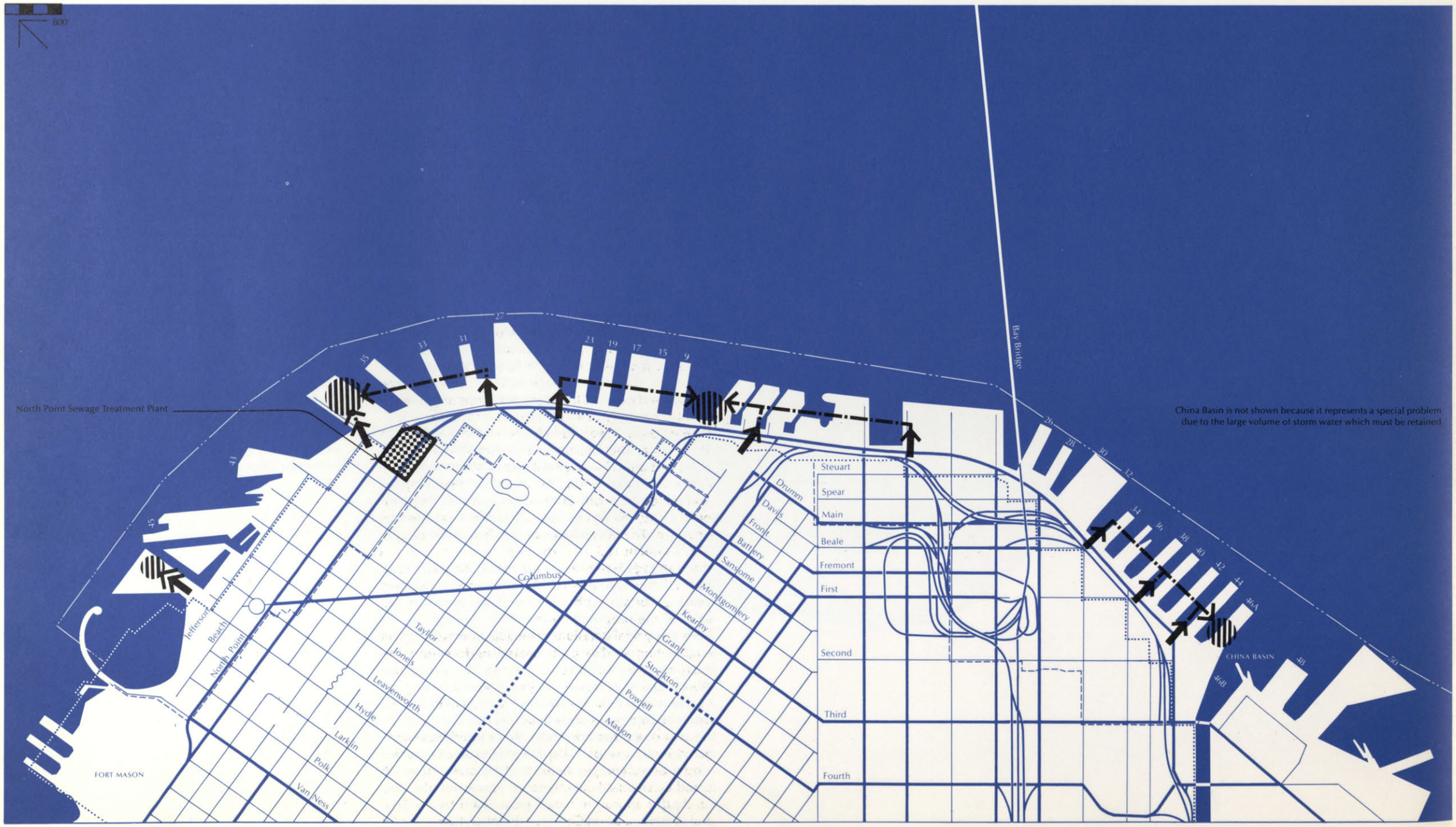
One advantage of a passenger ferry system is that during non-commute hours, the ferries could be used for recreational and sightseeing trips. For example, ferries could carry people on shopping and recreational trips between Fisherman's Wharf and Sausalito, Tiburon, Angel Island, and perhaps Alcatraz Island. Proposed sites for recreational ferry landings are located at Hyde Street Pier, Fisherman's Wharf Plaza, China Basin, and at the Ferry Building terminal which could be used for this purpose during non-commute hours.

84 Potential Sites for Storm Sewage Retention Basins

Storm Water Outfall Lines

Suggested Storm Water Outfall Diversion Lines

Suggested Sites for Retention Basins



Storm Sewage Retention Basins

San Francisco's sewerage system combines both sanitary sewers and storm water sewers in a single system. During the rainy season, then, the capacity of that system is insufficient, and untreated sewage overflows the system and flows directly into the Bay. Solutions to the problem of water pollution caused by storm water and sewage overflow are now being studied by the Department of Public Works, and a recommended "Sewage Master Plan for Combined Sewage Treatment" will be completed in 1971.

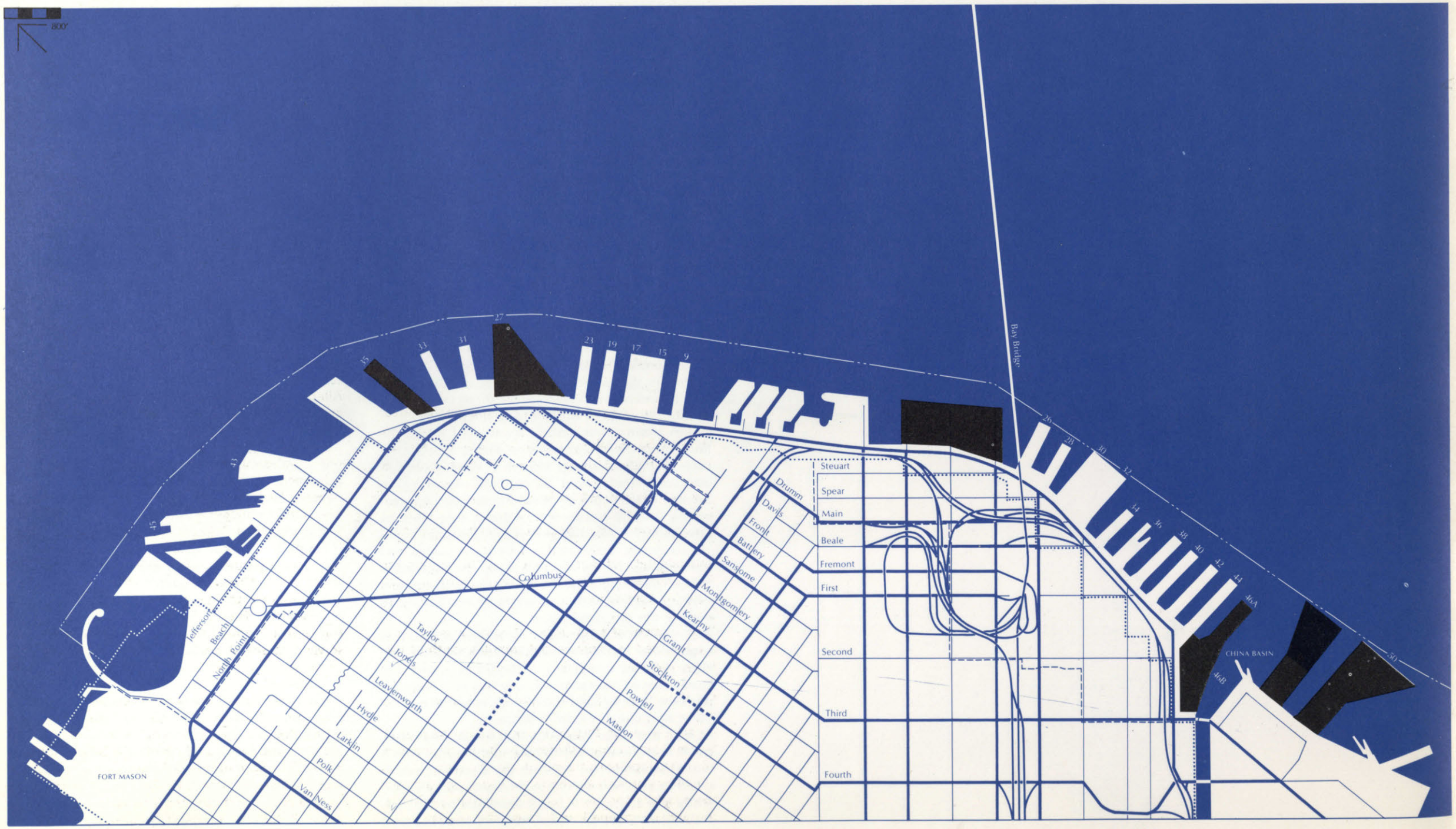
One possible solution now being studied is the use of shoreline storage basins which would be constructed to retain overflow sewage until such time as conditions permit pumping it back through the normal treatment process. The Department of Public Works requested that consideration of this concept be included in the Northern Waterfront planning studies.

At this time, it appears that storage basins, if constructed, would not interfere with the operation of the port nor with the development of the Northern Waterfront as proposed by the plan. Indeed, the provision of shoreline storage basins beneath cargo storage and non-maritime use platforms might redistribute the costs of waterfront development.

Eleven storm sewer outfalls are located within the Study Area. The Department of Public Works indicates that a total storage volume of about three million cubic feet would be required. Assuming an average basin depth of about fifteen feet, approximately 210,000 square feet of basin area must be provided. The plan diagrammatically indicates a special treatment facility at the Hyde Street outfall, and three storage basins at points along the waterfront. In the latter case it would be necessary to connect existing outfalls with a diversion sewer leading to each of the proposed basins.

Before any final decisions are made, however, further engineering studies of estimated performance and costs must be completed. It should be noted that storage basins represent only one way of solving the problem, and detailed studies may reveal that some other alternative is more feasible.

At least one other possibility that should be investigated is the use of collapsable rubber tanks which would be submerged beneath the water and which could be attached directly to the sewer outfalls. Currently this approach is being examined by the Federal Water Pollution Control Administration in a pilot project that will anchor two rubber tanks in metal cradles on the bottom of the Anacosta River in Washington, D.C. Each tank has a capacity of 100,000 gallons, and since they will be anchored seventeen feet below the surface of the river and will be only seven feet deep when full, they will always be at least ten feet below the surface and thus continually out of sight. A similar project is to be built in the Choptank River in Maryland, except that there a single steel-and-rubber tank of 200,000-gallon capacity will be used. These rubber tanks seem to offer a unique potential as storage containers for storm sewage overflow along the San Francisco shoreline, and their feasibility should be studied.


800'
Bay Bridge
CHINA BASIN
FORT MASON
Steuart
Spear
Main
Beale
Fremont
First
Second
Third
Fourth
Drumm
Davis
Front
Battery
Sansome
Montgomery
Kearny
Grant
Stockton
Powell
Mason
Columbus
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Leavenworth
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Passenger Ship Terminal

The plan recommends that passenger ship activity in the foreseeable future be concentrated at Pier 35, although in the long run, other locations may emerge as more desirable. Indeed, there has been much interest in developing a regional terminal that would service all passenger ship operations in the Bay Area and, therefore, five alternative terminal sites have been investigated.

Potential sites for a passenger ship terminal should possess the following general characteristics:

1
Easy auto access from the regional freeway and airport systems.

2
Close proximity to the central business district.

3
A location that would utilize the amenities (shops, people, etc.) associated with a terminal in a manner complementing or revitalizing adjacent areas of the City and waterfront.

4
Railroad and truck access for cargo handling operations.

5
Ability to use all or portions of existing pier facilities.

6
Ability to handle all San Francisco's passenger service now and hence potential for future expansion.

The five alternative sites include:

1
Rehabilitation of Pier 35 (existing passenger terminal).

2
Rehabilitation of Pier 27, assuming that Pacific Far East Lines shipping activities relocate to another waterfront location.

3
Development of a new regional terminal as part of a major mixed-use commercial complex south of the Ferry Building.

4
Rehabilitation of Piers 46A and 46B at China Basin.

5
Expansion of the Mission Rock terminal now used by American Presidents Lines, possibly in conjunction with development of a mixed-use complex.

The merits of each alternative site will depend upon three factors: the extent to which each site possesses the general criteria listed above; the relative value assigned to each one of the criteria; and the timing of site development.

Alternatives 1 and 2—Pier 35 and Pier 27—would each utilize existing piers and the terminal could expand to adjacent piers. The general atmosphere provided by authentic maritime activities and by the passenger ships themselves would heighten the interest and variety of Sub-Area I and II. Both piers would need physical alterations to open them to the public in a manner commensurate with the natural attraction of passenger activities. In the long run, Pier 27 offers a greater berthing capacity, but it is presently used solely for cargo operations. Nevertheless, Alternative 1—Pier 35—is a desirable site, for at the present time a passenger facility with its attendant amenities (shops, people, shipping activity, etc.) could provide a stimulus to non-maritime development in the eastern portion of Sub-Area I. In addition, Arthur D. Little, Inc., in their report to the San Francisco Port Authority points out that a refurbishing of Pier 35 is the only economic option for a passenger facility at this time within or contiguous to the Northern Waterfront.

Alternative 3 would not utilize existing pier structures and would therefore necessitate new and costly construction. However, this site affords opportunities to develop a regional terminal in conjunction with office, hotel and commercial activities. Terminal development at this site could have three important benefits. First, the site is in close proximity to Downtown, and development could increase the strength and direction of linkages between Downtown and the waterfront. Second, a terminal at this site would introduce a genuine maritime character and amenity which, in combination with a mixed-use complex, could improve the general quality of the adjacent environment. Finally, in a well-planned complex, transportation facilities (especially rail and truck services to ships) could be more adequately integrated with other modes and with the overall activity structure.

Alternatives 4 and 5 are meritorious sites if terminal development occurs in the distant, rather than near, future. Both alternative terminals would utilize existing piers and each could potentially be expanded at a later date. Both sites afford very direct access to the regional freeway system. Furthermore, the proximity to Downtown of these sites is equal to that of Alternative 3. Both of these sites are also appropriate for

142 mixed-use development which, in combination with the maritime activity and amenity provided by passenger ships, could influence revitalization of the district located between China Basin and the Yerba Buena Redevelopment Area.

Although this study has recommended that Pier 35 be used as a terminal, this must be viewed as an interim solution. Before a specific long-term location can be established, a comprehensive feasibility study should be made covering trends and characteristics of future passenger traffic, development costs, potential methods of financing, and potential complexes that could include a terminal.

Acknowledgements

City Planning Commission Northern Waterfront Committee

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James S. Kearny
Walter S. Newman

Citizens Advisory Committee

Crab Boat Owners Association
Fisherman's Wharf Merchants Association
International Longshoreman's and Warehouseman's Union
Joint Urban Design Committee
North Waterfront Associates
Russian Hill Improvement Association
San Francisco Bay Conservation
and Development Commission
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