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Urban Waterfront Development

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ULI—the Urban Land Institute is an independent, nonprofit research and educational organization incorporated in 1936 to improve the quality and standards of land use and development.

The Institute is committed to conducting practical research in the various fields of real estate knowledge; identifying and interpreting land use trends in relation to the changing economic, social, and civic needs of the people; and disseminating pertinent information leading to the orderly and more efficient use and development of land.

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Douglas M. Wrenn

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Foreword

Water was our first form of transportation and thus, for the most part, the growth of our communities has been at the mouth of navigable rivers, on bays, at key points along rivers and waterways, or on the ocean. Our earliest commerce was water-related. But the development of railroads in the 19th century expanded our geographic and commerce opportunities and triggered the cities' shift away from their waterfronts. What were once front doors became back doors. As the nation's transportation network continued to evolve, highways became the dominant form of travel, resulting in urban sprawl. Urban areas abandoned their waterfronts, and central cities declined along with them.

But over time, waterfronts have been rediscovered—and are now "hot" real estate. The current interest in their revitalization stems from urban renewal programs following World War II. Though the primary focus of these programs was redeveloping the downtown core, if there was a waterfront it was identified as a later phase of the overall revitalization. Today, through the combined efforts of private developers and community officials, waterfronts are being recognized as an urban amenity which can accommodate both water and nonwater-dependent uses.

This book is about that trend, a trend that will restore vitality to many cities. *Urban Waterfront Development* attempts to define the issues that have led to this revitalization, to recognize the legitimacy of conflicting interests, and to provide examples of waterfront developments that have been favorably received in their communities and the marketplace. It does not try to provide a simple path to resolution of these various factors, but rather presents several case studies which offer insight into alternative methods.

Like other ULI publications, *Urban Waterfront Development* seeks to relate private/public interests in land use and development to ULI's overriding goal of encouraging good development practices which best serve all segments of the community. We hope we have succeeded. To help provide a broader perspective to the waterfront development issue, we recommend the following additional ULI publications: *Mixed-Use Developments* (1976), *Adaptive Use* (1978), *Joint Development* (1979), and the *Downtown Development Handbook* (1980).

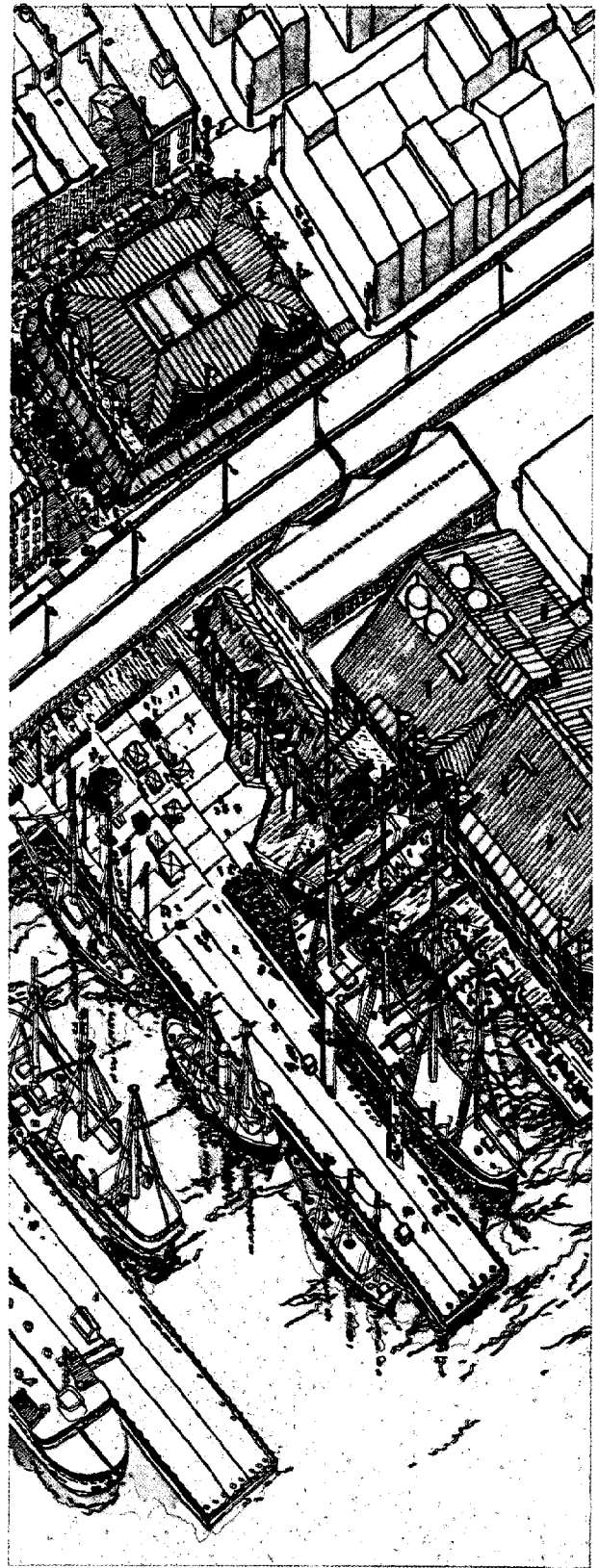
Frank H. Spink, Jr.
Senior Director, Publications

I. Historical Perspective

Urban waterfronts are special cultural resources. They are unique in their potential to provide diversified opportunities for economic development, public enjoyment, and civic identity. Until recently, however, urban waterfronts were one of North America's most neglected resources.

As patterns of commerce have changed, the nature and use of urban waterfronts have changed. Technological innovations affecting air, land, and water transportation made the port facilities of many cities obsolete. Urban waterfronts were allowed to deteriorate as the result of old age, underutilization, and lack of investment.

The effective reuse of waterfront sites, buildings, and piers, both for necessary economic development and for recreational and cultural activities, has already occurred in several cities, and many other cities are currently exploring similar opportunities. Realizing these opportunities, however, is a complex and challenging task. It requires understanding the historical role of waterfronts in urban development, the characteristics of present day waterfronts, and the unique combination of factors that influence waterfront development.



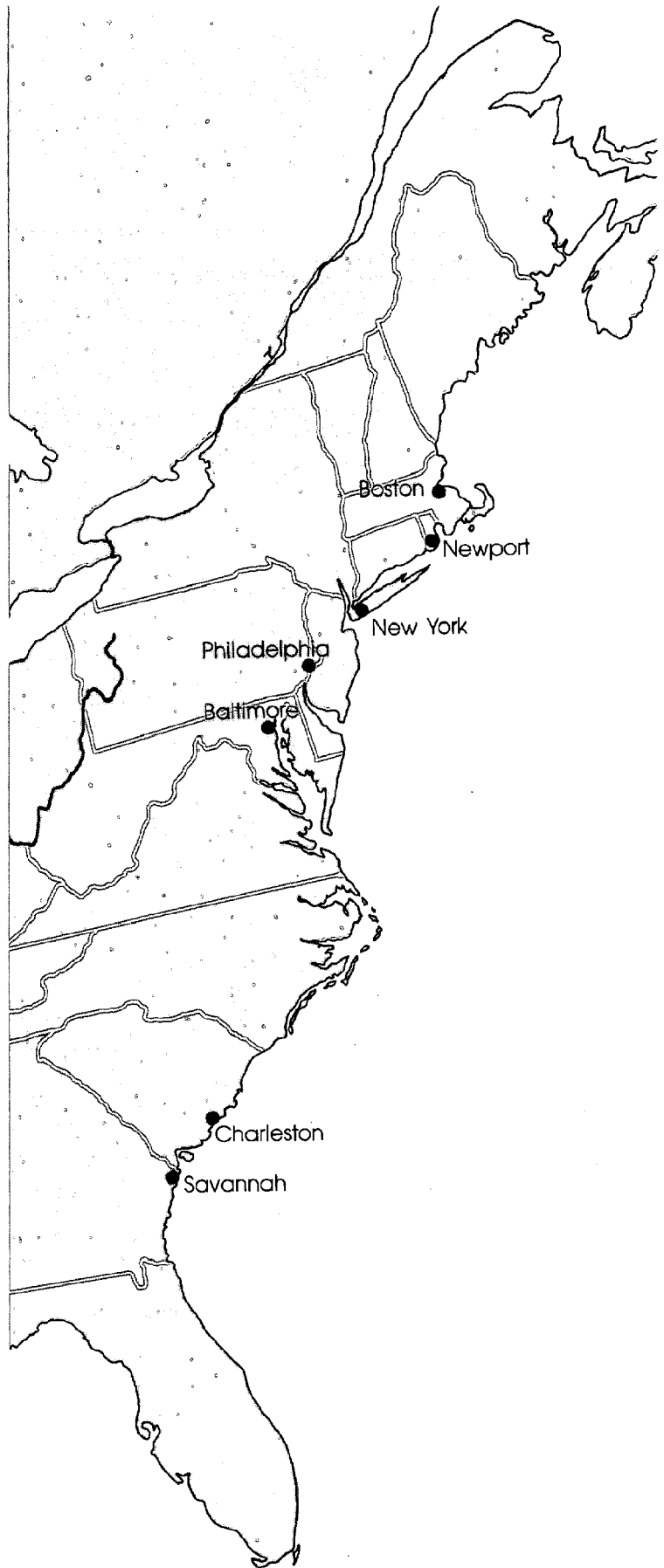
Role of Waterfronts in Urban Development

The early settlement of North America was directly tied to the location and accessibility of navigable waters. The movement of materials, products, and people was primarily dependent upon water transportation, and protective harbors were favored sites for early development and growth. A good harbor provided security and accessibility—a place where a foothold could be gained in an uncharted land. As settlements were established and immigrants arrived, the colonial waterfronts were the doors to opportunity. Just as importantly, a waterfront served as part of the linkage to the necessities of Europe and to a familiar and predictable environment.

Coastal Seaports

By the beginning of the eighteenth century, five seaports had been established along the Atlantic coast, truly demonstrating how essential the waterfront was to urban development. These cities, small as they were, had developed a commercial vitality, urban amenities, and a civic spirit that set them apart from other settlements. The northernmost city was Boston on Massachusetts Bay; the southernmost was the newer, much smaller settlement of Charles Town (Charleston), one thousand miles down the Atlantic seaboard in South Carolina. The other three were located between these geographical extremes—Newport in the Providence Plantations of Rhode Island; New Amsterdam (renamed New York in 1664 after the English conquest of New Netherlands); and Philadelphia, on the Delaware River at the mouth of the Schuylkill. The Dutch settlement on Manhattan was five years old when the Puritans of the Massachusetts Bay Company started building Boston in 1630. Dissidents from the religious views of the Bay colonists founded Newport on Narragansett Bay in 1639. Royal patentees established Charleston in 1680. William Penn laid out the Quaker “City of Brotherly Love” two years later.

More than just age differentiated those leading coastal cities from each other. Just as each came to be the metropolis of its province and the direct link with European civilization 3,000 miles and some three months voyage to the east, so from the very beginning each



had distinctive characteristics formed by its geographic setting and the nature of its hinterland. Each port had a sheltered harbor well adapted to the use of ocean-going vessels. The broad Delaware at Philadelphia's site was virtually an arm of the sea reaching up from Delaware Bay. At Charleston, where ships loading or unloading had to resort to lighters before wharves were built in the 1690s, anchorage was safe for the largest ocean-going craft of the day, New York and Newport stood on islands, and Boston was connected with the mainland only by a narrow neck washed by the tides at high water and during storms. Furthermore, each town was immediately affected by the aims of its sponsors and financial backers in England or Holland, and, above all, by the ideals, educational background, and religious convictions of the first settlers.

But the common locational variable supporting the development of these cities was a safe harbor. Each waterfront was a focal point of activity. It was the place where necessary provisions were received and distributed and outgoing cargo packaged and loaded.

The waterfront was not only a marketplace for the transfer of supplies, but also for the exchange of information and ideas. In this respect it served as the primary stage for social interaction. In every colonial port the waterfront was an important meeting place and a symbol of community strength.

The dependence upon the sea for the transport of materials and goods was most pronounced in the relatively harsh environment of New England. Compared to the fertility of the lands adjoining the more southern settlements, the New England hinterland was barren and hard. Yet Boston thrived by developing shipbuilding and a strong seafaring trade. Cod, mackerel, and haddock netted on the Newfoundland banks were a staple of that trade and laid the foundations of Boston's economic fortune. As a principal port of entry, Boston was also the distributing center of merchandise for the entire region. After 1720, Salem, on Massachusetts's northern shore, and Newport, to the south, began to offer a serious challenge to Boston's supremacy over New England commerce, but the city's financial resources, accumulated over the years, made the difference. Colonialists drawn to the sea gravitated toward Boston's Long Wharf and, when their seafaring days were over, settled into jobs in shops, warehouses, and offices along the waterfront. In tide-enclosed Boston, it was said that all streets led down to the sea.

Newport, founded in 1639, had a modest population compared to Boston. But the Narragansett Bay settlement nevertheless gradually attained influence by promoting its waterfront. During Newport's first half-century its commerce was confined to exchanging the agricultural products grown locally for European goods imported into Boston. The economic dependence on Boston lessened little by little as Newport merchants began to extend their trade southwards to the Carolinas and the Caribbean.

To a lesser extent this is what happened in many smaller New England coastal settlements. A waterfront complete with docking and cargo handling and storage facilities meant security, independence, and, most important of all, viability. It is not surprising that from 1720 on local shipyards and locally established merchants dominated the economic life of southern New England.

Manhattan's development followed a slightly different course. In addition to a magnificent natural harbor, the island offered settlers two advantages denied the New England towns: fertile soil extending over a wide adjacent territory and easy access to the interior of the continent by way of the river named for its explorer, Hendrik Hudson. New Amsterdam early on had brought Long Island and most of the Connecticut settlements along the Sound into its economic orbit. Although the decline and eventual collapse of shipbuilding and the loss of the fur trade to the frontier outpost a hundred miles up the Hudson River at Albany checked New York's economic expansion, its commerce regained vitality early in the 18th century. This economic resurgence was first accomplished by shipping through Boston but concerted efforts to shake off dependence on New England shippers met with considerable success after 1730 when New Yorkers began to import directly from London and Bristol and to dispatch return cargoes to England.¹ In this case, the waterfront was indeed the means for supporting urban growth and development.

The fourth settlement of the five to achieve stature in the Colonies was located nearly 850 miles south of New York in a swampy subtropical region of South Carolina. Yet Charleston and New York shared the same attachment and dependence upon the sea. From about 1720 till the outbreak of the Revolution, Charleston merchants shipped directly to English or southern European ports. Return cargoes sold almost as soon as they landed on the "Battery," the sea wall built along the harbor's edge.

Remarkable as the growth of other colonial towns, Philadelphia's rise was the most spectacular. The last one established of the five ports, it achieved in 60 years a commercial and cultural importance second only to Boston. Once again the waterfront was the catalyst for economic prosperity. The key, however, was the building of roads into the back country which enabled Philadelphians to market the agricultural goods produced on

¹ Constance McLaughlin Green, *The Rise of Urban America* (New York: Harper & Row, 1965), page 3.

152 The waterfront of New Bedford, Massachusetts, in 1870 retained the appearance of the colonial seaports of New England.





1-3 Pacific coastal seaports.

farms 80 miles inland, and, in 15 years, between 1727 and 1742, to expand shipbuilding on the Delaware.² This clearly demonstrated the advantage a city could gain by improving the overland accessibility of its waterfront.

Each of the five leading colonial cities developed distinct characteristics in architecture and overall appearance, in intellectual interests, and in emphasis upon various amenities. However, no matter what the location or the founder's immediate aims, the lifeblood of each city was commerce, and the waterfront its heart.

In the 1750s, from the newly founded colony of Georgia below South Carolina to the New Hampshire settlements of northern New England, newer towns were beginning to compete with the early leaders. For example, Augusta, Georgia, at the head of the Savannah River, was intercepting some of Charleston's trade with the hinterland. Norfolk, Virginia, and Annapolis, Maryland, on Chesapeake Bay were likewise expanding as outlets for tobacco and other agricultural goods. Further north, Salem and Portsmouth were obliterating Boston's monopoly over northern New England's commerce; and the rising power of Providence at the head of Narragansett Bay was shrinking Newport's status by cutting it off from direct contacts with the farming settlements in the interior.

During this early period of urban growth, the emergence of a particular city was directly related to the location and quality of its port. The development of Baltimore is a good example. The city quadrupled its population in the 15 years following the Revolution and was able to do so primarily because of its location.³ Unlike vessels sailing from the older American ports, Baltimore's ships bound for the West Indies or southern coastal cities on leaving the mouth of the Patapsco River sailed the protected waters of Chesapeake Bay for a hundred miles before reaching the open sea. This allowed for a safer as well as a shorter voyage than could be made from Philadelphia, New York, or New England. Its location on the upper bay, moreover, made the city the logical marketplace for the wheat that farmers were beginning to raise in western Maryland. In the 1790s, even before the state legislature granted a municipal charter, the city's merchants worked to capitalize on these advantages by building roads that enabled them to divert from Annapolis much of the tobacco trade of southern Maryland.

The location of navigable waters and protective harbors were just as critically important in the settlement of the Gulf and Pacific coasts as it was along the Atlantic seaboard. This significance is revealed in the pattern of urban development that occurred along coastal bays and inlets. The early development of major cities such as New Orleans, San Diego, and San Francisco clearly illustrates this fundamental relationship between a suitable harbor and urban expansion.

² Ibid, page 28.

³ Ibid, page 58.

Although European explorers sailed to the west coast of North America during the 1500s, urban development did not occur until almost 200 years later. The west coast port cities developed much more slowly than the colonial cities on the east coast for two basic reasons: the distance by sea to Europe was significantly longer and more treacherous, and the countries that sponsored the initial explorations concentrated their efforts on establishing settlements in other, more accessible, areas of North, Central, and South America.

Sir Francis Drake first landed on San Francisco's shore in 1579, but the city's development did not occur until many years later. By 1776 the full potential of San Francisco as a port city was impossible to ignore. Eighteenth century Spanish explorers saw San Francisco Bay as a great Pacific Coast harbor and built landing facilities where the Presidio overlooks the entrance to the bay. The first major harbor facility was later developed in sheltered Yerba Buena Cove near the northeast corner of the San Francisco peninsula.⁴

The search for protected, deep water harbors led Portuguese explorer Juan Rodriguez Cabrillo into San Diego Bay in 1542. During the 1700s, Spanish vessels sailed regularly to San Diego to supply the missions and military outposts established there. By the time of the American Revolution, a viable trading pattern had developed in San Diego Bay.

The Pacific Northwest was settled much later, but access to navigable waters was still a major factor influencing the location of development. Seattle was founded in 1857 by a small group of settlers who had explored north from the Oregon Territory. They searched the Puget Sound shoreline to find the deepest, most desirable port and staked claims on what is now downtown Seattle.

With the beginning of the gold rush and the subsequent growth in population, west coast seaports took on even more importance in stimulating urban growth and regional trade. In 1850 the first commercial wharf was built in San Diego and a year later the first steamship arrived in San Diego from San Francisco, marking the beginning of regular service between these two ports. San Francisco's first major pier, Long Wharf, was built in 1849.

Inland Ports

Until the development of the railroad, North American cities were almost of necessity situated on waterways. The extreme difficulty of overland transportation left no choice to settlers other than to use coastal or inland waters as routes for trade and, as much as possible, for travel. This condition dominated the continuing urban development of North America.

As settlers migrated westward over primitive highways, port cities began to emerge along inland waterways. Pittsburgh, at the head of the Ohio River, was an early example. Cargo was transported overland by covered wagon from coastal seaports to Pittsburgh where boatmen loaded the merchandise on to barges and rafted it 1,800 miles down the Ohio and Mississippi to New Orleans. Two other cities owing their early success to waterfront commerce were Cincinnati and St. Louis. Both towns grew relatively quickly into major trading posts.

The development of cities along the great lakes was also influenced by the need for a safe harbor. For example, when Lieutenant Governor John Graves Simcoe selected a site on the north shore of Toronto Bay as the location for a new town to be named York (renamed Toronto), he regarded the bay as the best harbor on Lake Ontario, suitable for all military, naval, and commercial activities. In fact, the new settlement's status as a port preceded its incorporation as a city.⁵

Along with the steady movement of settlers westward, several other factors contributed to the expansion of inland ports. The signing of the Louisiana Purchase in 1803 was one important event. It unified under one flag the river ports of New Orleans and St. Louis with the coastal cities along the Atlantic seaboard, thereby allowing the crops harvested from the farms multiplying around Cincinnati to be shipped to eastern markets. The impact was felt in Cincinnati where the city's population tripled in 10 years, and wharves, taverns, storage buildings, and other structures lined the riverfront. St. Louis became the westernmost location for outfitting wagon trains. The U.S. Army established forts to maintain security along inland waterways, improving the safety and reliability of waterborne transportation.

Another major development that magnified the importance of a viable waterfront in stimulating urban growth was the introduction of the steamboat. About 1811, a steam engine shop was opened in Pittsburgh—the strategic point of transfer from overland routes to the western rivers. However, it was not until 1818, after Cincinnati began building steamboats, that they became the primary form of river commerce. For anyone shipping goods upstream from New Orleans, the steamboat offered tremendous savings in time, risk, and cost. Instead of the 78-day record for a barge poled up to Cincinnati, steam transport in the 1820s reduced the

⁴ Harold Gilliam, "San Francisco Bay: Mystique Versus Economics," *Urban Waterfront Lands* (Washington: National Academy of Sciences, 1980), page 101.

⁵ Donald F. Putnam and Robert G. Putman, *Canada: A Regional Analysis* (Canada: J. M. Dent & Sons, 1970), page 229.



1-4 Inland ports

trip time to about 25 days.⁶ Every town along the Ohio and Mississippi Rivers benefitted from the steamboat. St. Louis's trade with New Orleans doubled, and by 1835 the Louisiana port, with commerce valued at approximately \$54 million, had a larger volume of exports than New York City.

On the inland seas of the Great Lakes, steamers were relatively scarce until completion of the Erie Canal in 1825 stimulated the settlement of the region. Like steamboats, the canals dug by other states and private companies envious of the success of Erie Canal spurred city growth. New York City profitted more directly and more largely than any other one community. As the 350-mile waterway, begun in 1817, pushed westward from the Hudson at Albany toward Buffalo on Lake Erie, towns sprang up along its course. Produce from the adjacent countryside moved eastward over the completed stretches to the Hudson and on to Manhattan, and shipment of goods went from the port into the interior. While Buffalo, the western terminus of the canal, grew into a city, the canal traffic ensured New York's commercial leadership. However, Pennsylvania's imitative attempt to link Philadelphia and Pittsburgh by a combination of canal and land transport cost taxpayers \$14 million without producing comparable results, just as the money sunk into the Chesapeake and Ohio Canal along the Potomac westward from the national capital through Maryland neither yielded investors satisfactory returns nor created new centers of trade.⁷ In Ohio, on the other hand, a network of canals built to feed into the Erie fostered the growth of secondary towns lying between the Ohio River and Lake Erie.

Impact of the Railroad

The development of rail transport had a two-sided impact on the role of waterfronts in urban development. On one hand, it gave a competitive edge to the first port cities with rail connections and strengthened the importance of many urban waterfronts. On the other hand, it opened up areas commercially unapproachable by water, thus diminishing a city's need for water access. Furthermore, it handicapped some port cities that could not accommodate the spatial requirements of the railroads along their waterfronts.

Baltimore was the first North American city to put faith in rail transport. In 1827 its bankers, after hearing a careful description of English experience with a railway, concluded that locomotives and iron tracks laid over the mountains and into the Ohio Valley would be the best means of capturing a share of the western trade which the Erie Canal was diverting to New York. Within five months Baltimoreans had prepared a plan, obtained a company charter, raised \$3.5 million of capital, and engaged a competent engineer to start construction of the Baltimore and Ohio Railroad. Before the enterprise

⁶ Green, *The Rise of Urban America*, page 65.

⁷ *Ibid.*, page 66.

was five years old, freight was rolling into Baltimore in a volume that gave it undisputed commercial control of most of Maryland, and by midcentury, when the iron tracks reached the Ohio Valley (The Baltimore and Ohio entered Cininnati in 1857), the Chesapeake Bay port, as an outlet for western produce, had attained a position that only New York and New Orleans could challenge.⁸

Other Eastern cities were quick to follow Baltimore's example, even when they had good waterways at their doorsteps. Unlike canals and rivers, railroads were usable at all seasons of the year, the speed of delivery offset the relative cheapness of shipping by boat, and, most important of all, land routes could reach areas commercially unapproachable by water.

In St. Louis, however, railroad development delivered a serious blow to the economic viability of the city's port district—Laclede's Landing. The Landing was compact and perfectly situated for the days of the steamboat, but did not have the available space required by railway facilities. Furthermore, the completion of the Eads Bridge in 1874, the first bridge spanning the Mississippi at St. Louis, stimulated expansion of newer industrial and warehouse facilities away from the waterfront district. Generally the railroads spelled prosperity for St. Louis, but the city lost much of its attachment to the riverfront. This was not the case in Chicago, where the recreational and commercial uses of the city's waterfront were not diminished by the rapid expansion of rail facilities.

⁸ Ibid. page 69.

Evolution of Urban Waterfronts

It is obvious that urban waterfronts played a major role in the settlement and growth of North American cities. What is less obvious, but just as important, is how waterfronts have changed in response to dynamic economic and technological influences. It is significant because many of the incentives and constraints associated with contemporary development opportunities stem from changes occurring in the past.

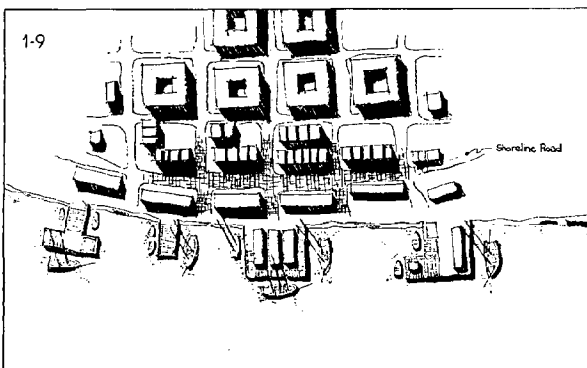
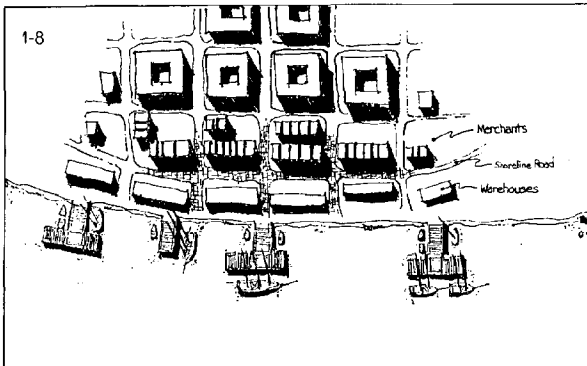
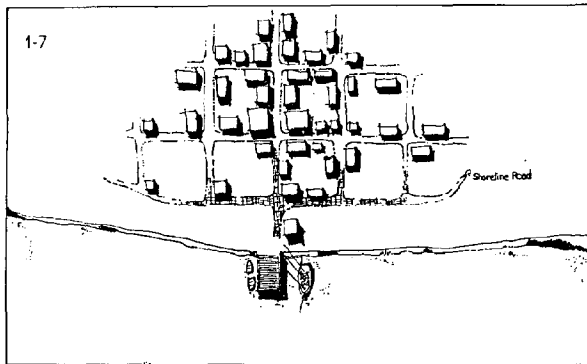
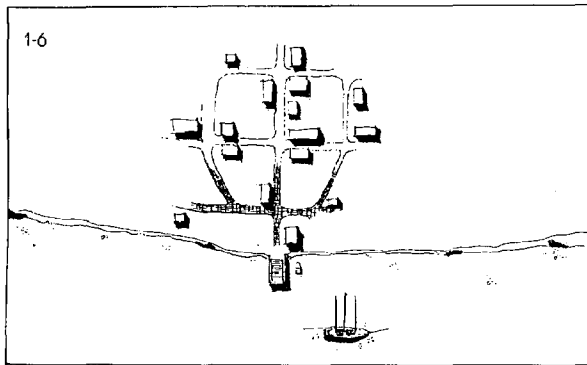
Urban waterfronts in North America have historically suffered from a lack of vision and management in their adaptations to successive demands for new functions. Traditionally, waterfront development and growth has been disjointed and incremental, characterized by a web of loosely related decisions and actions by dozens of political jurisdictions and hundreds of entrepreneurs.

To gain an overall perspective of the changes that have taken place along urban waterfronts, it is useful to trace the typical pattern of port development.⁹ Keep in mind that this was the common sequence of events and as such does not correspond to any particular city. Specifically, the scale and pace of change was uniquely tied to the characteristics of each waterfront city.

⁹ The typical pattern of port development was adapted from *Waterfront Precedents* (Toronto: City of Toronto Planning and Development Department, 1976), pp. 2-5.



1-5 Baltimore's thriving port stimulated the city's early development.



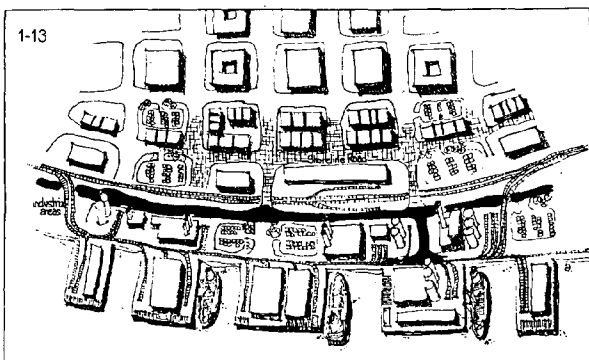
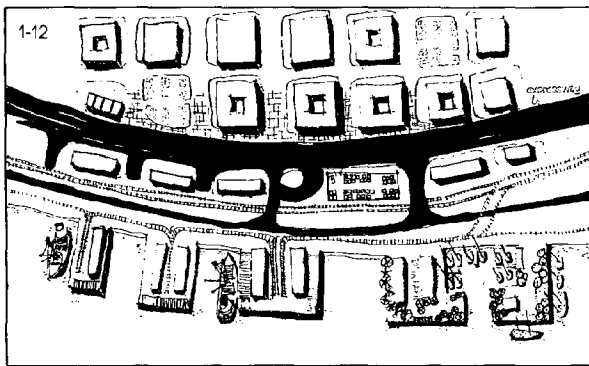
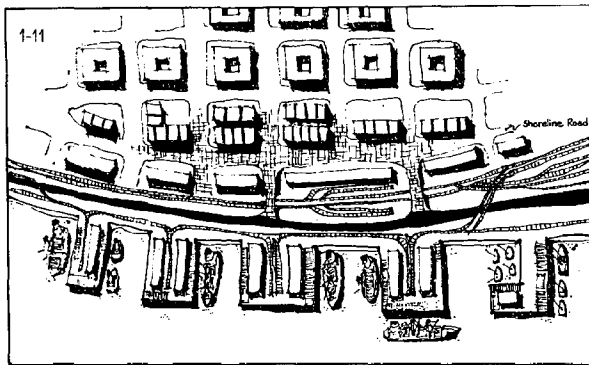
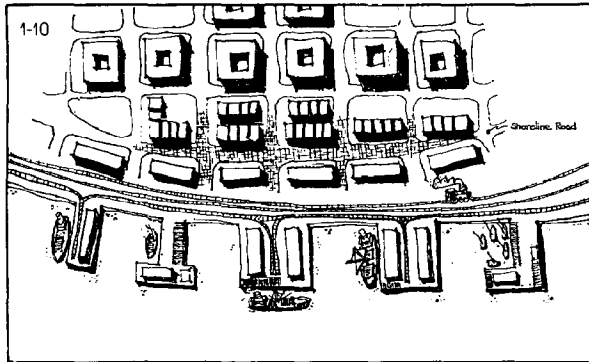
Typical Pattern of Port Development

The first prerequisite for establishing a port was the existence of a safe harbor suitable for cargo and passenger ships. Within the harbor, a site was selected for construction of a small wooden jetty. Ships were anchored offshore and cargo was transported to the jetty by smaller boats. At this time, the waterfront was nothing more than where primitive inland trails converged at the location of the jetty. Later on, a street pattern was slowly established. Throughout this period of settlement, inhabitants had direct contact with the natural shoreline. (See Figure 1-6.)

This was followed by a period of rapid growth and development during which the physical configuration of the waterfront began to be significantly altered. A larger pier was usually installed to allow ships to dock and the street grid began to be filled in with buildings. (See Figure 1-7.) Seawalls and bulkheads were constructed to stabilize the shoreline and improve anchorage facilities. Although there was dramatic expansion during this period the settlement still clung to the waterfront with a shoreline road providing primary access. At this point, the settlement was fast becoming a city and its waterfront emerging as a port. Maritime commerce stimulated urban development and the shoreline road was a busy street providing services, supplies, and office space for merchants and the shipping trade. (See Figure 1-8.) Commerce escalated with the use of steamships. Rows of newly constructed warehouses blocked the water's edge from the street, and wooden piers were gradually replaced by bigger docks made of stone and fill material. By filling out into the water to expand docking and storage facilities, the distance between the city's center and its shoreline was significantly increased. (See Figure 1-9.) The rapid expansion of the waterfront and its growth as a port facility precipitated the formation of a governing body—a port authority or commission—to manage shoreline activities.

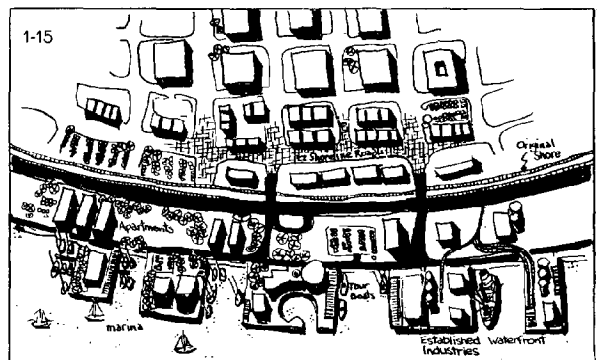
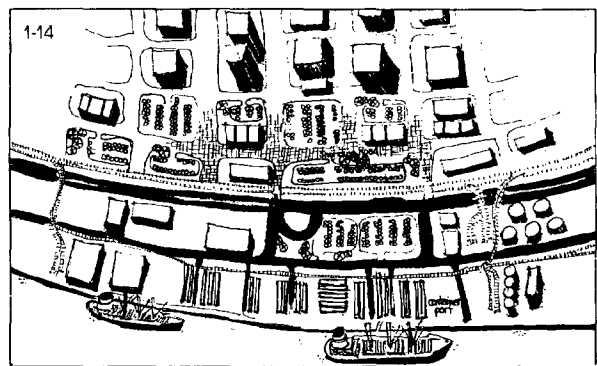
The port continued to thrive; more warehouses were built and railroads first appeared. The introduction of railways required a great amount of waterfront land. Space was needed to service docks and install tracks. Thus, even more land was created with fill material (often generated by dredging operations) to satisfy the spatial needs of the railroad. As shown in Figure 1-10, this change effectively severed the central city from the waterfront.

As this process of expansion continued, the original shoreline road became functionally less useful as the distance between it and the water increased. The central city was effectively detached from the shoreline and the waterfront was congested and difficult to maneuver through. To alleviate congestion a new elevated highway was built near the shoreline with limited access to the city. Offices and stores along the old shoreline road were consequently converted to warehouses. (See Figure 1-11.)



At this stage the typical port development scenario followed one of two paths. If shipping declined, then the shoreline remained unchanged and the buildings along the old shoreline road were subsequently demolished and the expressway widened. (See Figure 1-12.) If shipping increased, then the port activities were expanded, more industrial uses were introduced, and wider piers were constructed. (See Figure 1-13.)

Throughout this incremental development process the scale of the waterfront increased significantly with the size of the elements of industrialization (trains, cranes, ships) in use. Today, the economically successful port resembles Figure 1-14. However, in North American cities, the original port area rarely developed as a commercial shipping terminal for two reasons: large, previously established waterfront industries were entirely dependent on supply by ship and any major relocation was too costly; and secondly, the old port areas were too constricted for modern container ships to maneuver easily, and thus there was a lack of back-up space for cargo storage.



1-16 Container cranes have revolutionized cargo handling in port cities.

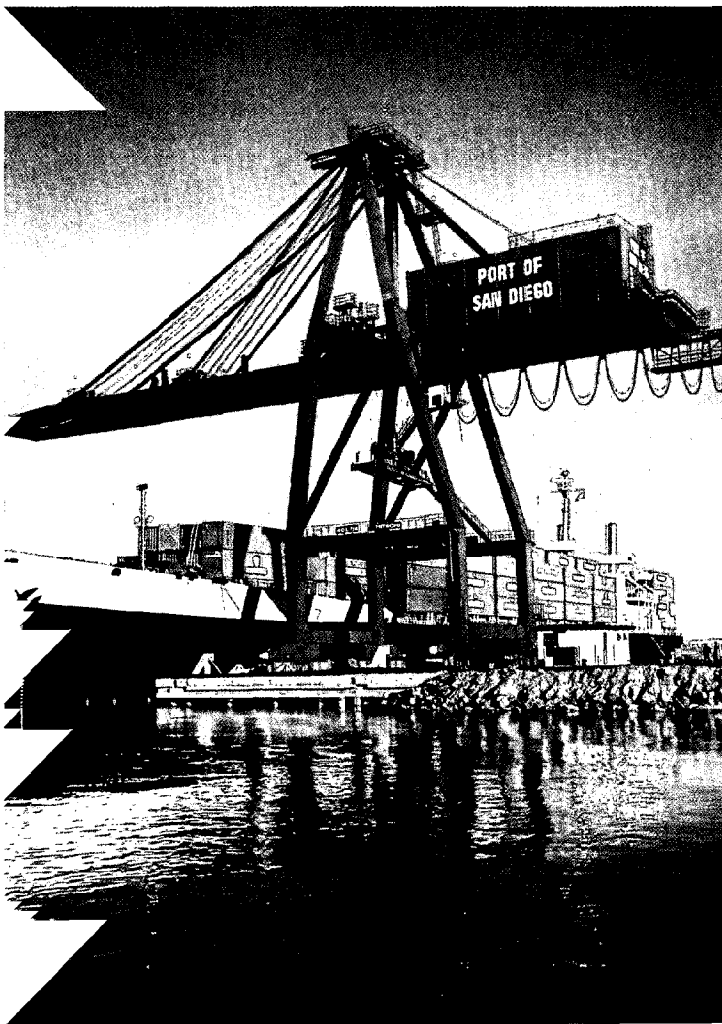


Photo credit: Port of San Diego

Containerization revolutionized cargo loading. In traditional cargo handling, known as "break-bulk," individual packages in separate crates were loaded on and off ships. In containerization, however, cargo is prepacked in large metal boxes, each about the size of a small truck body.

Containerization speeds ship loading enormously. While it takes 12 days to load a 6,000-ton ship break-bulk style, it takes only one day to load the same size ship with containerized cargo.¹⁰ However, the operation requires a different kind of port facility. The number of berths available became secondary in importance because a ship requires comparatively short docking time. Backup space—35 acres per berth by rule of thumb—became the essential element of a successful port facility.¹¹ Hundreds of acres of upland area are required to efficiently service the large container ships. As a result, many of the break-bulk finger piers in the port fell into disuse and disrepair. At about the same time, some manufacturers began to leave the city, and the railroads were hard hit by the decline of manufacturing plants. When their freight volumes declined, the railroad suffered. Railroad yards on the waterfront were allowed to deteriorate as the result of old age, neglect, and disinvestment. The waterfront virtually became a ghost area—a deserted, inaccessible, depressing reminder of better days.

The old port area lost its original usefulness, and private developers and city governments discovered a relatively inexpensive supply of downtown waterfront land ripe for redevelopment. Due to the port's commercial failure, there was a chance to open the waterfront once more to public use and a blend of recreational, residential, and commercial uses were developed. (See Figure 1-15.) In the meantime, a new container port was established outside the city where space was plentiful.

This typical sequence of change has taken place to varying degrees throughout North America. Variations can be attributed to many interrelated factors: a city's age and size, its location and climate, the diversity of water-related uses, and forms of governmental intervention. The magnitude and ramifications of this evolution can be better appreciated by looking at the actual experiences of individual cities. In this respect, the metamorphosis of urban waterfronts can be qualified in terms of physical alterations, changes in environmental quality, the succession of different functions, and the redefining of jurisdictional responsibility.

¹⁰ Robert F. Wagner, Jr., "New York City Waterfront: Changing Land Use and Prospects for Redevelopment," *Urban Waterfront Lands*, page 85.

¹¹ *Ibid.*

Physical Alterations

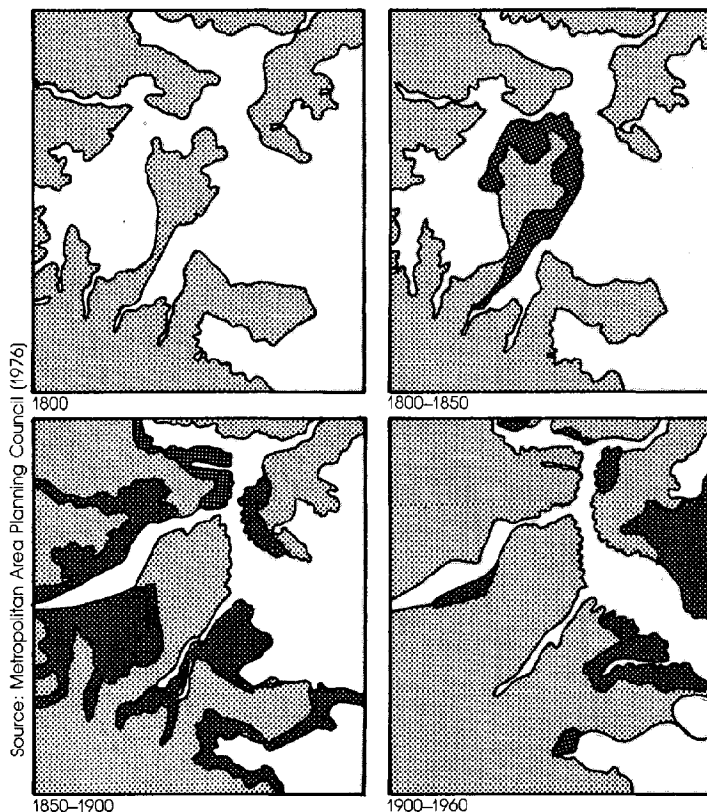
As alluded to in the typical development scenario, the physical alteration of urban waterfronts was necessitated by technological innovations affecting waterborne transportation. It was an ongoing process and produced dramatic change. For example, during the early stages of Baltimore's development, the city dredged the mouth of the Patapsco River, filled the marshland adjoining it, and put up warehouses and wharves along the extended waterfront until its docking facilities rivaled New York's. In Boston, when conflicts occurred over the location of waterfront facilities, an obvious and relatively easy answer was to create new land by filling in the harbor. The extent to which this was done is startling. As shown in the illustration, the large waterfront areas of South Boston and Charlestown neighborhoods as well as downtown were created to meet the demands of expanding maritime activities.

Toronto, like many other inland waterway cities, has a history of changing the shoreline to create lands for new uses or the expansion of existing uses. The Toronto waterfront is marked by succeeding "headlines" as landfill operations have extended the shoreline farther and farther into the harbor. In addition to deepening the harbor and expanding the port area through its reclamation activities, the Toronto Harbor Commissioners

(appointed in 1911 to coordinate administration of the port and harbor) built a protective breakwater 900 feet offshore, extending from Humber River to the Western Channel.

Similar alterations were made in west coast cities. In San Francisco a seawall was constructed to control mud slippage, to allow filling in of the mud flats, and to improve moorage conditions along the waterfront. Two and one-half miles of seawall were completed by 1880, and the mud flats that were filled in became the city center with its financial and commercial districts. The Vancouver, British Columbia, waterfront was drastically altered when Granville Island was formed in 1915 from material dredged by the city to increase the width and depth of the navigable channel in False Creek. In San Diego, Shelter Island (a major waterfront feature) was created and later connected to the mainland by filling in the bay with dredged materials.

Many other examples could be cited but the point is clear: urban waterfronts' configurations have been dramatically altered over the years in response to changing social and technological factors. If waterfronts were not able to accommodate change, then they lost much of their economic viability.



1-17 Land creation in Boston harbor, 1800 to 1960.

Environmental Quality

As urban waterfronts followed the typical pattern of expansion and industrialization, the quality of the environment was noticeably affected. Pollution controls were unheard of and more often than not the pollutants and waste generated by shipping and commercial fishing operations were pumped or discarded directly into the sea. Moreover, rapid urban development increased storm runoff, accelerating erosion and sedimentation. This also created additional flooding and drainage problems. Until modern sanitary systems were developed, waterways were literally open sewers and the stench in the air served as an unpleasant reminder.

The deterioration of water quality was particularly rapid in inland rivers which did not benefit from the tidal action that helps dilute and flush out pollutants. Furthermore, inland waterways suffered from the cumulative effect of each port city along a river discharging pollutants and wastes into the water.

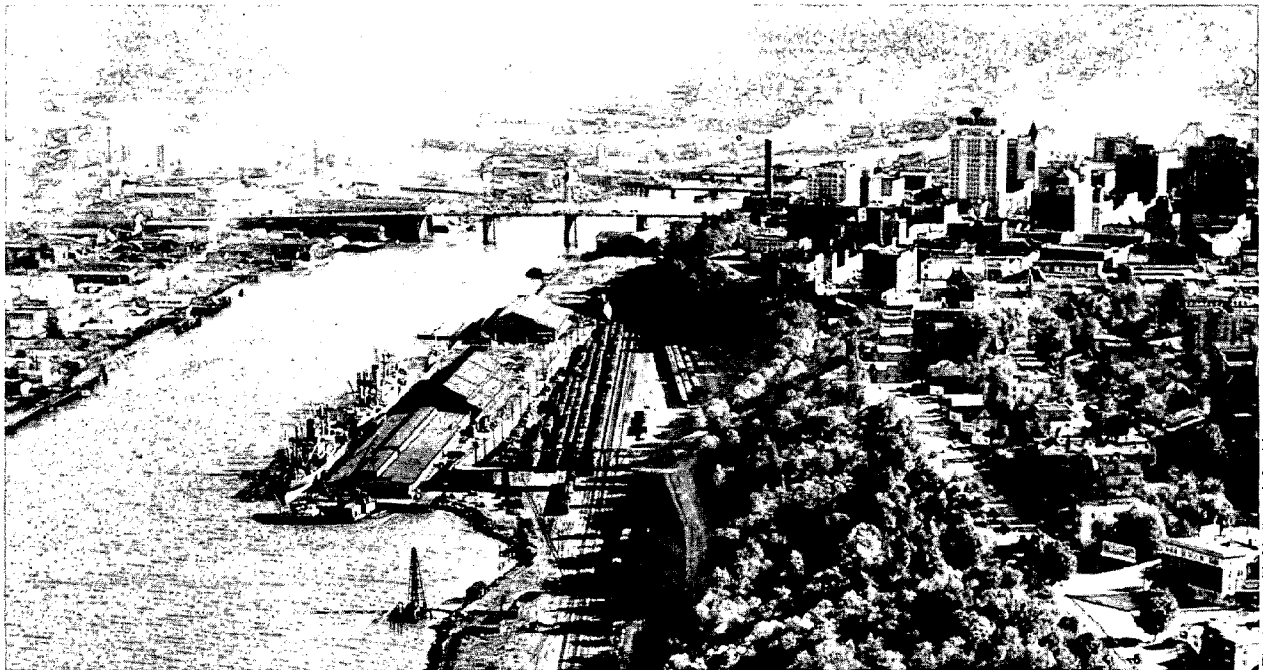
The elements of industrialization—motor-powered ships, railroads, processing plants, grain elevators, and so forth—contributed to the further deterioration of the waterfront environment. The detrimental impacts associated with industrialization were greater air pollution, greater noise and congestion, destruction of fish habitats, and improper waste disposal. Intensively utilized ports were noisy, grimy places—visually unpleasing and

physically uninviting. The water's surface was frequently thick with oil and gas discharged from ships, and the shoreline was littered with trash and debris.

On the other hand, the ports that could not accommodate industrialization became noncompetitive and somewhat obsolete. In these cases, environmental quality suffered more in terms of general urban decay—vacant buildings, rotting piers, and unsightly storage facilities—than specific pollution problems. This is essentially what happened in Boston and St. Louis, as well as many other cities.

With the implementation of pollution controls in the late 1960s and early 1970s, coupled with the relocation of some industrial operations from central waterfront locations, the quality of the shoreline environment was dramatically improved. Portland, Oregon, is a good example. In Oregon, the commitment to improve water quality was demonstrated as early as 1938, although it was not until the beginning of the 1960s that the state's Department of Environmental Quality was created and important legislation enacted. During that decade, guidelines were adopted for establishing water quality standards, and public policy regarding statewide controls was clarified. A system of permits and financial incentives, such as tax credits and assistance grants to cities and counties, was authorized. Because of these and other major public policy decisions, the renewal and redevelopment of the Willamette River waterfront was possible.

Many studies have been completed documenting the relatively healthier condition of North American waterways. The overriding result has been a renewed interest in the waterfront's recreational and aesthetic appeal.

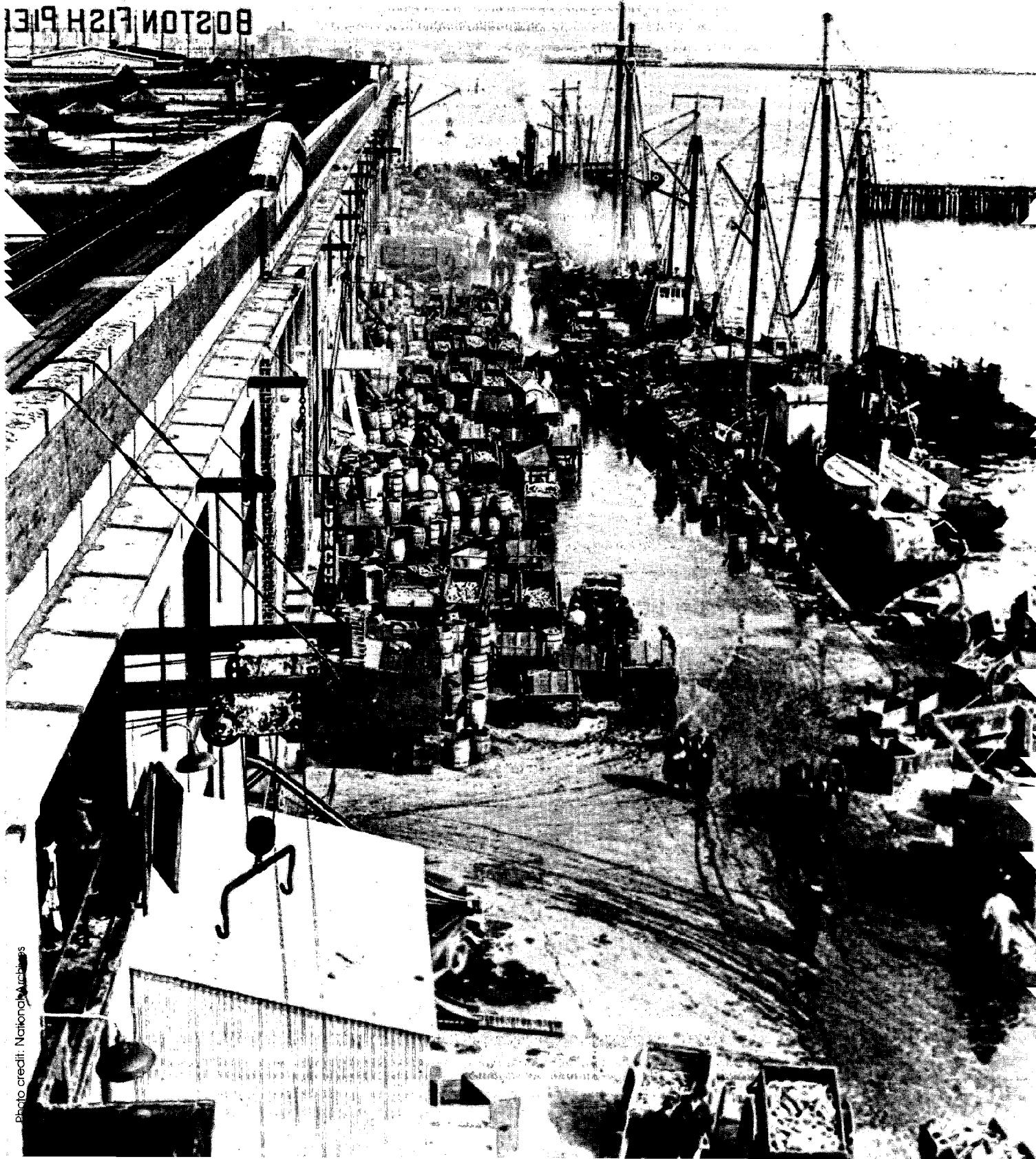


1-18 By 1930 industrialization had significantly damaged the environmental quality of the Tacoma, Washington, waterfront.

Photo credit: National Archives

1-19 The Boston Fish Pier was built in 1912 to help relieve the congestion at other wharves in the harbor. It was the largest and most modern plant of its kind in the world with a tiny railroad on the roof capable of distributing ice to each dealer, a cold storage facility, a central heating system, and a telegraph communications system.

BOSTON FISH PIER



Succession of Waterfront Functions

The functions of urban waterfronts have always been tied to the characteristics and needs of individual cities, although they have shared a typical sequence of development. During the early urban development of North America, a city's waterfront served primarily to support its immediate resident population. The basic functions were commerce, shipbuilding, transportation, commercial fishing, and defense. Recreation was a secondary function and often the waterfront was thought to provide by itself adequate open space for the health and recreational needs of the citizens. In the New York plan of 1811, for example, a neglect of parks was

justified on the grounds that "the large arms of the sea" embracing Manhattan made other recreation facilities unnecessary.¹² Waterfronts, however, were gradually monopolized by facilities for transportation and commerce and were rendered useless for any other purpose.

As settlements grew into cities, shipping, commercial, and industrial activities were traditionally located on or adjacent to the waterfront. During the late 19th century, railroad yards and facilities were built along the waterfront usually adjacent to the large shipping facilities. Gradually, the waterfront became the center of the commercial and industrial life of these cities. By the early 20th century, the waterfront areas in major port cities hummed with a variety of commercial shipping, railroad, and industrial activities. Typically, the waterfront areas were characterized by numerous, expansive developments such as railroad yards and industrial and shipping facilities which funneled raw materials and finished products to and from merchants and manufacturers throughout the country.

¹² August Heckscher with Phyllis Robinson, *Open Spaces: The Life of American Cities* (New York: Harper & Row, 1977), page 88.



Photo credit: National Archives

1-20 By the early 20th century, the waterfront areas of major port cities such as New York were dominated by commercial shipping, railroad, and industrial activities.

The development of the railroad system drastically reduced the dependence of cities on their waterfronts to provide the basic functions of transportation and commerce. With the exception of the cities dependent on international trade, communities were more reliant on rail service than water access to support urban growth. In such cases, recreational and residential uses at the waterfront often gained priority.

The use and expansion of the railroad system along with the predominance of a natural resource in the hinterland, such as timber or coal, led to the increased specialization of urban waterfronts. Cities would compete with each other for regional dominance and a single use would thrive at the expense of other functions. The result was that within a coastal region one city would be known for shipbuilding, one for cargo shipping, one for fishing, one for recreational boating, and so forth.

When the wharves, docks, and other waterfront facilities became inadequate for their original purposes, waterfronts were used for storage and industry. The old structures along Boston's central waterfront which had been used as shipping and receiving headquarters were slowly converted to industrial, wholesale, and storage facilities. In Salem, Massachusetts, for example, Pickering Wharf stored coal and later oil and gasoline.

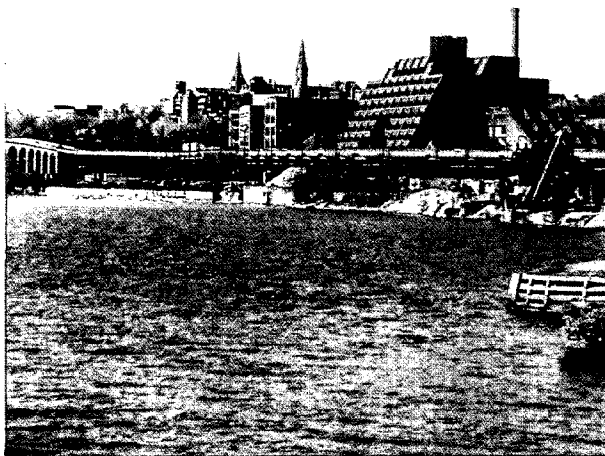
The demand for accessibility to inner cities and remarkable technological advances in all major modes of transportation strongly influenced the use of urban waterfront lands. The movement and temporary storage of vehicles were two functions delegated to the waterfront. In cities throughout North America, elevated expressways were constructed over waterfront lands. The Whitehurst Freeway in Washington, D.C., Gardiner Expressway in Toronto, and the Alaskan Way Viaduct in

Seattle, are three notable examples. While in retrospect the wisdom of locating these highways along the waterfront is questionable, at the time they were first proposed highway development corresponded with suburban growth and the demand for easy movement through urban areas. In many cities the waterfront did not have a high priority as a location for recreation, open space, or consumer-oriented activities. Such uses were being developed along suburban expressways and beltways. In addition, construction required minimal displacement of people, and the highways did not adversely affect surrounding uses.

A related trend was the conversion of waterfront lands to vehicular parking areas. During the 1950s, for example, low-priced parking was the most profitable use of Boston's central waterfront.¹³ In many other cities deteriorated structures were demolished to make way for surface parking facilities. For years a large part of the Georgetown waterfront along the Potomac River in Washington, D.C., has been used to store municipal buses and other vehicles.

A second, perhaps more important, functional change was the development of major commercial airports on waterfront lands. The rapid development of larger, faster, and noisier aircraft in the era following World War II required ever larger sites to accommodate airport runways and support facilities. In many cases, urban shorelines have been effectively monopolized by airport use. This was primarily due to the availability of waterfront lands in the early postwar years, even though many airports such as National Airport in Washington, D.C., Logan Airport in Boston, Lindbergh Field in San Diego, and San Francisco's International Airport now operate under restrictions resulting from intolerable noise levels over settled areas.

The undesirable impact of such noise, while not always sufficient to deter incompatible development in areas below approach and departure paths, results in environmental degradation and conflict in many urban waterfront areas. Additional problems are created by the encroachment of airport-related land use on surrounding areas and the congestion of highways and roads with ground traffic generated by airports. But waterfront airports, located relatively close to intown air travel demand centers, are excused for their adverse environmental effects because they provide convenient access, even though the long-range impacts appear to be quite severe.



1-21 For years, a large part of the Georgetown waterfront along the Potomac River in Washington, D.C., was used to store vehicles.

¹³ Virginia Farrell, *Development and Regulation of the Urban Waterfront: Boston, San Francisco, and Seattle* (Princeton, N.J.: The Center for Energy and Environmental Studies, Princeton University, 1980), page 5.

The expansion of waterfront airport areas experienced in the 1950s and 1960s has ceased, quite likely permanently. Increasing competition for close-in sites among many different potential users, including residents, businesses, and institutions, prevents airport extension as does ecological considerations.

Since the turn of the century, several cities have developed waterfront areas into parkland and recreation areas. The motivation for this varied, but generally it was done to stabilize the shoreline, improve drainage and flooding conditions, and enhance urban recreational opportunities. The parks were often designed around a monument or historical site. This has been carried to the extreme in Washington, D.C., where over 80 percent of the Potomac and Anacostia shoreline combined is under the jurisdiction of the National Park Service.¹⁴ The 1901 plan for Washington devoted much attention to the banks of the Potomac. It set the pattern for waterside parks and green spaces which has gradually been completed as land has been filled and sites for monuments established. More typical is St. Louis where in 1934 the decision was made to move forward with the Jefferson National Expansion Memorial and the levee was cleared from Eads Bridge to Poplar Street as far west as Third Street. Thirty years later, this became the site of Eero Saarinen's famous arch and a 91-acre park built entirely by the federal government. Chicago offers another striking example. When Burnham presented his plan for the city in 1909, considerable public support existed for his proposal to develop the lakefront as park. He depicted a new shoreline of beaches, lagoons, islands, harbors, and cultural facilities, a vision that shaped much of the subsequent development. Today, nearly 24 of the city's 30 miles of shoreline consist of public parks and beaches.¹⁵

Looking back at the different functional uses of urban waterfronts leads to the conclusion that the current wave of redevelopment projects represents a logical extension of a continuing cycle of reuse. For each city the scale and type of redevelopment will vary, just as it has in the past, but basically the physical configuration and urban form of the waterfront should continue to change in response to new demands.

Rise of Jurisdictional Responsibility

One very significant part of waterfront evolution has been the redefining of jurisdictional responsibility in association with changing functional uses. Given that economic viability was hinged to urban waterfronts,

governments on all levels were moved to establish governing agencies to protect the public's health, safety, and welfare. Likewise, separate organizations were established to manage and protect special interests dependent upon water resources.

The Rivers and Harbors Act of 1879 authorized the U.S. Army Corps of Engineers to regulate all activities affecting navigable waters. The Corps of Engineers remains the principal federal regulatory agency but, since 1899, other federal agencies, including the U.S. Coast Guard, Maritime Administration, U.S. Fish and Wildlife Service, and Environmental Protection Agency, have been given some jurisdictional authority to regulate shoreline activities. State governments have likewise been concerned with regulating the management and use of land and water resources, and the growth of the number of state agencies having jurisdiction over shoreline activities mirrors what has occurred on the federal level.

Since the turn of the century, public port authorities have become an important management force directing the use of urban waterfronts. Most public port authorities derive their authority and obligations directly or indirectly from state law. In some states port authorities operate directly under state statute as state-level departments or special districts. Others are controlled indirectly by states, with powers statutorily passed from the state to municipalities or counties which, in their turn, create port authorities.

The Toronto Harbor Commissioners were appointed in 1911 to coordinate administration of the port and harbor. In California the Board of State Harbor Commissioners was formed in 1863. By 1920 most major ports were under the jurisdiction of governing organizations charged with managing cargo transfer and storage and promoting industrial development. Over the years as the functional uses of waterfronts have changed, their responsibilities have expanded to include operating airports, bridges, transit systems, and recreational boating facilities.

A third layer of jurisdictional responsibility has developed at the city or county level. Municipal offices were formed to implement land use controls such as zoning and subdivision ordinances, police power ordinances concerned with health, safety, and fire protection, and the provision of public services such as roads, water, sewer, electricity, and so forth.

Each level of government has produced regulations and permitting programs designed to protect coastal resources. Consequently, waterfront development proposals have always been subject to more reviews and approvals than projects located outside waterfront lands, and secondly, the number of permits and approvals needed has been steadily increasing.

Based on the past experiences of port cities, it is evident that urban waterfronts should continue to change in the future. In this context, waterfront development is a logical extension of the sequence of change that has taken place throughout North America.

¹⁴ National Capital Planning Commission, "The Urban River" (Washington: U.S. Government Printing Office, 1972), page 12.

¹⁵ Heckscher, *Open Spaces: The Life of American Cities*, page 96.

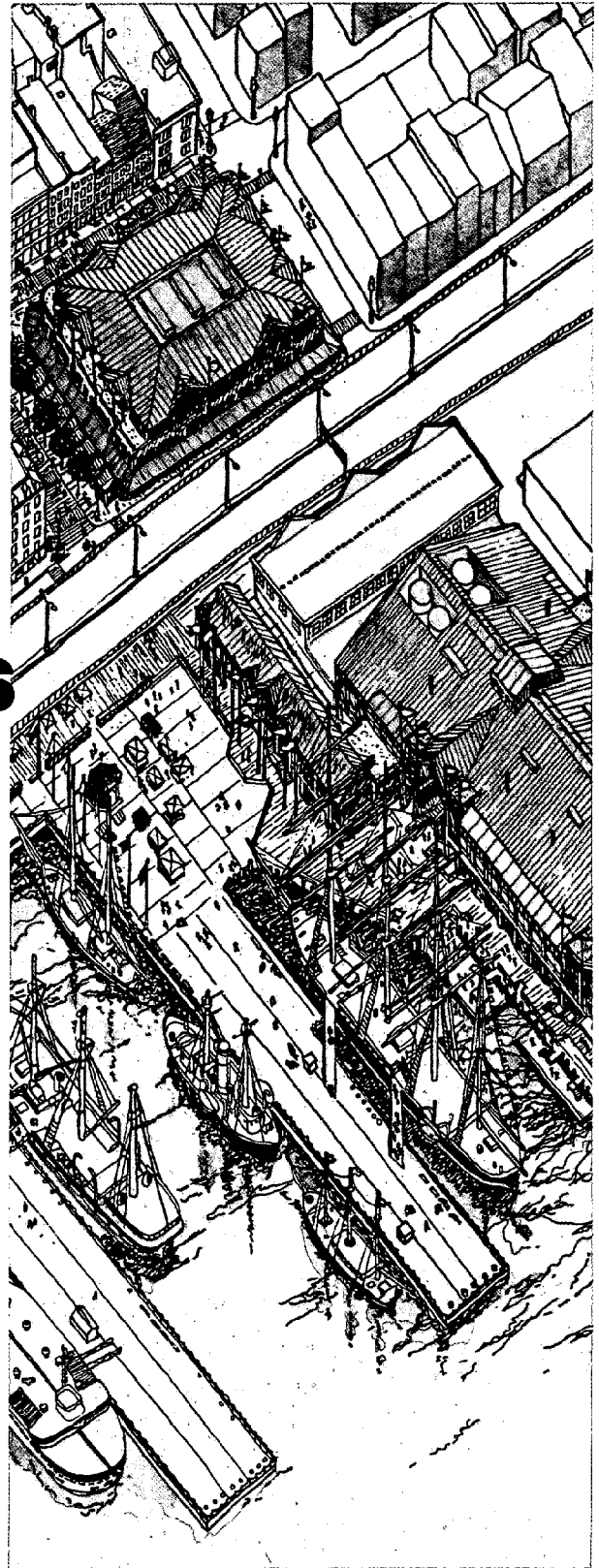
1-22 Chicago was one of the first North American cities to develop the recreational potential of its waterfront.



II. Characteristics of Urban Waterfronts

Urban waterfronts are by definition the interface between land and water, and just as North American cities have noticeable similarities and differences, so too do their waterfronts. Waterfronts vary enormously in type and character as well as in size and age. While the term "urban waterfront" customarily applies to the port areas of large metropolitan regions such as Boston, New Orleans, Baltimore, San Diego, and Seattle, it also refers to small resort towns with active harbors, commercial fishing villages, and many medium-sized industrial cities located along navigable waters.

The ultimate success of any development effort will depend upon how responsive it is to the unique qualities defining a specific waterfront. When examining development opportunities there are several factors related to a waterfront's geographic location, urban context, and jurisdictional boundaries that must be taken into account. Furthermore, a sensitivity must be developed for the dynamics of each factor; that is, it must be determined which conditions can dramatically change and which ones cannot.



Geographic Location

Geographic location is a fundamental variable distinguishing one urban waterfront from another. It is obviously important because it defines a multitude of environmental characteristics related to water, land, and climate. Furthermore, since a city's location is fixed, many geographic locational characteristics are not subject to dramatic change. In short, geographic location influences the physical form and cultural heritage of an urban waterfront.

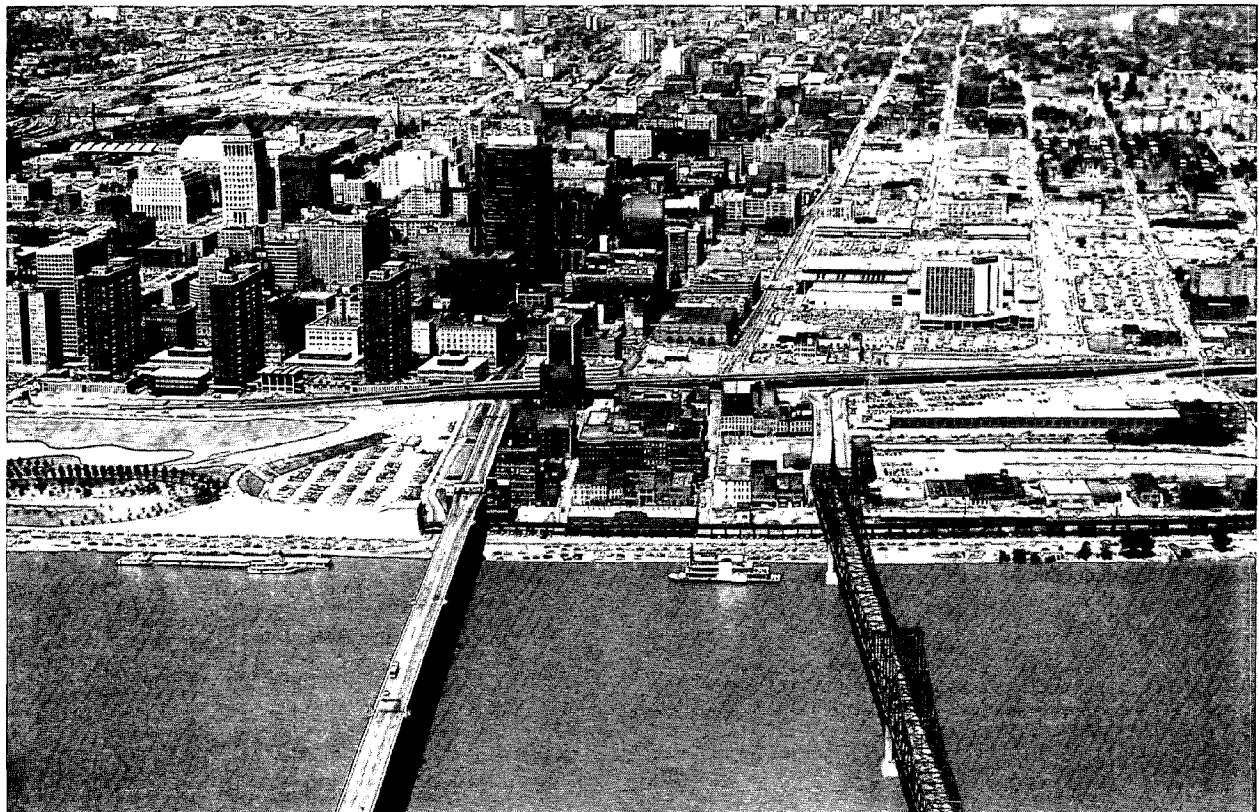
Water Resource

Waterfronts are located on different types of water bodies—on coasts, along rivers, at the terminus of shipping channels, or alongside bays and coastal inlets—and the condition of these water resources varies significantly with each location. The more important factors are the dimensions and configuration of the body of water, the water resource dynamics, and the water quality. To a great extent, these factors dictate the potential water-related uses of the shoreline. Furthermore, they combine to affect the engineering, design, and construction of new projects.

In general terms, the larger the dimensions of the water body, the greater the range of potential water-related uses. This relationship is based on common

sense: obviously, a deep water harbor located on a large coastal bay is able to accommodate uses that an inland river port with a narrow channel and shallow marina cannot. Nevertheless, there is another side to this relationship: the greater the range of potential water-related uses, the greater the potential competition and conflict between uses. The friction between the recreational boating community and the shipping industry is one example.

Although it is usually advantageous to have a deep water harbor, in Seattle the water depth is so great that it restricts the distance structures can be built out from the shoreline. As a result, piers were built along the city's central waterfront, angling out away from the seawall to make them long enough to accommodate cargo ships. This design solution worked well until the development of larger ships made the piers inadequate for cargo handling. Moreover, the reuse of this part of Seattle's waterfront continues to be constrained by this condition. But Seattle is an exceptional case. More often, if waterfront development is stifled by water depths it is because shallow conditions prohibit some water-oriented use.



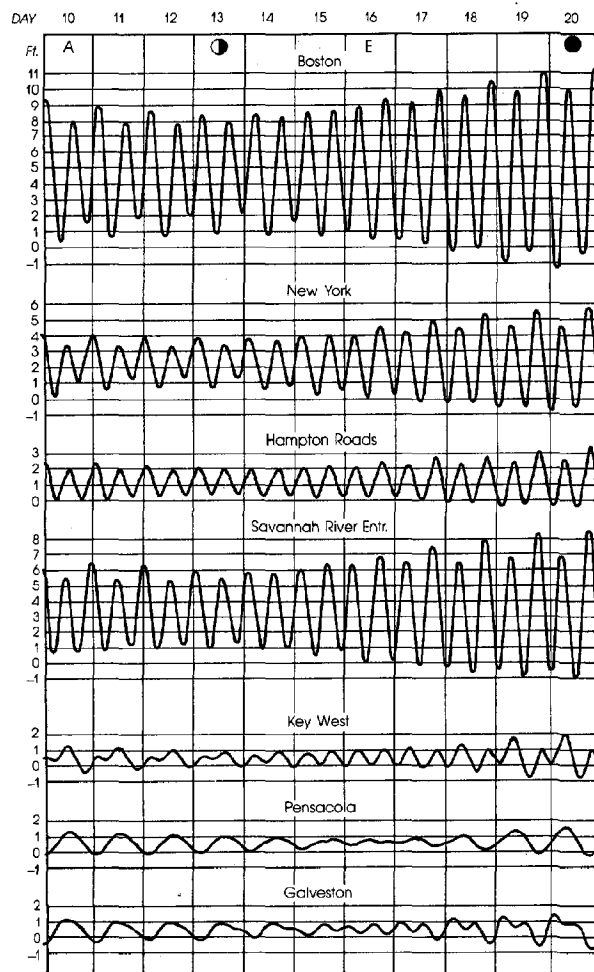
2-1 Located between two highway bridges spanning the Mississippi River, Laclede's Landing in St. Louis is undergoing major redevelopment.

The importance of the water's resource dynamics cannot be overestimated as a factor. In coastal seaports, for instance, tidal fluctuations and wave action significantly affects waterfront development. The graphs below show the variations in the tide from day to day and from place to place for representative ports along the Atlantic, Gulf, and Pacific coasts of the United States. In San Francisco and Seattle, breakwaters are necessary to protect marina slips and docking facilities from the destructive force of wave action. This requirement increases development and maintenance costs.

The flow dynamics of inland waterways also exert a strong influence over shoreline development. River ports must contend with dramatic water level fluctuations—low flows following periods of drought and flooding caused by heavy rains or melting snow. If flow variations are severe enough, the development of urban waterfronts can be extremely limited.

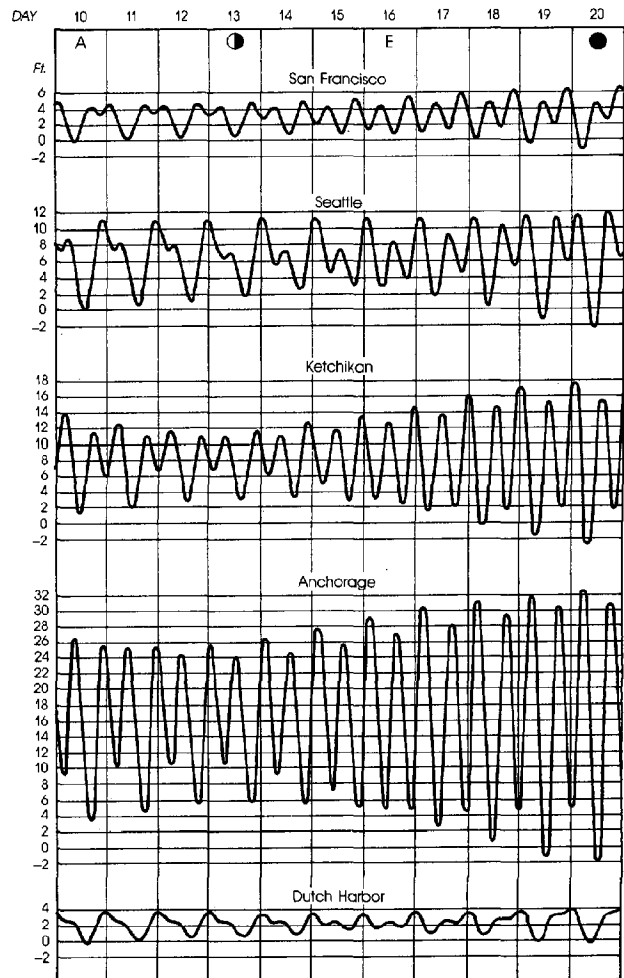
Lunar data: A — Moon in apogee
 ☾ — last quarter
 E — Moon on Equator
 ● — new Moon

Typical Tide Curves for Atlantic and Gulf Coasts Ports



2-2 Typical tide curves for Atlantic and Gulf coast ports.

Typical Tide Curves for Pacific Coast Ports

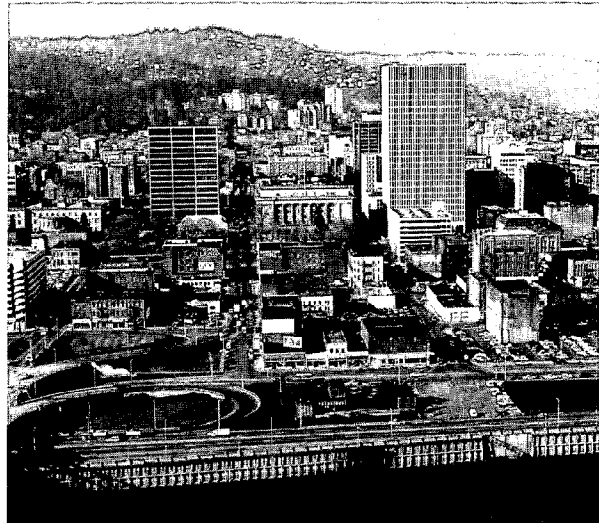


2-3 Typical tide curves for Pacific coast ports.

To overcome the problems caused by water level fluctuations, waterfront development is confined to higher elevations. In St. Louis, for example, Laclede's Landing is located on an embankment separated from the water's edge by a levee, a roadway, and a railroad line. With this arrangement, the Landing is protected from floods but removed from the shoreline. Portland offers a slightly different illustration. There, a seawall stretches along much of the downtown shoreline with land filled in behind it. In this instance, the waterfront is vertically detached from the water's edge.

Water quality is another factor affecting the character of urban waterfronts. Coastal waterfronts obviously must endure the corrosiveness of saltwater, but salinity is just one measure of water quality. Other important parameters include turbidity, dissolved oxygen, temperature, and the type and concentration of chemical pollutants.

An effective urban waterfront renewal plan must meet a critical precondition—clean water. Without clean water, not even the most innovative and appealing project will succeed in attracting people and activity to the banks of a river or bay. Although in general terms water quality has been vastly improved over the past 15 years, significant variations in conditions persist, as illustrated in Figure 2-6.

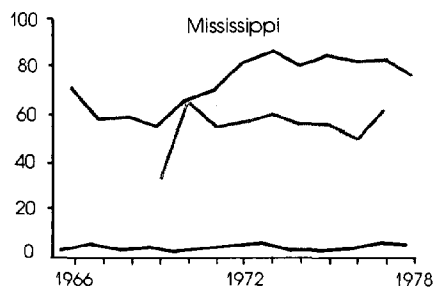


2-5 A seawall is a significant feature of Portland, Oregon's waterfront. The height of the Willamette River varies some 20 feet during the year.

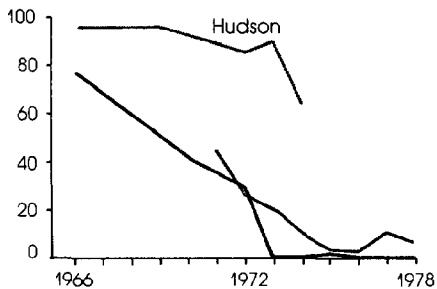


2-4 The daily tidal fluctuation at Norfolk, Virginia, is approximately two feet.

Violation rate (percent)

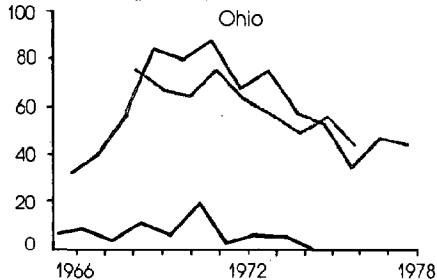


Violation rate (percent)

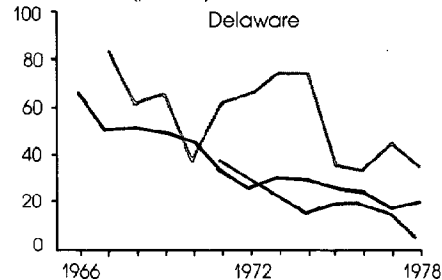


Legend
 — Dissolved oxygen
 — Phosphorus
 — Fecal coliform

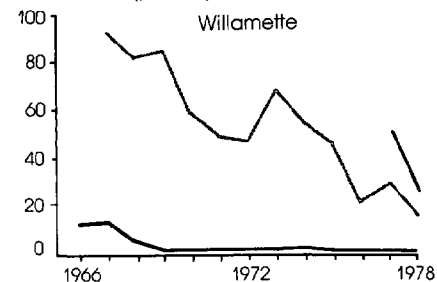
Violation rate (percent)



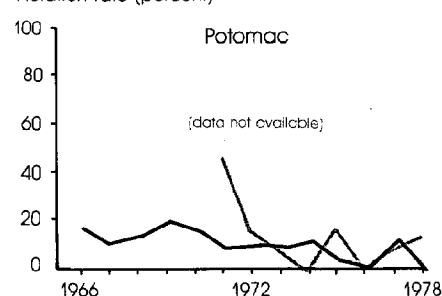
Violation rate (percent)



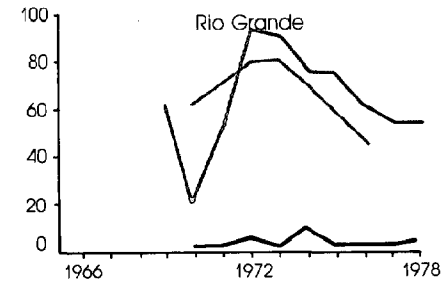
Violation rate (percent)



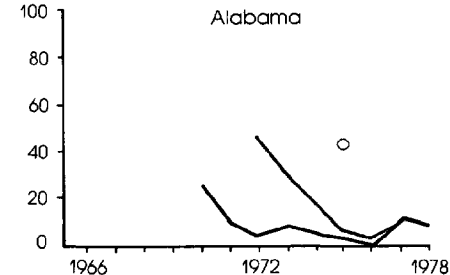
Violation rate (percent)



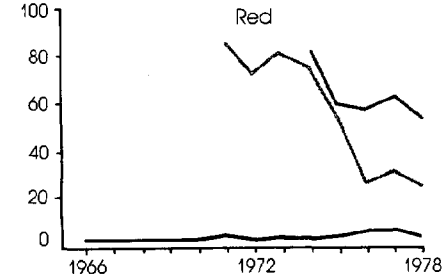
Violation rate (percent)



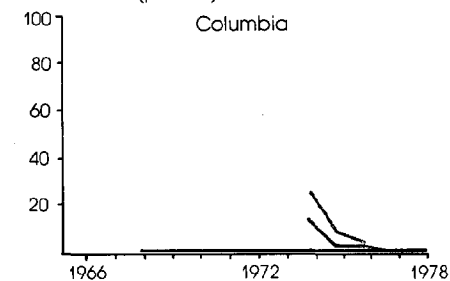
Violation rate (percent)



Violation rate (percent)



Violation rate (percent)



2-6 Changes in water quality parameters for selected rivers in the United States.

Land Resource

The second primary locational factor is the land resource and the characteristics of the land can vary just as much as water resource conditions. The more important factors are the amount of waterfront land, its configuration, its condition, and its ownership.

Waterfronts can be measured in terms of shoreline length and total land area. The potential range of waterfront uses is obviously contingent on these dimensions. In the past when there was a need for additional waterfront land the response was to create new land by filling out into the water. However, the environmental degradation associated with expanding the waterfront has led to an almost complete curtailment of this activity. Thus, it is safe to assume that the amount of waterfront land in a given location is relatively fixed.

The inland boundaries of urban waterfront lands vary widely from city to city. In Boston, for example, the Faneuil Hall/Quincy Market—an area adjacent to the city's waterfront—is located over one third of a mile from the water's edge. In contrast, Seattle's central waterfront extends less than 100 yards inland from the seawall. More often than not the perceived boundaries coincide with topographical variations or physical barriers such as railroad yards or highways. In some cases, jurisdictions have officially delineated waterfront land for land planning and management purposes. San Diego's waterfront, for example, is defined by the Unified Port District. The district was established in 1962 by an act of the state legislature. The enabling legislation conveys the tide and submerged lands within San Diego Bay to a unified port administration for management purposes.

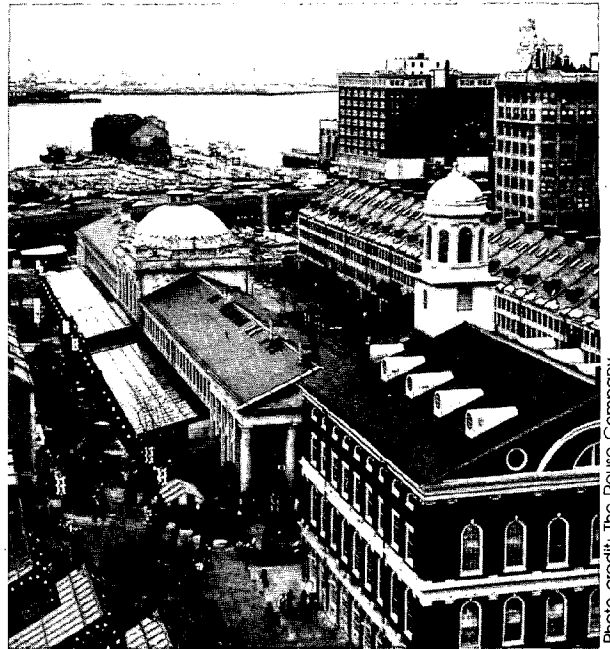
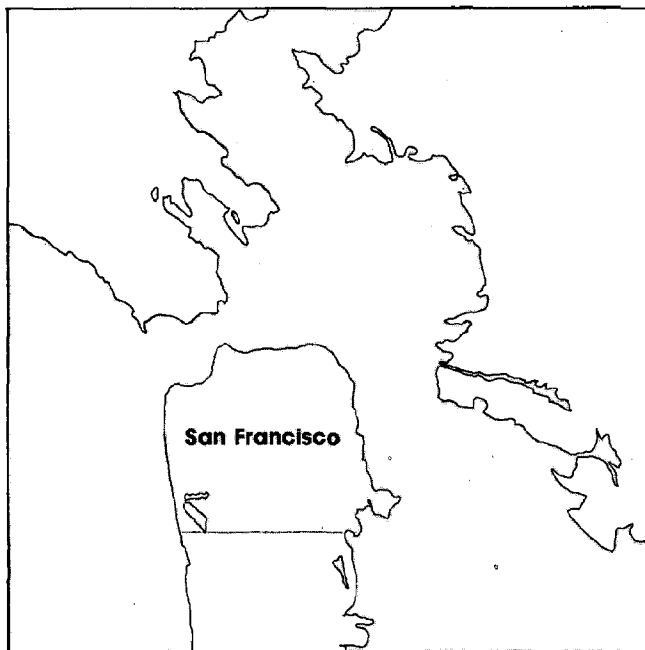


Photo credit: The Rouse Company

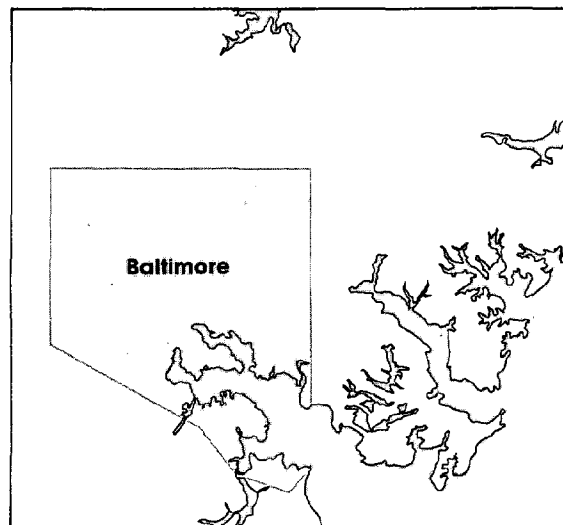
2-8 The Faneuil Hall/Quincy Market area of Boston is located over one-third of a mile from the water's edge.

The supply and configuration of waterfront land not only affects its use but also strongly influences the pattern of urban development. Coastal seaports generally follow an urban form where either part of the city's perimeter is bounded by the shoreline and growth occurs farther inland, or the body of water penetrates inland and the city gradually envelopes it. Figure 2-7 of San Francisco and Baltimore provides an example of both concepts.



2-7 Shoreline configuration influences the urban form of coastal cities.

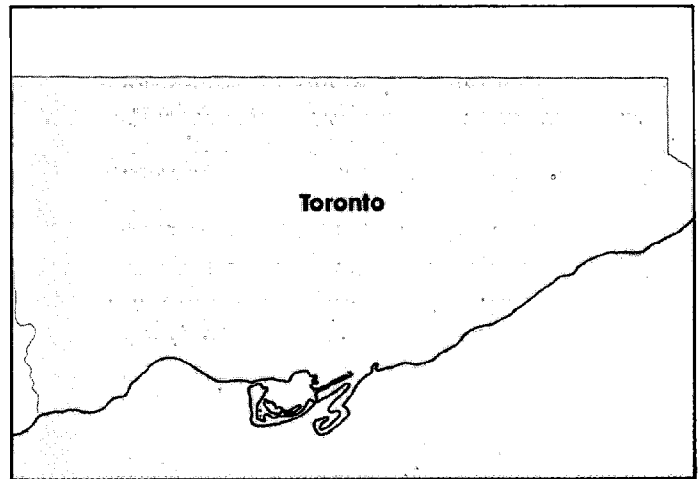
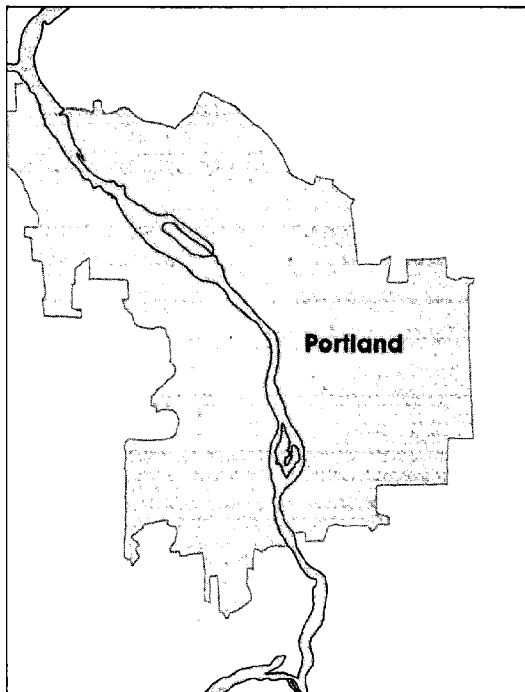
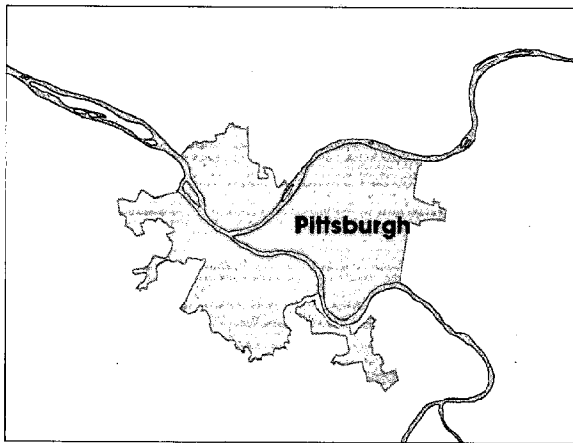
0 5mi.



Cities such as San Francisco have waterfronts that face directly onto large expanses of water. In these cities waterfront development is more linear and wraps around part of the city. This convex configuration of the shoreline increases the miles of urban shoreline within a short radius of the city center. Boston and New York are two other examples of this urban form.

On the other hand, cities that resemble Baltimore have waterfronts that border channels or small harbors providing access to the open seas. In these cities the linear expansion of the waterfront is somewhat constricted by the size of the channel or harbor. Generally there are fewer miles of urban shoreline in proximity to the central city. Baltimore is a classic example of this urban form. Although the city is technically located on the Chesapeake Bay its traditional city waterfront encompasses an inner harbor of modest dimensions. As a result the waterfront is not as expansive as, say, San Diego's or New York's but it extends into the heart of the central city.

Three distinct development patterns characterize cities located along inland waterways. As Figure 2-9 shows, cities such as Portland are bisected by a medium-sized river and urban development takes place on both sides of the water. Toronto is representative of cities located on the Great Lakes or a major river: the urban shoreline marks one edge of the city and development occurs farther inland. The third urban form is exhibited by cities like Pittsburgh that are located at the confluence of two or more rivers and the shoreline wraps around much of the city.



2-9 Three distinct development patterns characterize cities located along inland waterways. Some cities are bisected by rivers and urban development takes place on both sides of the water (Portland). For cities located on the Great Lakes or a major river, the urban shoreline marks one edge of the city and development occurs farther inland (Toronto). The third form is exhibited by cities located at the confluence of two or more rivers and the shoreline wraps around much of the city (Pittsburgh).

0 6.5 mi.

The condition of waterfront land is an important development factor. Composed of alluvial unconsolidated soil or compacted fill material, waterfront sites commonly have poor load-bearing capacities and erosion problems. Frequently foundations remain from previous uses and protective bulkheads are in need of restoration.

In the Northwest many waterfronts were former sawmill sites. On Portland's south downtown waterfront, for example, 10 feet of sawdust and woodchips lie below the surface of much of the site.¹ The original Seattle waterfront was destroyed in the Great Seattle Fire of 1889. When rebuilt, piers were erected on pilings over the water and attached to land by railroad trestles and timber walkways. The area between the pier ends and dry land was gradually filled with earth, wood waste, ship ballast, and various types of refuse.²

More typical are waterfronts where a portion of the original seawall is missing or damaged and large-scale erosion of the adjacent land has taken place. Seawall deterioration can be caused by earth pressure, settlement, or repeated flooding and wave action. The U.S. Army Corps of Engineers conducted an investigation of the Potomac Park waterfront in Washington, D.C., and found that portions of the seawall land had collapsed and areas adjacent to the wall had eroded. Furthermore, the study revealed that waterfront land in East Potomac Park has subsided several feet in the past years due to settlement and shrinkage of the filled material as it dried out.³ In Seattle, surveys undertaken by the city's department of engineering in 1979 indicated the need for a coordinated program of seawall improvements along the central waterfront. Studies revealed that the gravity type seawall (constructed in 1916) had significantly deteriorated. The report cited crack patterns, surface erosion, and support piling decay as major problems of the seawall's condition.⁴ In a report prepared by the Boston Redevelopment Authority on the condition of the harbor, the poor condition of piers, bulkheads, and seawalls was listed as a major problem.⁵

Climate

The third primary locational factor is climate. Obviously, regional weather conditions affect the use and form of urban waterfronts. The more significant regional distinctions are seasonal variation and microclimate.

In regions where there are drastic seasonal variations in temperature, precipitation, and wind conditions, there are corresponding variations in the pattern and intensity of waterfront use. Conversely, in regions where there are minor seasonal variations, the pattern and intensity of use is relatively constant. This is a simple but important concept: the economic viability of potential uses is defined by the functional capabilities of a waterfront site. In Toronto, for example, the harsh winter weather prohibits many waterfront uses for several months of the year. Consequently, the waterfront is used intensively during the summer. Yet waterfront development has proceeded successfully by following a strategy that encouraged a mixture of facilities to generate year-round activity but flexible enough to accommodate the fluctuations in demand for certain uses.

Seasonal conditions affect freeze and thaw cycles, water level fluctuations, rates of erosion and siltation, storm intensity and duration, and many other environmental characteristics. In short, the potential of any waterfront site will be determined in part by regional climatic conditions.

Microclimatic distinctions between waterfront land and the rest of the urban area also affect development potential. In colder climates, for example, because large water bodies gain and lose heat much more slowly than the land, there can be large temperature differences at certain times of the year (usually spring and summer) between the water body and the land. This imbalance causes offshore and onshore breezes. When the water body is colder than the city, the warm air of the city rises, drawing in cold air from the water. In the fall and winter when the land begins to turn cold and the water is still warm, the reverse occurs. However, since cities generate heat, the land is rarely cold enough to cause significant offshore breezes.⁶

Waterfront exposure to winds either caused by land and water temperature differences or storm systems can increase the duration of cold in the winter and modify high temperatures in the summer compared to downtown conditions. Furthermore, waterfront sites have more instances of fog and mist than inland sites because the warmth of the city evaporates the moisture. And finally, land and water temperature differences and wind direction affect the relative amount of cloudiness and sunshine during a season.⁷

¹ Al Benkendorf, "Planning for Successful Waterfront Renewal," *Environmental Comment* (April 1981), page 15.

² Makers, *Alaskan Way Seawall and Promenade Guideplan—Seattle Central Waterfront* (Seattle: author, October 30, 1979), page 4.

³ Bernard Johnson, Inc., "Report on the Condition of and Recommendations for Future Investigations of the Seawall, Potomac Park, Washington, D.C." (Baltimore: U.S. Army Corps of Engineers, March 1980), page 13.

⁴ Makers, *Alaskan Way Seawall*, page 5.

⁵ *Boston Harbor: Challenges and Opportunities for the 1980s* (Boston: Boston Redevelopment Authority, n.d.), page 5.

⁶ *Waterfront Precedents* (Toronto: City of Toronto Planning and Development Department, 1976), p. 34.

⁷ Ibid.

Urban Context

Urban context is an expression frequently used but seldom understood. It is used here to refer to the unique set of relationships or linkages that exist between a city and its waterfront. In this sense, urban context means more than simply the location of the shoreline within a city; it encompasses the pattern of land and water uses, the constituency for those uses, historical and cultural resources, access and circulation, and visual quality. Unlike many of the geographic variables previously discussed, most of these factors can be significantly altered.

Urban context is largely defined by the land and water uses. In this respect there are two basic parameters: type of use and water dependency. Type of use refers to the traditional urban development classifications. For instance, some waterfronts are heavily industrialized, reflecting either current activity or the past port-related functions. Other waterfronts are primarily resort areas, and still others are dominated by commercial

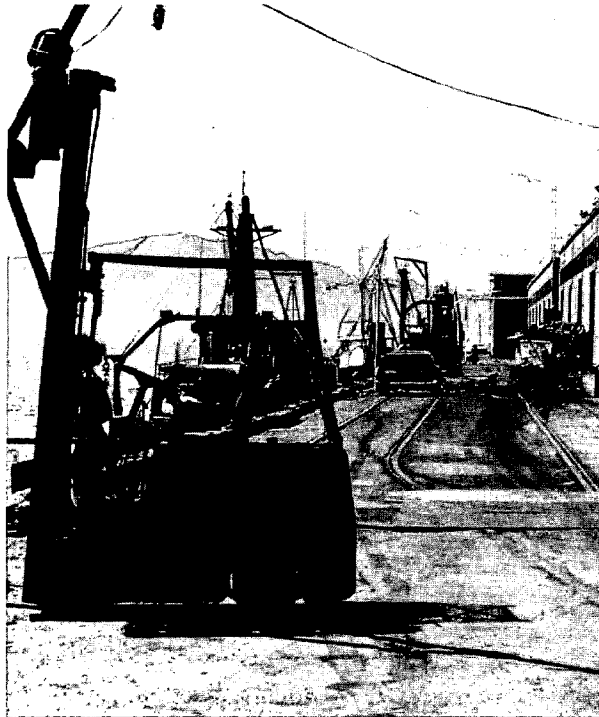
facilities. More commonly, urban waterfronts are composed of a mixture of industrial, commercial, residential, recreational, and transportation uses. Furthermore, basic distinctions between waterfronts can be made in terms of the water dependency of the uses. There are water dependent uses, water-related uses, and uses that are neither dependent on nor have any relationship to the water resource.

Water dependent uses, as the term implies, are those which cannot exist in any other location but on the water. Obviously included in this category are the port terminals for general commerce, ferry, and passenger services, the marine construction and repair facilities, the marinas and moorage areas, and the tug and barge companies.

Water-related uses are those which may be helped by location on the water, but could function away from the waterfront. In other words, if real cost savings or revenue advantages can be attributed to a waterfront location (unrelated to land rents or costs), the use is considered water related. Included under this category are single-user terminals, lumber mills, seafood processing plants, sand and gravel companies, petroleum handling and processing plants, parks, public resorts, aquariums, and restaurants.



2-10 Baltimore's Inner Harbor is composed of a mixture of industrial, commercial, transportation, and recreational uses.



2-11 Cargo terminals like this one in San Francisco are one type of water-dependent use.

Waterfront uses that are neither dependent nor related to the water are those which can locate equally well away from the shoreline. Included under this category are apartment buildings, hotels, taverns, private residences, warehouses not directly associated with waterborne commerce, and retail sales activities.



2-12 Waterfront restaurants are a water-related use.

The combination of uses reflects the role of the waterfront within an urban area and the relative compatibility of particular uses; thus, each urban waterfront is unique. More importantly, the urban infrastructure—the systems and services supporting the uses—also varies depending on the type and water dependency of the waterfront uses.

The infrastructure of many of the water-dependent and water-related uses has significantly changed. As a result, some of the more traditional waterfront uses—particularly the industrial ones—have either relocated to shoreline sites outside of urban areas or ceased to exist.

On the other hand the enormous infrastructural investment and need for water access makes some of these uses virtually immovable. It was these circumstances that led to the recent decision to expand and upgrade the Seattle Ferry Terminal in its antiquated central waterfront location instead of building a new facility elsewhere.

Waterfront Constituency

A waterfront's urban context is partially defined by the characteristics of its constituency. Actually there are two constituencies: a primary group composed of people who use the waterfront as a residence, place of work, or recreation resource and a secondary group of people who occasionally go to the waterfront, have no direct involvement with it, but feel the water's edge is a public resource and are concerned about it. The characteristics of both groups vary significantly depending on the mix of land and water uses. In some cases there is a special constituency that exists because of a specific physical or cultural feature of the city's shoreline. Usually this is a small but vocal group that has a narrowly defined interest in the waterfront.

The profile of the primary constituency is a reflection of the major waterfront uses. If a waterfront is mostly industrial then attention is focused on issues related to the water environment such as operational efficiency, employee parking, truck access, and so forth. Industrial uses that are labor intensive often carry a good deal of political clout when workers organize to protect their interests. In New York City, for example, waterfront redevelopment plans have been stymied in the past by the longshoremen's union. The organization fought the proposals because they felt redevelopment would jeopardize their jobs.

If the waterfront is occupied by residential uses, the primary constituency may have a different set of priorities. People who live on the waterfront are concerned about public safety and quality of life issues. Residents tend to evaluate development plans in terms of property values and urban amenities.

When recreational uses exist along the waterfront then the primary constituency will more likely place importance on environmental conditions such as water quality, maintenance of open space, traffic congestion, and public access, just to name a few. This user group may be opposed to development projects perceived as a threat to the recreational use of the waterfront.

Baltimore is a good illustration of this user group reaction. When the Inner Harbor redevelopment program was initiated the intent was to make significant public waterfront improvements to attract private investment and development. Dilapidated structures were removed and new bulkheads constructed. However, the market for retail development was not immediately apparent. Therefore, interim landscaping was provided which formed a pleasant setting for outdoor festivals and associated recreational uses. A year or two later, when the Rouse Company's plans for a retail commercial facility were revealed, public opposition surfaced in protest to the loss of open space and forced a city-wide referendum. The referendum passed in 1978 and the project turned out to be an overwhelming success.

Since urban waterfront land is generally a limited resource, the primary waterfront constituency often has what can be labeled a "lifeboat mentality." That is, once a user group is entrenched in a waterfront location, they do not want to share the resource with others even if it is for a similar type use.

The profile of the secondary constituency varies depending on the socio-economic characteristics of an urban population, regional differences, and other factors. Although this group does not have the direct involvement of the primary constituency, it can be very important in determining waterfront policy. In fact, if waterfront lands are vacant or the viability of existing uses is questionable, then the secondary constituency takes on more importance.

The controversy over the Georgetown waterfront area of Washington, D.C., shows the importance of the secondary group. In that case, a proposed waterfront redevelopment project was opposed by citizens who felt the waterfront should be designated as parkland, exclusive of commercial uses. Although the city government supported the project, the objections voiced by the citizens were strong enough to delay the project and force the developer to make significant changes in terms of project use allocation and design.

Many urban waterfronts have a special user group that exists because of unique physical or cultural features of a city. Often this group forms a strong constituency affecting shoreline activities beyond their immediate area of activity. San Francisco's Fisherman's Wharf is a classic example. The Ferry Terminal in Seattle and the New England Aquarium in Boston are other examples of waterfront uses having special constituencies.

Waterfront Heritage

The urban context of a waterfront is partially determined by its heritage. In light of the fundamental role navigable waters played in the urban development of North America, it comes as no surprise that many waterfronts are rich in resources of historical and cultural significance. The type and importance of these resources varies depending on the age and location of the city. Some of the more common ones include: military installations, industrial buildings, markets and trade centers, shipping terminals, warehouses, fishing facilities, and municipal buildings. Depending on the status of a particular resource in terms of its historic designation, ownership, and condition, the heritage of a waterfront can either produce many opportunities for adaptive use or prohibit reuse altogether.

The distinctions between restoration, renovation, and adaptive use of structures are relatively clear.⁸ The purpose of restoration is to refurbish a building's original architectural details as closely as possible. The renovation of a structure refers to the physical upgrading of materials and support systems while retaining a building's original use. Adaptive use, on the other hand, is the process by which structurally sound older buildings are developed for economically viable new uses. Such buildings may be historically important, architecturally distinctive, or simply underutilized structures which exhibit signs of life under a facade of age and neglect. Since many historic waterfront uses are no longer viable, adaptive use holds the greatest promise for many urban waterfronts.

The cornerstone of Toronto's harborfront project is the Terminal Warehouse Building, built in 1927. It is one of the first poured-in-place concrete structures in Canada and has eight floors with a total of one million square feet of floor space. The building is being redeveloped as a mixed-use structure containing commercial and retail space, offices, and residential units.

The redevelopment of Laclede's Landing, St. Louis's obsolete 19th century riverfront warehouse district, combines restoration and adaptive use. Asphalt has been removed from the old narrow granite block pavers restoring the streets to their original form and the architecturally significant cast-iron building facades have been recreated. The interiors of the buildings have been adapted to accommodate a mix of retail, office, residential, and entertainment uses.

⁸ ULI—the Urban Land Institute, *Adaptive Use: Development Economics, Process, and Profiles* (Washington: author, 1978), page 3.

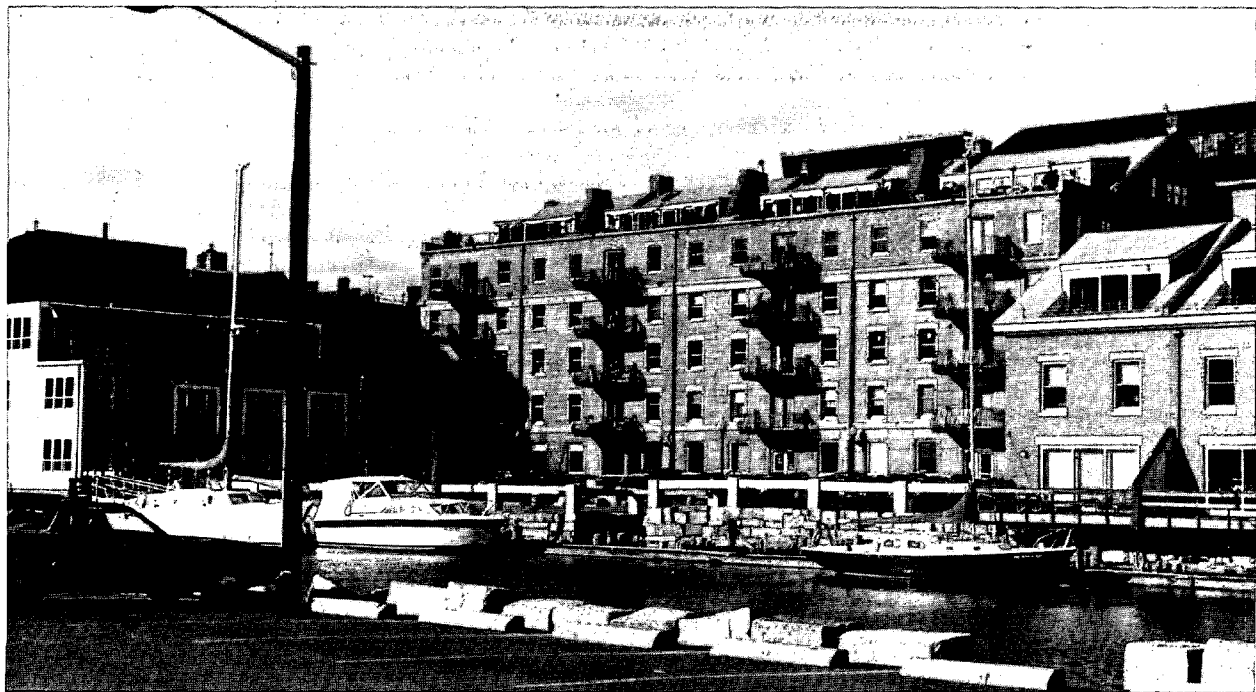
Boston's waterfront heritage has produced a variety of redevelopment opportunities. Much has already been written about the success of Faneuil Hall and Quincy Market as a commercial and retail center. Certainly a large part of the success can be attributed to the historical importance of the structures. This is also true for Union Wharf, the last of four historic wharves to be recycled on Boston's waterfront. At Union Wharf, a granite warehouse built in the mid 1840s has been converted to residential and office condominium units.

Boston's largest adaptive use project is the Naval Shipyard, located across the harbor in Charlestown. The Navy Yard was decommissioned as a shipbuilding and repair facility in 1974. For over 175 years the yard had played an important role in military history and technological innovation. The redevelopment includes the 23-acre Boston National Historic Park, home of the U.S.S. *Constitution*, and a 16-acre park which provides access to the harbor for Charlestown residents long cut off from their waterfront by the Navy Yard. The remainder of the site is being developed for mixed residential/commercial activity which, when completed, will include 1,200 new housing units, a 700- to 1,000-room hotel, and commercial, office, loft, and light industrial space. Where possible, these uses will be incorporated in the reuse of the Navy Yard's historic buildings. New construction will be added in other areas.

These examples are indicative of the way historical and cultural resources can enhance waterfront use. The key is to recognize that each city will have unique opportunities based on its own historical development. In cities such as Boston and St. Louis, waterfront heritage has more meaning than in cities like San Diego, where urban development has taken place much more recently.



2-14 The redevelopment of Laclede's Landing, St. Louis's obsolete 19th century riverfront warehouse district, combines restoration and adaptive use.



2-13 Union Wharf is the last of four historic wharves to be recycled on Boston's waterfront.

Waterfront Access

Just as human life is dependent upon a circulation system, the life of a city is supported by a network of transportation elements. In this respect, accessibility—the relative ease of movement to and from a site—is an important characteristic of any urban location. For waterfronts it takes on even more significance because of conditions inherent to land and water transportation.

Accessibility is a function of travel time, distance, and comfort. Thus, in theory, the proximity of urban waterfronts to city centers would make them highly accessible. This is rarely the case, however, unless a waterfront has a long history of public use. Typically a variety of physical, institutional, and psychological barriers exist, limiting land and water access.

Physical barriers are the most imposing obstacles restricting waterfront access. In many instances the construction of modern bridge, tunnel, and highway systems across waterways and along urban shorelines was done at the expense of waterfront accessibility. The placement of highways along urban waterfronts was not accidental—waterfront land was available and underutilized. Consequently, an urban waterfront may be easy to get near, but difficult to get to.

The proliferation of highways, bridges, and tunnels was dramatic. In Manhattan, for example, 94 percent of the waterfront is lined with major highways and 24 major bridges span New York City's waterways.⁹ The Gardiner Expressway (an elevated limited access highway) was

built along the Toronto waterfront during the mid-1960s, separating the heart of the city from the shores of Lake Ontario. Many other examples could be cited; the Mark Twain expressway in St. Louis, the Alaskan Way Viaduct in Seattle, and Boston's Central Artery are a few that come to mind.

In San Francisco, public recognition of the impact of a waterfront expressway resulted in a strong political movement. In the 1960s state engineers constructed an overhead two-level freeway along the waterfront from the south, crossing the face of the famed Ferry Building at the foot of Market Street. Public outrage ran high at this "Chinese Wall" along the waterfront. In a well-organized campaign, voters forced the Board of Supervisors to veto all further freeway plans. The Embarcadero Freeway was left unfinished, with stub ends at mid-waterfront, and was never extended all the way along the waterfront to the Golden Gate Bridge as had been originally planned. Notably, in halting the Embarcadero Freeway, the city forfeited \$280 million in federal highway funds. But an open waterfront, it seemed, was worth it.¹⁰

Obviously, transportation patterns changed in these cities. With the completion of bridges and tunnels, many ferries were put out of operation and, in some cities, the original street configurations which were compatible with ferry crossings became obsolete. New roadways were needed to serve the bridges and tunnels, and as these were constructed waterfronts were consumed by the approaches to these facilities.

In some cities ferry service continues to exist. In Seattle, for example, Puget Sound can only be crossed by boat and the central waterfront ferry terminal is a vital component of the regional transportation system. In 1978, 7.5 million patrons used the ferry terminal at Pier 52.¹¹ Passenger ferry service operates in San Francisco Bay connecting the downtown waterfront with Sausalito and other jurisdictions. In most cases, however, ferry operations cannot be economically justified where bridge or tunnel alternatives exist. This is the case in San Diego where a proposal surfaces every few years to revive the ferry to Coronado, only to be rejected because of the costs involved. In general, the feasibility of water transportation depends on high demand, multiple destinations, and seasonal stability of the market.

Railroad facilities are another type of physical barrier commonly found on urban waterfronts. Railroads were built to support shipping and industrial uses at a time when waterfront access was not a major concern. The competitive edge afforded port cities with rail connections far outweighed the importance of general city access.

⁹ Robert F. Wagner, Jr. "New York City Waterfront: Changing Land Use and Prospects for Redevelopment," *Urban Waterfront Lands* (Washington: National Academy of Sciences, 1980), page 88.

¹⁰ Harold Gilliam, "San Francisco: Mystique Versus Economics," *Urban Waterfront Lands* (Washington: National Academy of Sciences, 1980), page 103.

¹¹ Makers, *Alaskan Way Seawall*, page 13.

In Toronto during the latter part of the 19th century, land that had been intended for a public promenade along the lakeshore was used by the railroads for loading and unloading freight. By 1908 there were from nine to 16 tracks at street level the length of the waterfront, separating the harbor from the business center of Toronto.¹² Many cities are similar; railroad facilities block much of the waterfront in New York City, New Orleans, and Chicago, just to name a few.

Other physical barriers to waterfront access are formed by utility structures and waste treatment facilities occupying urban waterfronts. In many cases, steam turbine and gas turbine electrical generating plants were built at waterfront locations, restricting access to the water's edge. The same is true of wastewater treatment facilities which are located along many urban shorelines.

Institutional barriers restricting waterfront access are obstacles created by legal, political, and economic conditions. In other words, access is physically possible but not allowable for various reasons. Military installations and government research facilities are two prevalent examples. These uses tend to be exclusionary and self-contained and, depending on the specialized use of the facility, may either hinder access or preclude it completely. Fort McNair, located at the confluence of the Washington Channel and the Anacostia River in Washington, D.C., forms an institutional barrier to the urban shoreline. In San Diego, the U.S. Navy Training Center restricts direct public access to a portion of the waterfront.

Psychological barriers to waterfront access deserve close attention because even if physical and institutional obstacles are removed, people will continue to stay away from the shoreline if they think it is inaccessible. Obviously, by removing the other barriers, some of the psychological impediments will vanish with them. Nevertheless, psychological barriers can only be totally removed by changing the public's image of the waterfront as a difficult place to get to. For example, the Toronto Railway Viaduct which allowed unimpeded road access to the waterfront did not significantly change the public perception of the railroad as a physical barrier to the harbor. In addition, psychological barriers are derived in part from impressions of waterfront safety, user groups, and activities occurring on the waterfront.

¹² "Harbourfront Site History" (Toronto: Harbourfront Development Corporation, 1978), page 16.



2-15 Significant physical barriers separate downtown Tacoma, Washington, (far right) from its waterway.

Visual Character

Waterfronts are special visual environments. Someone once remarked that people look better near the water. This could also be said of urban structures. A waterfront's high visual interest is attributable to its form, texture, and special features. Although there are certain features common to urban waterfronts, each setting has a unique visual character. It is determined by the assortment of physical elements composing a waterfront and by the viewer response to these elements.¹³

Conceptually, landscapes are made up of edges and spaces. The edges give form to what the eye sees by providing spatial definition. In this respect, perhaps there is no stronger edge than where land and water meet. The two-dimensional configuration of the water's surface is in sharp contrast to the vertical elements found along the shoreline. In Baltimore, the Inner Harbor is partially framed by the World Trade Center, the National Aquarium, and Harborplace.

Waterfronts usually have a rich visual texture. It is produced by the variety of surface materials used to construct waterfront facilities and the weathered condition that distinguishes the old from the new. Materials such as wood, granite, and brick have a greater surface coarseness than steel and glass. Furthermore, the movement of moored boats bobbing in the water and nautical flags flapping in the breeze enhance the visual textures of a waterfront.

Vegetation influences the visual character of urban waterfronts. Generally, plant materials soften the hard appearance of shoreline structures. Outside of waterfront parks, however, shoreline vegetation is usually sparse. One exception is San Diego where much of the urban shoreline is dotted with palm trees, and buildings are typically surrounded with shrubbery and ground cover.

The visual excitement of an urban waterfront is frequently enhanced by the presence of features that are only found along the water's edge. Such elements as ferry buildings, marinas, ship repair facilities, and the like stimulate interest because of their novelty. Often these structures are visual landmarks and serve as a focal point within a waterfront setting.

Urban waterfronts vary tremendously in terms of their visual accessibility. Some are easily visible from many areas of the city while others are hidden by physical

barriers or removed from view. In San Francisco, for instance, the configuration of the urban shoreline, the expanse of the bay, and the city's dramatic topography combine to make the waterfront visible from several locations. Quite the opposite is true in Baltimore, where the size and location of the Inner Harbor limit the visual accessibility of the city's waterfront.

The physical components of a waterfront only partially determine its visual character. The other equally important determinant is viewer response to those physical components. It is a function of two variables: viewer exposure and viewer sensitivity. Vision is an active sense and responses to visual stimuli are strongly conditioned by these two factors.

Viewer exposure refers to the position of the observer in relation to a city's waterfront. A waterfront's visual character varies with the distance, elevation, and movement of the viewer. As distance increases, the ability to see details of an object decreases. The higher the point of observation, the greater the range of vision. For moving observers, the viewing time combined with the speed of travel determines what objects can be seen on a particular route.

Viewer sensitivity refers to the receptivity of different viewer groups to the visual environment. That is to say, people do not interpret visual stimuli in an identical way. Indirectly, people's values, opinions, experiences, and preconceptions influence their impression of a waterfront's visual resources. Recreational boaters, for instance, do not see shipping terminals the same way dock workers do. This is an extreme example, of course, but it serves to make the point that visual character is a function of its visual resources and the viewer response to those resources.

Government Jurisdictions

A fundamental characteristic of urban waterfronts is the structure of government jurisdictions charged with management responsibility. Although important variations exist, waterfronts generally have a jurisdictional structure that far exceeds the typical urban governmental framework in both size and complexity. This is because the presence of the water resource introduces additional and overlapping agencies at each level of government. Furthermore, numerous special purpose government groups have authority over specific shoreline resources and uses. In Baltimore, for example, there are 30 state, local, and federal agencies that have some form of compulsory jurisdiction over the city's waterfront.¹⁴ This is generally not as severe in Canada; the Toronto central waterfront has only 10 public agencies emanating from four levels of government with jurisdictional control.¹⁵

¹³ William G. E. Blair, "Visual Resource Management," *Environmental Comment* (May 1980), page 7.

¹⁴ Ann Breen Cowey, Robert Kaye, Richard O'Conner, and Richard Rigby, *Improving Your Waterfront: A Practical Guide* (Washington: U.S. Government Printing Office, 1980), page 11.

¹⁵ Dennis Wilson, "Planning for a Changing Urban Waterfront: The Case of Toronto" (Toronto: York University, 1978), page 12.

Federal Involvement

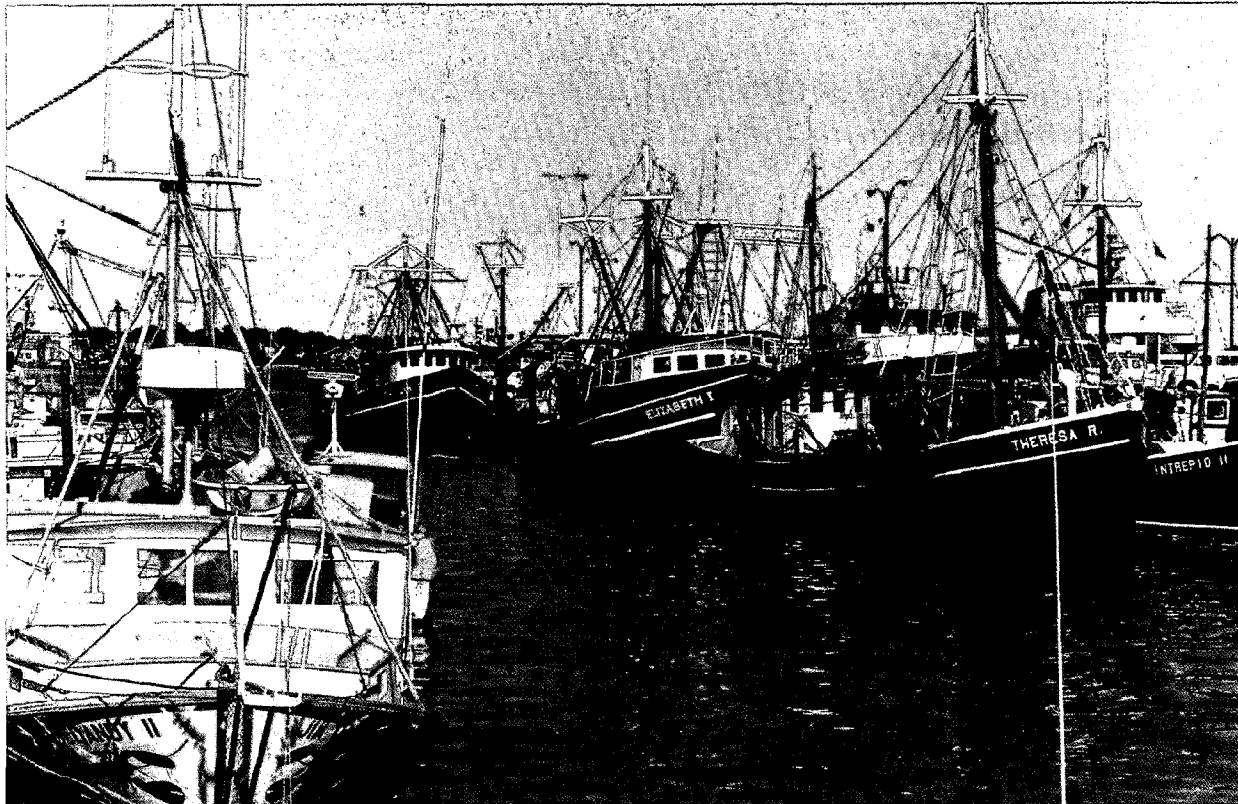
Several different federal agencies administer programs that affect waterfronts, including the Office of Coastal Zone Management, the Economic Development Administration, the National Park Service, the Environmental Protection Agency, the Department of Housing and Urban Development, the Department of Transportation, the U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers. Although each of these agencies administer programs affecting urban waterfronts, the ones with direct regulatory responsibility deserve further mention.

The U.S. Army Corps of Engineers is one of the most important coastal management agencies. In addition to building and maintaining jetties, channels, and other public works, it administers two regulatory permit programs: one to review all activities affecting navigable waters (authorized under Section 10 of the Rivers and Harbors Act of 1899) and another to regulate dredge and fill activities in navigable waters (authorized under Section 404 of the Federal Water Pollution Control Act Amendments of 1972). Since most waterfront development activities involve some dredging and filling, there is some overlap between these two permit programs. Navigable waters have been defined very broadly for dredge and fill purposes to include: all tidal waters to the mean high-tide line, all wetlands that are wholly or partially covered at high tide, whether publicly or

privately owned, and all contiguous wetlands that are periodically inundated during storms or floods. A Corps decision to issue a permit is based on whether the overall public interest would be served. This is determined by considering benefits and costs of the project, environmental and fish and wildlife concerns, flood protection, recreational needs, and other matters.

The U.S. Fish and Wildlife Service is charged with maintenance and enhancement of fish and wildlife resources and protecting the rights of the public to use navigable waters. They notify the Corps of Engineers regarding the effect of any proposed development project on fish and wildlife resources. Over the past 10 years this agency has been the most vocal opponent of developments in coastal areas. It does not issue a permit unless developers provide mitigating measures in their proposals to reduce potential disturbances.

Protection of water quality is the responsibility of the Environmental Protection Agency. Therefore, EPA reviews the quality of dredge spoils and the site into which they are to be placed. The legislation under which the EPA operates allows the agency to overrule a Corps dredge and fill permit on environmental grounds.



2-16 The visual excitement of an urban waterfront is enhanced by the presence of features found only along the water's edge. The fishing fleet in New Bedford, Massachusetts, is one example.

The extent to which other federal agencies are involved in an urban waterfront depends on the type of uses and funding commitments found in a particular city. In New York City, for example, as many as 35 federal agencies have been identified as having some degree of responsibility for the city's waterfront.¹⁶ In any event, the National Environmental Policy Act (NEPA) requires each federal agency to prepare a detailed statement of environmental impact on every major federal action. It is circulated for comment to other federal agencies, state and local governments, and the public.

The Office of Coastal Zone Management administers a voluntary federal program that encourages states to establish planning and management systems for coastal land resources. Since its inception in 1972, the program has had a strong environmental protection orientation. However, a more balanced approach which incorporates to a greater extent economic development considerations seems to be emerging as states begin to focus on older urban waterfronts in need of redevelopment.

State Involvement

While the federal initiative basically establishes only a broad framework, state agencies are directly involved in managing urban waterfronts. Many programs in the area of environmental protection and control of critical land areas are implemented, administered, or guided at the state level of government. Although significant differences exist from state to state, more often than not waterfront development is subject to many agency approvals. Almost all states have environmental protection laws and resource management agencies that regulate shoreline development.

While significant differences exist among states in their coastal zone management programs, each state participating in the federal program is required to:

- identify permissible land and water uses
- identify coastal zone boundaries
- designate geographic areas of particular concern
- detail organizational arrangements
- determine implementing authority.

There is a good deal of latitude built into these requirements. As a result, programs are tailored to reflect individual state priorities. For example, Washington State's Shoreline Management Act of 1971 grants priority to water dependent uses and to uses which increase the public's ability to enjoy the shoreline. Consequently, the

state's coastal zone management program has specific policies concerning particular uses in different types of coastal environments. On the other hand, some states such as Texas rely on performance standards that do not specify particular uses to evaluate coastal projects.

States employ different methods for determining the inland boundaries of the coastal zone. Some use fixed setback lines, others use elevation contour lines, and still others conform the boundaries to physical elements and political units. In almost all cases, urban waterfronts are included within a state's coastal zone boundaries.¹⁷

Federal guidelines dictate that geographic areas of particular concern include "transitional or intensely developed areas where reclamation, restoration, public access, or other actions are especially needed." Obviously this part of the coastal zone management program is very relevant to urban waterfronts. State use of this designation can vary significantly; some states use it to restrict development and other states use it to encourage waterfront development.

Not surprisingly, states have adopted different types of organizational arrangements to implement their coastal zone management programs. In general, two basic approaches are used: delineating coastal management responsibilities within existing governmental agencies or enacting new comprehensive legislation. In some states, such as Massachusetts and Wisconsin, coastal zone regulations are integrated into existing state and local regulatory agencies. Texas takes a somewhat different tack, using existing state authorities to implement its coastal program but regulating only matters of state or national interest. Local concerns are reserved for local decision makers.

Other states have legislated new management systems and special permit procedures to implement their coastal programs. Washington requires permits for all substantial development in the coastal zone. While certain uses—such as single-family residences, docks and bulkheads for single-family residences, and certain agricultural uses—are exempt from permit requirements, all other substantial developments are included.¹⁸

California also has comprehensive coastal legislation. The impetus for this legislation was a public initiative, Proposition 20 (California Coastal Zone Conservation Act of 1972); however, it created only an interim coastal management program. Permanent legislation was enacted in 1976 (the California Coastal Act) and requires permits for all major developments within the 1,000-yard coastal zone. Local governments are responsible for developing detailed programs for implementing state policies. Until they are developed and certified, however, the State Coastal Commission issues permits as they did under Proposition 20.

¹⁶ L. Michael Krieger, *Waterfront Redevelopment Strategy: Phased Redevelopment of the Inner Harbor Waterfront* (New York: The Port Authority of New York and New Jersey, 1979), page 24.

¹⁷ Marc Hershman, et al., *Under New Management—Port Growth and Emerging Coastal Management Programs* (Seattle: Division of Marine Resources, University of Washington, 1978), page 34.

¹⁸ Ibid, page 39.

Each coastal zone management program deals with urban waterfronts in a way that reflects the major issues facing the state. It is important to know that distinctions exist in terms of use priorities, boundaries, permitting requirements, and the implementation process.

Local Involvement

The greatest variation in the structure of jurisdictional responsibility for urban waterfronts is found at the local level of government. In most cases there are county and city offices that administer land use regulations, ordinances concerning health, safety, and fire protection, and provisions for public services such as roads, water, sewer, and utilities. In this respect no two urban areas are exactly alike.

Furthermore, many waterfronts fall within the jurisdiction of commissions or authorities established to manage a regional water resource. The model for this type of agency is the San Francisco Bay Conservation and Development Commission (BCDC). Established in 1965, it has authority over a major coastal resource that is bordered by nine counties and 32 cities. BCDC has permit authority over San Francisco Bay fills and dredgings and over a 100-foot strip of shoreline around the bay in order to assure public access.

Port Authorities

Port authorities are an established management structure common in commercial harbors throughout the nation. In most cases, these are public agencies specifically created to manage local port operations. Port authorities normally have broad legal powers, including bonding authority and eminent domain, and often function as entities separate from local government. They are created either by state legislation as state-level departments or as independent special authorities.

A port authority serves as an overall management structure, with responsibility for publicly owned port terminals, as well as regulatory control over privately owned operations. In addition, a port will have land use planning authority for properties within its jurisdiction. San Diego and Boston are two such examples.

The Massachusetts Port Authority (Massport) is an independent, special purpose governmental unit established by the commonwealth of Massachusetts in 1956. The port authority has management control over cargo transfer throughout Boston Harbor. Massport also manages Logan International Airport, operates several

bridges, and is a major landowner in the area. The state enabling charter granted Massport broad government powers, including bonding authority, land use controls, and power to establish user charges, such as landing fees, docking fees, and tolls.

The San Diego Unified Port District is a special purpose unit of government created in 1962 by an act of the state legislature and approved by area voters in November of that year. The District was established to manage the harbor, operate the international airport at Lindbergh Field, and administer the public tidelands surrounding San Diego Bay. The enabling legislation conveys the tide and submerged lands within San Diego Bay to a unified port administration in order to further the development of commerce, navigation, fisheries, and recreation. San Diego Bay covers 23 square miles, stretches 14 miles from Ballast Point to the salt marshes of the South Bay, and washes 54 miles of shoreline. The port district encompasses an area which includes the cities of San Diego, National City, Chula Vista, Imperial Beach, and Coronado. It is authorized, by its enabling legislation, to levy property taxes within those five cities. The district is governed by a seven-member Board of Port Commissioners, whose members are appointed to four-year terms on the Board by the city councils of the five cities the district encompasses. The San Diego City Council appoints three commissioners and each of the other city councils appoints one commissioner. Policies by which the District operate are established by the Board of Port Commissioners. Daily activities are supervised by the Port Director and carried out by the District staff. A permit from the Commission is in addition to whatever other permits may be required.

It is apparent from the variations in waterfront characteristics that each city has unique shoreline development opportunities. For this reason, every development plan should be born out of a comprehensive investigation of the factors related to a waterfront's geographic location, urban context, and jurisdictional boundaries. Ignoring any one characteristic, no matter how insignificant, invites problems to surface later in the development process.

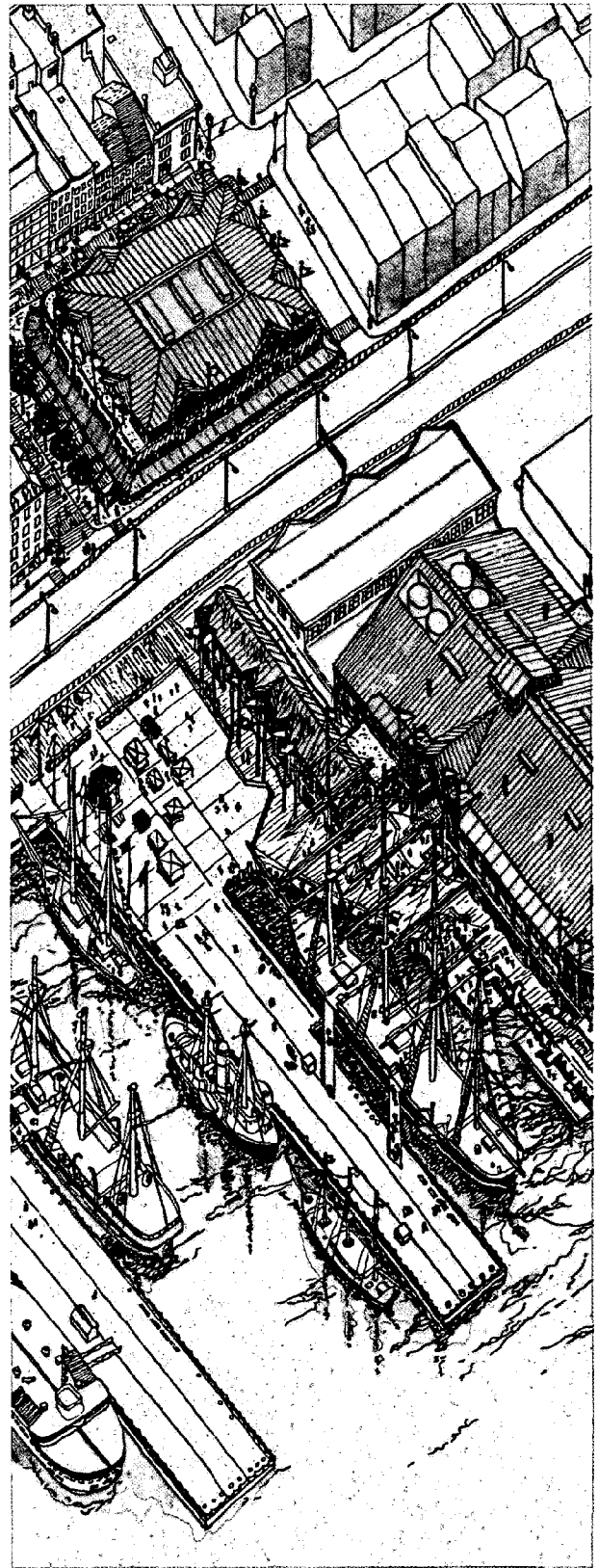
III.

Identifying Development Opportunities

Waterfront developments are complex and challenging but also very rewarding when successfully completed. Determining whether an opportunity exists to develop a waterfront area depends upon the incentives and constraints that distinguish a site. However, local governments can encourage development with a variety of responses, ranging from innovative co-development concepts to traditional urban revitalization programs. Appreciating the value of these public initiatives requires understanding the factors that stimulate and hinder development.

Incentives

Incentives for developing waterfronts are both directly and indirectly related to waterfront conditions. One of the more significant factors stimulating development is the dramatic improvement in environmental quality. The nation's effort to clean up its waterways, begun in earnest in the mid 1970s, is beginning to produce the desired results. In addition, many waterfront industries have either relocated outside urban areas or discontinued operations. The air and water pollution generated by waterfront uses has been reduced by the implementation of point source controls. Consequently, urban waterfronts are becoming cleaner and land along the water's edge is suitable for uses that were unthinkable a decade ago.



Another factor, and one which does directly relate to waterfront conditions, is the change in the functional role of urban waterfronts. At one time the commercial life of cities depended almost exclusively on the activities of their ports. This is no longer the case; the shift in importance along with recent revolutionary changes in cargo handling and steadily decreasing waterborne passenger travel has left large sections of urban waterfront land unused or underused.

The general renewed interest in inner city living is stimulating development, and waterfront locations are prime attractions for new or converted residences, offices, or shops near city or neighborhood centers. Coinciding with this preference for urban places is the attractiveness of adaptive use or preservation of older structures. Tax benefits for structures placed on the National Register of Historic Places have helped encourage creative reuse of old buildings. Furthermore, the rising costs of new construction make conversion of existing structures economically attractive. Waterfronts often possess exciting opportunities to reuse older structures. These opportunities are enhanced by the positive historical image urban waterfronts hold in North America.

The steady rise in travel costs coupled with the increase of leisure time has produced a growing demand for recreational opportunities in urban areas. Because many residents feel that cities have neglected their waterfront resources, providing opportunities for the

public to use and enjoy waterfront sites is a major concern in many cities. In this respect, the 1978 urban recreation study by the Department of the Interior identified the recreational potential of waterfronts as a key recreation challenge.¹ The recreation potential of waterfronts goes beyond the traditional water-based sports and programs; it also covers a broad range of activities related more to urban living.

Finally, one other factor which contributed to waterfront development during the 1970s was the availability of federal funding for public improvements. In that decade, most cities used one or more sources of federal financial assistance in their waterfront development projects. This is not to imply that waterfront development is dependent upon government aid. Johns Landing in Portland, Oregon, and Palmer Point in Greenwich, Connecticut, for example, are private development ventures. Other projects have been successfully developed entirely through private sources and certainly future projects will have to rely on similar means of financial support. However, in many cases, federal funding was the catalyst for attracting private investment in waterfront areas.

¹ Committee on Urban Waterfront Lands, *Urban Waterfront Lands* (Washington: National Academy of Sciences, 1980), page 9.

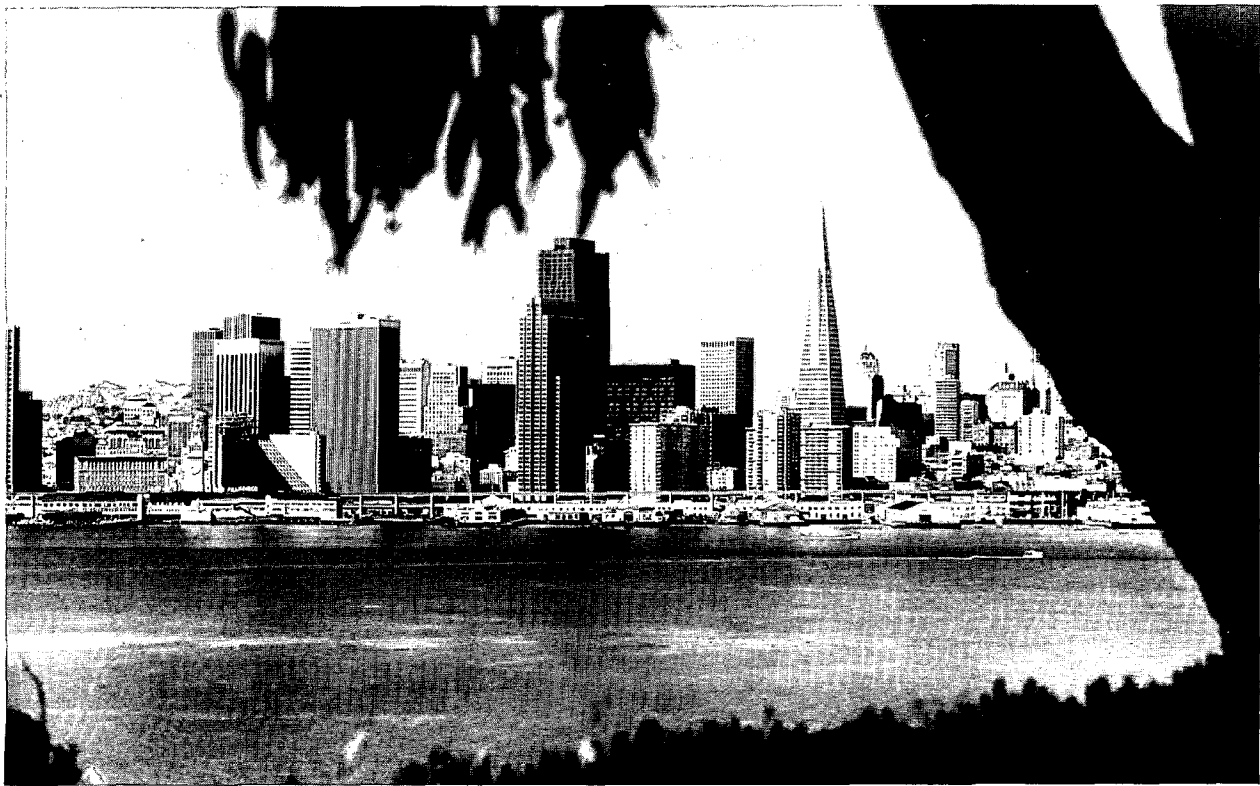


Photo credit: San Francisco Convention and Visitors Bureau

3-1 San Francisco's development opportunities, like other cities, are defined by the unique combination of incentives and constraints that distinguish its waterfront.

Constraints

Successful waterfront projects throughout North America attest to the strength of the development incentives. Moreover, many recent projects have a mix of recreational, residential, and commercial uses that clearly demonstrate the tremendous development potential of urban waterfronts. Nevertheless, there should be no illusion about the ease of waterfront development. Beyond the inherent difficulties of any substantial urban development project, waterfronts present several special problems. The constraints discouraging development come from two sources: the characteristics of waterfront sites and the institutional framework guiding the development process.

Site Limitations

The use and condition of urban waterfronts impose many impediments to nonindustrial development. All too often the potential reuse of a waterfront site is constrained by neighboring shoreline uses. Many types of development are not compatible with the large commercial airports, waste treatment facilities, power generating plants, and industrial operations that occupy waterfront sites in several cities. Furthermore, waterfronts currently serve many cities as convenient locations for lumber yards, tank farms, and vehicle storage areas. As a result, waterfront development may entail finding new locations for these necessary uses.

There are other serious problems involved with the purchase of urban land for waterfront redevelopment. These include fragmented ownership of properties, restricted property rights, such as easements and deed restrictions, and problems identifying and locating the actual owners. Moreover, waterfront locations have traditionally been used heavily for railroad, utility, and highway right-of-ways, which severely complicates attempts to assemble land. In addition, special waterfront features such as eroding shorelines and legal questions regarding ownership of submerged lands and riparian water rights may present additional obstacles.

Development is also difficult because of the unusual physical problems urban waterfront sites tend to have. The severity of the problems vary widely depending on a city's size, age, and history of waterfront uses. Although most of these problems can be overcome, to do so requires a significant investment in time and capital.

One characteristic problem is the inaccessibility of waterfronts. This is due primarily to the lack of attention given to shoreline access by neighboring developments and the use of adjacent lands for industrial, military, or transportation purposes that restrict access. Consequently, many waterfront sites are unusually difficult to reach by vehicle or by foot. For example, railroads historically have been built along urban shorelines and even if the trains are no longer in use, the tracks, switching yards, and related facilities restrict access and limit development opportunities.

In addition to these constraints, waterfront sites commonly have very poor soil conditions for typical construction methods. Frequently building foundations and rubble remain from previous uses. Furthermore, waterfront soils are usually unconsolidated and have a very limited load-bearing capacity. This is due in part to the fact that in many cities waterfront land was created over the years with fill material. Compounding the poor soil conditions is the potential for shoreline erosion and periodic flooding. These factors can make waterfront development extremely difficult.

The deteriorated condition of waterfront structures and facilities in older cities creates additional problems. In some cases bulkheads, piers, and pilings have decayed to the point where they are unreliable and not suitable for new uses. Moreover, the development of some water-dependent uses, such as marinas or ferry terminals, may be infeasible because of excessive sedimentation, periodic flooding, deteriorated structures, or barriers (i.e. fixed-span low-level bridges) restricting water uses.

The important point is that limitations posed by the use and condition of urban waterfronts significantly increase development costs—particularly site engineering and construction costs. Furthermore, site investigations and infrastructure repairs dramatically add to the up-front costs of a project. Consequently, these constraints make waterfront development difficult if not necessarily impossible.



3-2 The deteriorated condition of bulkheads, piers, and pilings in many older cities is a major impediment to waterfront redevelopment.



3-3 Waterfront sites commonly have very poor soil conditions.



3-4 Fixed-span low-level bridges sometimes make the development of water-dependent uses, such as sailboat marinas, infeasible.

Institutional Constraints

Many of the more formidable constraints to waterfront development exist within the institutional framework guiding the management of urban shorelines. Waterfronts generally have a fragmented and complex structure of jurisdictional involvement. This is because the presence of the water resource introduces additional and overlapping agencies at each level of government. Moreover, numerous special purpose government groups have authority over specific shoreline resources and activities. As a result, waterfront development is subject to a multitude of governmental regulations and permit requirements. A typical waterfront project does not get off the drawing board until the developer has obtained all of the necessary approvals and permits. While most waterfront regulations and permits are designed to protect the shoreline from misuse, they tend to restrict options and impede the development process.

The most stringent regulations pertain to waterfront use. In many jurisdictions, uses that are neither water-dependent nor water-related are prohibited completely or allowed only if specific conditions are met. In Washington State, for example, the Shoreline Management Act of 1971 grants priority to water-dependent uses and to uses which increase the public's ability to enjoy the shoreline. This rule effectively eliminates new residential or office development on waterfront sites. In accordance with this state mandate, the Seattle

Shoreline Master Program, ratified in 1976, outlines the use of the city's central waterfront as follows:

In the Urban Central Waterfront environment, new development over water and the recycling and refurbishing of existing piers will be permitted which will:

- a. Reinforce the historic marine orientation of Seattle as a major downtown theme;
- b. Strengthen water-oriented recreation tourist activity, related retail business, and public areas open to the water;
- c. Maintain a full complement of water dependent uses; and
- d. Preserve and enhance views of Elliot Bay and the Olympic mountains from upland Central Business District development, street corridor vistas and the street level, provided no additional coverage of the water by fixed structures shall be permitted.²

Interpreted rather strictly, these guidelines narrow the range of development opportunities in Seattle.

In San Francisco, waterfront use is restricted through the permitting authority of the Bay Conservation and Development Commission. The state of California made a definite commitment in 1969 to emphasize water-related development along the shores of San Francisco Bay by declaring in the commission's enabling legislation that:

... further filling of San Francisco Bay should be authorized only when public benefits from fill exceed public detriment from the loss of the water areas and should be limited to water-oriented uses (such as ports, water-related industry, airports, bridges, wildlife refuges, water-oriented recreation and public assembly, water intake and discharge lines for desalinization plants, and power generating plants) or minor fill for improving shoreline appearance or public access to the Bay.³

While these waterfront restrictions may appear flexible, they are very strict in comparison to other cities. In Boston, for instance, the Hundred-Acre Plan guiding the city's waterfront redevelopment contained the following objectives:

1. Open the city to the sea for people and leisure use.
2. Reinforce neighboring districts: Government Center, the Financial District, the North End; eliminate blight.
3. Preserve historic buildings.
4. Create a waterfront residential community.
5. Increase city visitors and attendant facilities and accommodations.
6. Strengthen the city's economic base, attract private investment, increase employment, increase municipal revenues.⁴

The contrast between Boston and the two West Coast cities illustrates the severity of use restrictions controlling the development of some urban waterfronts. In such cases a private developer is forced to consider a limited range of options. The contrast also underscores the differences between older, underutilized east coast ports and newer, less decayed west coast waterfronts.



3-5 Seattle's range of development opportunities is restricted by the guidelines contained in the city's shoreline master program.

² City of Seattle, Department of Community Development, *Seattle Shoreline Master Program* (Seattle: author, 1976), page 6.

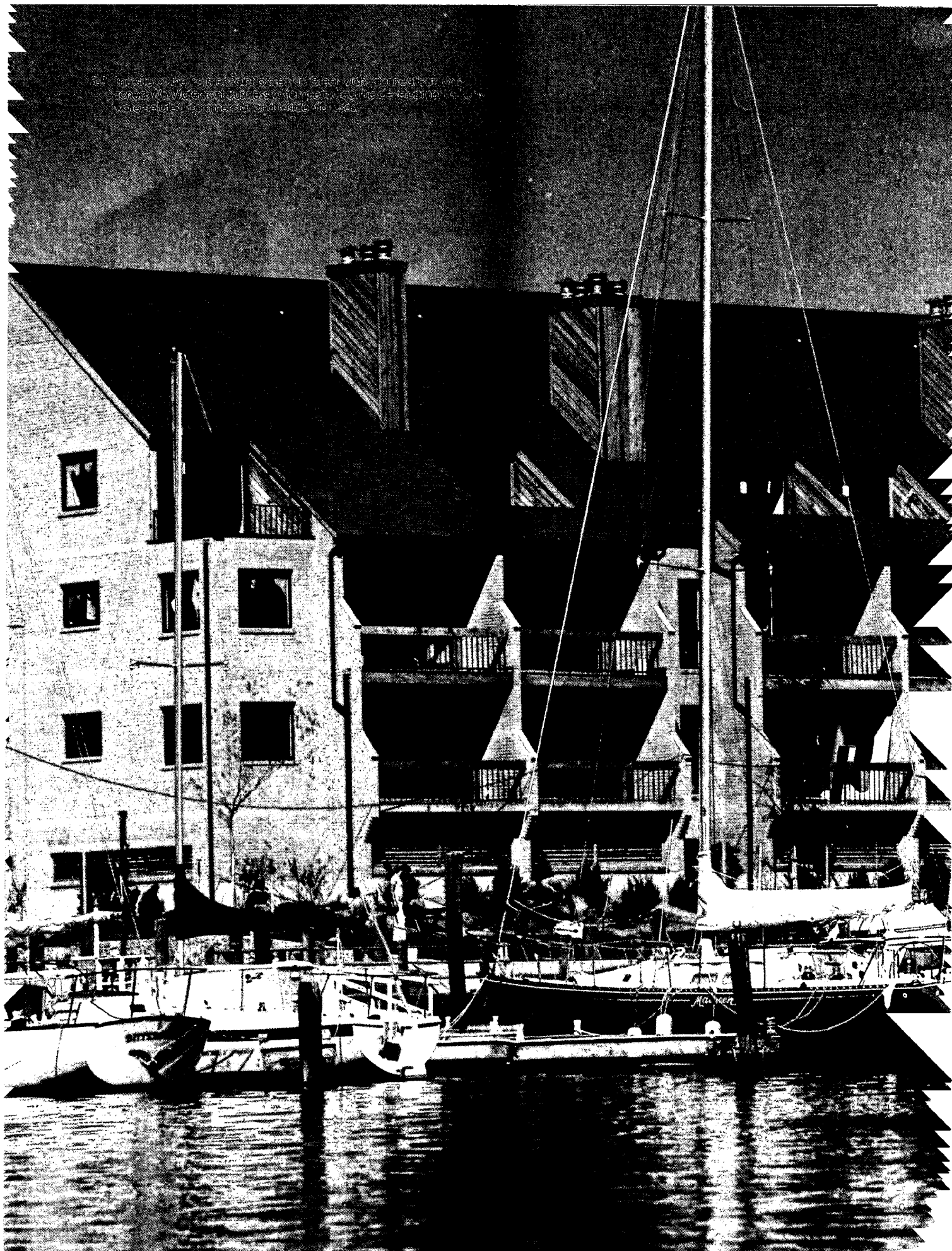
³ Harold Gilliam, "San Francisco Bay: Mystique Versus Economics" *Urban Waterfront Lands* (Washington: National Academy of Sciences, 1980), page 115.

⁴ Greater Boston Chamber of Commerce, Waterfront Redevelopment Division, "Report on the Downtown Waterfront Faneuil Hall Urban Renewal Plan" (Boston: author, June 1962), page 11.

3-6 In San Francisco, waterfront use is restricted through the permitting authority of the Bay Conservation and Development Commission.



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The building was built in 1968 and was
originally a warehouse which had been
converted to a residential building.



In many cities waterfront use restrictions are integrated into municipal zoning ordinances. In Greenwich, Connecticut, the site of the Palmer Point development project was zoned WB-Waterfront Business. This category permitted only water-related commercial and residential uses and allowed for a maximum floor area ratio of 0.5. As a predominately residential development, Palmer Point was required to devote 20 percent of the floor area ratio to marine-related businesses such as yachting publications, boat brokerages, marine supplies, and so forth.

Another regulatory burden on waterfront development is the requirement for public access. In this respect, California, Washington, and Massachusetts have strict public access requirements within their state coastal management programs. In California, for instance, the San Francisco Bay Conservation and Development Commission reviews each shoreline development application to determine the amount of public access that can be included in a development proposal. The Commission has the power to require access to the actual permit site, or it can substitute a requirement for provision of access at another location that is better suited to the public's needs. Washington's shoreline management regulations require local governments to include a public access element in their master programs.

In other states, public access to waterfronts is regulated on a local level by each city. Greenwich, Connecticut, provides a typical example: the city's zoning regulations stipulate that public access easements must be included in a waterfront development proposal. In some jurisdictions waterfront use restrictions and public access requirements are implemented through other waterfront permitting programs covering such activities as dredging and pier construction.

In many cities waterfront development is further constrained by regulations governing the aesthetics of a proposed project. While the Coastal Zone Management Act calls for the protection of aesthetic values, it offers little in the way of specific guidelines. Generally, state and local regulations deal with the height, bulk, and site coverage of the project with restrictions imposed to preserve visual access to the water's edge from inland sites.⁵

The development process can also be hindered by the involvement of numerous citizen groups, each having a special interest in the condition and use of a city's waterfront. In addition to groups typically associated with urban development, such as neighborhood associations, preservation organizations, and school districts, many other groups such as fishing organizations, recreational boating clubs, tugboat operators, and conservation groups are interested in waterfront projects. While citizen participation is a necessary ingredient of any good urban development, waterfront projects often become caught in a web of conflicting demands voiced by single-interest groups. This can produce costly delays and result in compromises that create inoffensive but mediocre results.

The additional development constraints imposed by shoreline management agencies increase the risk taken by a developer attempting to build a waterfront project. The potential magnitude of risk far exceeds what is typically associated with conventional land development projects. Often market studies and financial feasibility statements lead a waterfront developer to conclusions that collide head on with regulatory guidelines and time delays. The North Point Pier project (commonly known as Pier 39) in San Francisco is an excellent case in point.

⁵ Marc Hershman, et al, *Under New Management—Port Growth and Emerging Coastal Management Programs* (Seattle: Division of Marine Resources, University of Washington, 1978), page 68.

First proposed in 1972, the project is centered around the reuse of three piers. Pier 39 was reconstructed and contains restaurants and shops surrounded by a 24-foot-wide pedestrian walkway. Pier 41 was destroyed and replaced with a fixed breakwater and public fishing pier, and in the place of Pier 37 (destroyed by fire in 1976) a floating breakwater was constructed. Two marinas flank the main pier, one for a sport fishing fleet of 50 to 60 boats, and the other for about 250 private pleasure craft. The project also includes a five-acre public park and a 1,000-car parking garage located directly inland from Pier 39. An elevated walkway connects the parking garage with the pier area. The developer estimates that the planning and permit approval process for the project required five years (from 1972-1977) and cost \$1.2 million. This was a sizeable risk considering the investment had to be made before the developer actually knew whether or not the project would be granted approval.⁶

⁶ Virginia Farrell, *Development and Regulation of the Urban Waterfront: Boston, San Francisco, and Seattle* (Princeton, N.J.: The Center for Energy and Environmental Studies, Princeton University, 1980), page 25.

Given the financial risk associated with waterfront development, many lending institutions and investors are hesitant to participate in waterfront projects. Furthermore, the cost of regulatory delays encourages developers to follow the path of least resistance—in other words, to sacrifice project innovation and creativity by duplicating what has been approved in the past. More often than not, it is just too costly to pass a new idea through the permitting and review process.

Despite the risks and difficulties which can be associated with waterfront projects, the tremendous potential of waterfront sites for economic development and public enjoyment has captured the attention of both private developers and city officials. Few cities can afford to ignore the wealth of opportunities offered by the full and productive utilization of an urban waterfront. Likewise, developers clearly see the mutual public and private sector benefits that are possible with waterfront projects.

In order to gain the mutual benefits resulting from waterfront revitalization, many city governments and private developers are making special efforts to facilitate development. These efforts have produced many innovative concepts and techniques designed to effectively mitigate physical and institutional development constraints. While some of these innovations are simply refinements of existing policies or programs, many others are unique responses to the special circumstances of a particular waterfront.



Photo credit: Diane F. Dudeck

3-8 The Pier 39 redevelopment project in San Francisco.

Public Sector Response⁷

In many North American cities, public sector initiatives have helped to stimulate waterfront development. City governments have realized that waterfront areas represent major community assets demanding special public sector involvement. In this respect, some communities have selected alternative organizational structures to implement and manage waterfront projects. Others have relied upon innovative districting and zoning techniques to encourage development, and a few cities have used more traditional urban development programs to assist the efforts of private developers.

Management Structures

In many cases, the most difficult problems associated with urban waterfront development result from the complicated and fragmented institutional framework guiding shoreline management. As noted before, urban waterfronts are subject to multiple jurisdictions and

overlapping governmental responsibilities that often impede the development process. Recognizing the severe limitations imposed by various institutional constraints, some cities have established alternative organizational structures to orchestrate waterfront development.

One such alternative is a waterfront management council. As special purpose government bodies formed specifically for dealing with coastal areas, waterfront councils are empowered to control land use and development within their jurisdictional boundaries. Councils may be established for a region or limited to a single municipality. In either case, state enabling legislation is usually required. The San Francisco Bay Conservation and Development Commission and the Rhode Island Coastal Resources Management Council are two examples of this type of management organization.

⁷ Much of this section is based upon information contained in Ann Breen Cowey, Robert Kaye, Richard O'Connor, Richard Rigby, *Improving Your Waterfront: A Practical Guide* (Washington: U.S. Government Printing Office, 1980).

3-9

Public Sector Development Initiatives

Management Structures

- Waterfront Management Council
- Quasi-Public (nonprofit) Development Corporation
- Private (profit-making) Development Corporation
- Port Authority
- Joint Public/Private Development Venture

Zoning and Districting

- Special Waterfront Zone
- Overlay or Floating Zone
- Conditional Zone
- Economic Redevelopment District
- Historic Preservation District
- Mixed-Use Development District

Urban Development Incentives

- Induce Demand
- Assist in Land Assembly
- Provide Public Financing
- Enact Favorable Taxation Policies
- Simplify Regulatory Process
- Provide Public Improvements

A management council is effective because it establishes an independent government body that assumes some of the responsibilities of existing agencies. It changes the institutional framework by combining several previously dispersed management functions under one central authority. For example, land use planning studies, environmental impact assessments, shoreline access plans, and waterfront development proposals are the responsibilities commonly assumed by these councils. Furthermore, councils have a regulatory function built into their management responsibilities: usually a permit procedure that a developer must complete before shoreline property can be significantly altered. The permit authority provides councils with a powerful instrument for guiding waterfront development.

With a waterfront council the development process is more direct and efficient. The regulatory requirements are clearly established and developers have an opportunity to discuss potential projects with council representatives as design documents and permit applications are being prepared. If a project is clearly inconsistent with council policies and regulations, the developer is urged to abandon or reconsider the proposal without going through the permit process.

While waterfront councils help remove much of the redundancy from development regulations, the extent to which they actually encourage waterfront development depends upon the mandate and priorities of the council. The San Francisco Bay Conservation and Development Commission, for example, has a mandate to use its permitting authority to rigidly control the type and form of shoreline development.

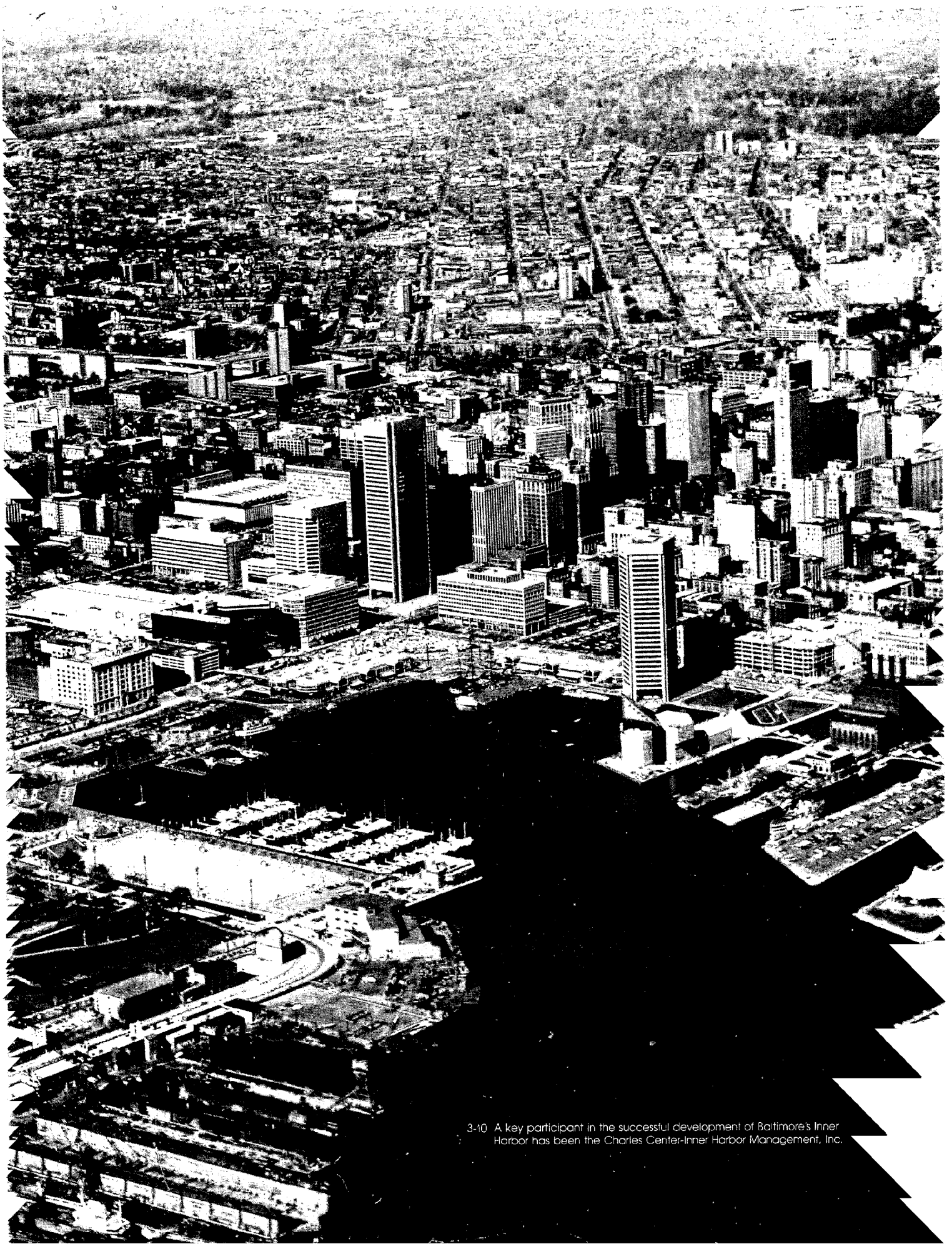
Quasi-public (nonprofit) development corporations are another type of alternative management structure. They differ a great deal from waterfront councils in that development is given priority over other concerns. Quasi-public organizations have proven successful where other public sector efforts to guide waterfront development have not worked satisfactorily. By creating a flexible organization that operates separately from a city development agency but under the policy direction of local government, quasi-public development corporations can respond to the special interests of local government, the private sector, and community groups more easily and efficiently than can a traditional department of local government.

One significant advantage of this type of management structure is that corporation status allows a management group to assume an objective, third party role in negotiations between local officials and private developers. This provides the opportunity to negotiate differences in goals and policies while projects continue to be managed with a minimum of confusion, conflict, or delay. By coordinating many previously dispersed local government functions through one management organization, a forum is clearly established for cooperation between private and public interests.

One of the best examples of a nonprofit quasi-public corporation is Charles Center-Inner Harbor Management, Inc., in Baltimore. It operates under a contract with the city that provides for the organization to direct the planning and management of development of the Inner Harbor. However, the corporation takes all policy direction from and is officially responsible to the Commissioner of the Department of Housing and Community Development. The management corporation works closely with public and private interests and community groups.

Charles Center-Inner Harbor Management, Inc., has proven to be a key ingredient in the successful development of Baltimore's Inner Harbor. As an agent of the city, the corporation recruits and negotiates agreements with developers, coordinates public and private development activities, acts as a client in the design of public improvements, and generally functions as a liaison between city officials and private contractors to expedite construction and keep projects on schedule. The high credibility and performance of the corporation has instilled enough confidence within the business community to ensure the cooperation of local business organizations as well as the developers themselves.

Special private (profit-making) development corporations have also been used in a few cities to manage waterfront development. This type of management structure is established to provide developers with the legal means of implementing all phases of development proposals by transferring powers normally assumed by local government to the corporation. Typically the private development corporation controls plan preparation, land acquisition (including acquisition by eminent domain in some cases), clearance, site improvements, and design guidelines. All actions of the corporation are subject to supervision and approval by the local government. The assumptions supporting this management approach is that a private corporation operating outside the traditional urban development process would have the resources and flexibility necessary to acquire capital, coordinate public and private improvements, and generally manage waterfront development more efficiently and effectively than a public development agency.

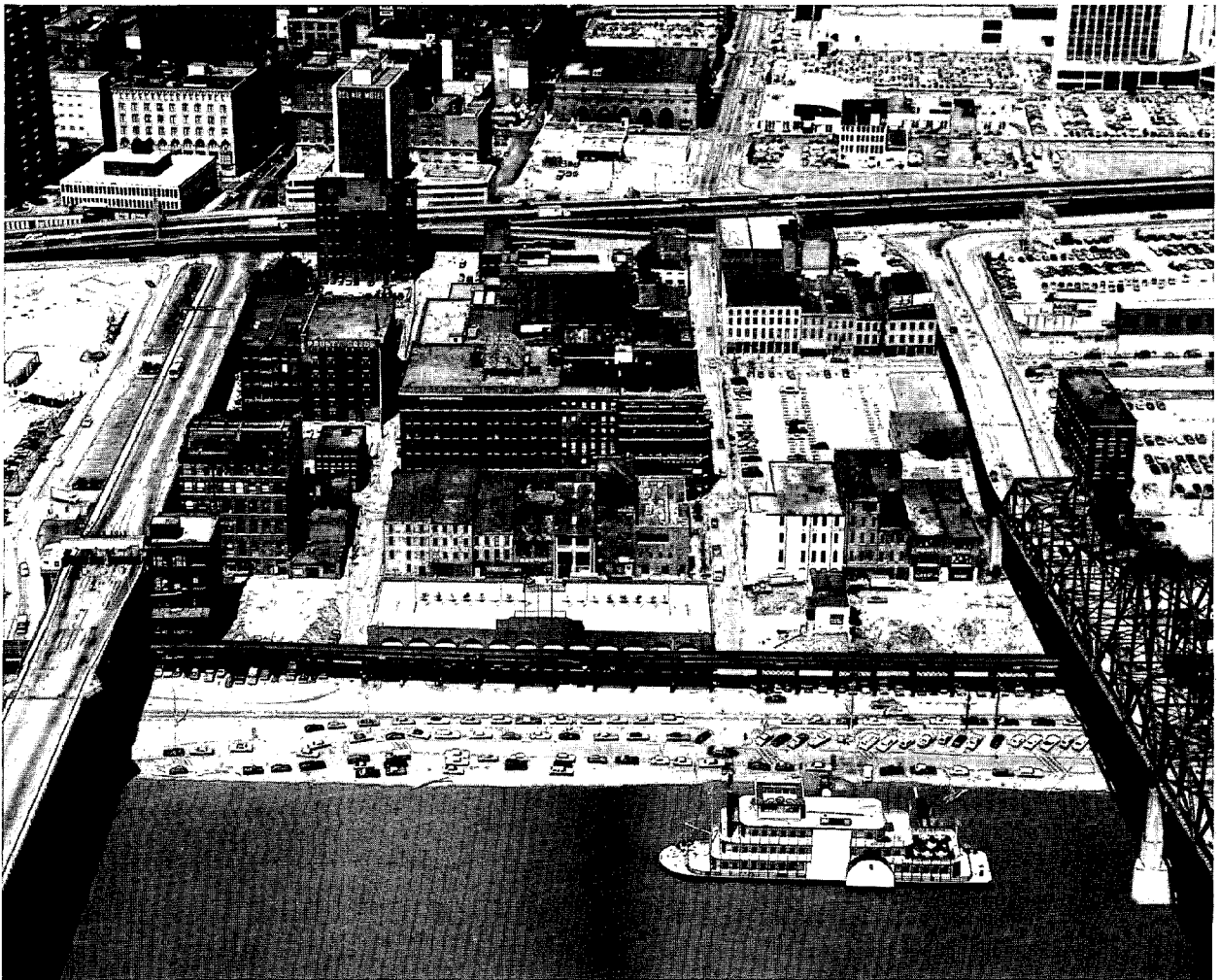


3-10 A key participant in the successful development of Baltimore's Inner Harbor has been the Charles Center-Inner Harbor Management, Inc.

Depending on existing statutes, the procedure for establishing such a corporation will vary from city to city. More than likely the legal authority must be granted to the local government through special enabling legislation. Once the legal basis is established, a special profit-making development corporation can be formed by private developers and financial interests. The next step is to define the boundaries of the development district. Following this action, the private development corporation prepares a final development proposal including planning studies, design alternatives, and financing arrangements. The proposal is reviewed by government agencies and public hearings are held.

The use of private development corporations in the planning and implementation of large-scale developments can be controversial because some people may feel that this approach allows too much control by private interests in projects that influence the whole community. This difficult issue can be avoided by making these private ventures part of a formal public review process where opinion can be solicited from a broad range of interests. Furthermore, the profit orientation of the corporation can be the spark needed to kindle the support of the business community. Without such support, it is very difficult to produce a waterfront product of high quality and lasting value.

One of the best examples of a private development corporation engaged in urban waterfront development is Laclede's Landing Redevelopment Corporation in St. Louis, Missouri. It has been very successful in stimulating private investment in the economically depressed and physically deteriorated waterfront district known as Laclede's Landing. The Redevelopment Corporation was formed by a local consortium of private sector interests



3-11 In St. Louis, Missouri, the Laclede's Landing Redevelopment Corporation has been very successful in stimulating private investment in the economically depressed and physically deteriorated waterfront district.

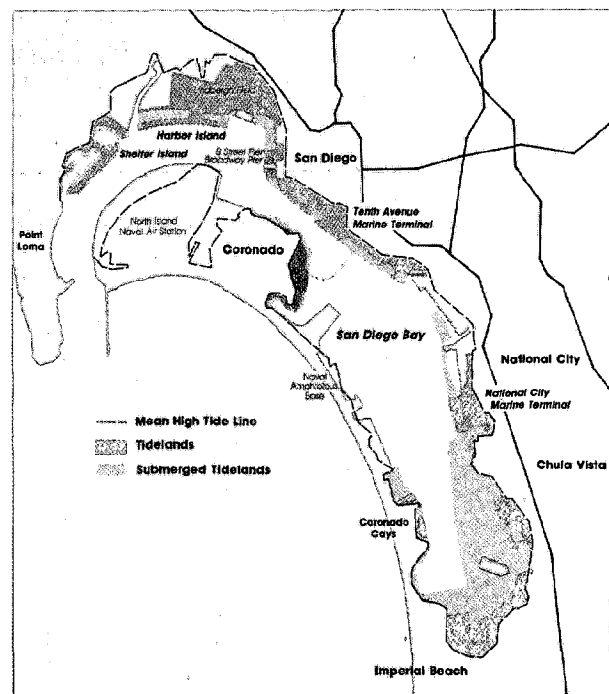
including developers, investors, and property owners under Chapter 353 of the Missouri Urban Redevelopment Law. This statute allows the city of St. Louis to pass to private corporations total development and planning responsibility, based on a plan approved by the board of aldermen and the mayor. Upon approving a development plan, the city is able to administratively grant the Redevelopment Corporation a limited power of eminent domain plus authority to provide property tax relief over a 25-year period to individual property owners in the Landing's district. The power of eminent domain obviously allows the private development corporation to overcome land acquisition problems, thus significantly reducing the developer's risk in project implementation. Furthermore, the tax incentive program has proven to be a substantial attraction stimulating private investment.

Providing a waterfront management structure that is conducive to development does not always mean a city must introduce a new type of organization. Some cities have been able to facilitate waterfront development by either redefining the role of an existing management entity or adopting a new public sector approach to waterfront development within the established institutional framework.

Among the various management entities commonly found in commercial harbors throughout North America, port authorities have the greatest potential to assume responsibility for waterfront development. This is because port authorities have the combination of legal authority, fiscal strength, and political skills required to effectively implement waterfront projects. In most cases, however, these public agencies were created to manage traditional waterborne transportation activities and do not use their land use planning authority and regulatory controls to manage the full range of potential waterfront uses. In recent years, however, some port authorities have taken steps to improve their ability to respond to waterfront development opportunities. In cities such as Boston, Toronto, Oakland, and Seattle, port authorities have adopted a multiple use approach to shoreline management. No longer are retail, commercial, recreational uses, and general public access viewed as inappropriate in port areas.

The role model for port authorities expanding their focus to include nonmaritime development is the San Diego Unified Port District Commission. Without a doubt, the port of San Diego and its neighboring communities have come the closest to achieving a completely comprehensive waterfront development program. The program is based on a multiple use concept that realistically reflects the port's relatively limited marine cargo development potential and the growing demand for recreational and commercial uses.

During the 1950s, the port of San Diego and its waterfront began to lose the large volume of cargo activity that it had during World War II and the Korean conflict. In response to this trend, a comprehensive waterfront management effort eventually led to the creation of the San Diego Unified Port District in 1962. A waterfront development master plan was promulgated in 1941 with the cooperation of the five major municipalities that border San Diego. This plan in essence granted in trust to the District all waterfront property up to the high water line. Although political and social conflicts surfaced during the formation and implementation of the plan, nearly everyone agreed that without such a plan and an agency to implement it, the waterfront, as it then existed, would continue to degenerate through underutilization, abandonment, and incompatibility of adjacent uses.



3-12 The San Diego Unified Port District.

In 1980, the waterfront was divided into 10 separate sectors, each of which either reflected the predominant prior uses of its shoreline or was designated to accommodate other uses which included recreational and light commercial activities. These planning considerations were based on the District's long standing authority to undertake projects in four major areas: commerce, navigation, fisheries, and recreation. Each of these areas of authority to operate has been broadly interpreted, thus permitting the construction and operation of public parks, commercial fishing piers and processing facilities, along with the leasing of land and facilities for use by hotels, restaurants, and marina operators. The ability to balance the profit-making operations such as hotels, restaurants, commercial fishing facilities, and marinas against public use projects has produced a viable and interesting waterfront. Moreover, San Diego's waterfront has developed into a major tourist attraction and, at the same time, has improved the quality of the urban environment.

Following San Diego's example, many cities are discovering the opportunities waterfronts offer when the public sector can structure an appropriate institutional framework that will encourage new investment in a variety of uses. Given the necessary mandate, port authorities appear to be an effective body to manage waterfront development in partnership with states, municipalities, and private development interests.

Finally, in a few cities, waterfront development has taken place without having to rely on a new management structure or redefined organizational responsibilities. Instead, development has been helped by a new public sector approach to waterfront development within the established institutional framework. The approach most commonly used is a joint public/private development venture.

With this approach public and private groups work as partners, under a contractual agreement, to contribute different elements of a proposed development project. It is particularly successful in smaller communities where neither local governments nor the private sector, acting independently, will have sufficient financial resources to implement a development proposal. It should be noted, however, that public/private ventures require a great deal of cooperation throughout the development process. Moreover, the partnership must have the continuity

and strength necessary to withstand dynamic political and economic forces. The agreements must be written in a way to anticipate potential conflicts and provide a contractual basis for resolving any problems which may arise. Freemason Harbour in Norfolk, Virginia, is an excellent example of how fragile a joint public/private venture established to accomplish mutually advantageous social and economic goals can be.

The Freemason Harbour project began in 1973, when the Norfolk Redevelopment and Housing Authority (NRHA) announced plans for a neighborhood development program that included portions of the central city waterfront. At that time, representatives from Chessie Resources, a subsidiary of the Chessie Railroad, expressed interest in redeveloping its waterfront properties that formed a large portion of the area under consideration. Originally, Chessie wanted to develop the site on its own, but realized that the massive costs involved in providing the necessary public facilities, principally parking, street improvements, and bulkheading, made it advantageous to work with NRHA. The Authority, on the other hand, at first wanted to purchase the property from the railroad for its own development, but also realized that the combined cost of land construction made this goal unreachable. The parties agreed that a combined effort represented a better course of action.

NRHA and the railroad decided to proceed as a joint venture and divided the cost of a preliminary planning study, with 65 percent borne by the Authority. In August 1975, Arthur Cotton Moore Associates completed the initial plan for the site, which involved an elaborate eight-phase proposal. Local financial interests expressed concern over several elements of the plan, and there was disagreement over the accuracy of the market analysis.



3-13 Freemason Harbour Project in Norfolk, Virginia.

That same year, Oliver T. Carr Co., a large Washington, D.C., development firm, contracted to conduct further marketing studies. Following the collaboration of Carr and the project coordinator, Barton Meyers Associates, the public and private aspects of the plan were redefined. A new land use concept was developed without the originally proposed large marina, with less housing, commercial space, and parking and greater public access to the waterfront.

In 1976, the city, Carr, and Chessie signed an agreement forming Freemason Harbour Associates to implement the new proposal, the Freemason Harbour/Harbour Square master development plan. In a separate, more specific agreement with NRHA, Freemason Harbour Associates agreed to finance its portion of the project from private sources. NRHA used a variety of sources including Community Development Block Grant money, other federal funds from the Department of Housing and Urban Development's Urban Development Action Grant Program, and revenue bonds. NRHA agreed to purchase 19 acres of land owned by Chessie Resources, combine it with its own six acres, and lease it back to Freemason Harbour Associates. This arrangement required the private developers to obtain financing only for construction of the buildings on the site. The city benefited because it collected rent directly from the leases. Previously, the owners paid property taxes that went to the state. Furthermore, the agreement stated that NRHA would provide street improvements, utility relocation, landscaping, bulkheading and related marine work, and park and beautification work. Freemason Harbour Associates agreed to construct a residential condominium project with accessory retail space. NRHA retained a 60-year renewable ground lease for site improvements on the developed parcels and collects a monthly payment from each of the condominium owners.

Freemason Harbour Associates built 20 townhouses in accordance with their agreement with NRHA. The units were all sold and occupied in 1979. The second phase of the project called for 30 residential units to be constructed on a renovated pier structure and a warehouse to be renovated for commercial use. Freemason Harbour Associates, however, did not move forward with phase two because of market uncertainties. Eighteen months later NRHA became impatient with the developer's inaction and requested that they produce a development scheme for the second phase of the project.

Freemason Harbour Associates submitted a development proposal consisting of six townhouses and a 30,000-square-foot office building (the warehouse would be demolished). In addition, the developers stated that the townhouses would only be built if presold. The Norfolk Redevelopment and Housing Authority felt that this proposal was not in line with their expectations



3-14 Waterfront redevelopment in Norfolk, Virginia, is being orchestrated by the Norfolk Redevelopment and Housing Authority.

based on the original project concept. NRHA did not want to reduce the project's residential component in spite of the developer's claim that the market was not strong enough to support it. After discussing the proposal at several meetings, NRHA and Freemason Harbour Associates mutually decided to terminate their agreement.

The Norfolk Redevelopment and Housing Authority released another request for development proposals and subsequently selected a local development firm (Christopher Company) for phase two of the project. Their development proposal calls for 90 residential units—30 units on the pier structure and 60 condominium units in a new building. The warehouse is to be demolished.

NRHA learned an important lesson from this experience: Instead of entering into one development agreement covering all phases of a project, it is better to sign separate agreements for each phase. This is particularly true for projects that are developed over several years.

Other cities are finding the joint public/private venture approach to waterfront development to be a reasonable alternative to the traditional development process. As federal government funding for waterfront projects becomes more difficult to obtain, the equity partnership approach combining public and private resources at the local level is gaining momentum. With the public sector becoming more skilled and experienced in co-development techniques, projects such as Freemason Harbour can weather the dynamic political and economic factors influencing the land development industry.

Zoning and Districting

In many communities land use plans, zoning ordinances, and building codes were written at a time when most urban waterfronts were dominated by traditional uses such as shipping, manufacturing, and associated land-based transportation and storage facilities. Since many older waterfronts are no longer used as intensively for such activities, there is the potential for vacant land, abandoned buildings, and deteriorating piers to be reused for a variety of different purposes. Attempts to realize the development potential of such waterfront sites have been unsuccessful in some cases because of antiquated land development codes and ordinances. Some communities are dealing with this problem by using innovative districting and zoning techniques to accommodate multiple use developments.

By establishing special purpose waterfront zones and districts, the public sector has the legal authority to implement innovative land development controls. Such authority can encourage waterfront redevelopment when conventional rezoning of shoreline property does not accommodate the specific requirements of waterfront activities. In addition, conventional zoning often fails to provide the essential flexibility required to respond to the changing market conditions that occur as areas become redeveloped.

One solution to obsolete or restrictive zoning codes is to rezone waterfronts as unique areas suitable for a variety of creative and compatible uses. There are basically three approaches to creating waterfront zones:⁸

- Designate a special waterfront planning area and recognize it as such in the city master plan.
- Adopt a waterfront zone as part of the existing zoning ordinance.
- Develop criteria and performance standards that pertain to waterfront characteristics.

It makes a substantive difference to include the waterfront area in an adopted master plan because it provides legal standing as part of a standard zoning ordinance. Calling attention to the waterfront through special area plans is an important first step. Even without a site-specific zoning designation, the goals and objectives articulated in a special area plan can be the basis for community action.

In Chicago, the "Lakefront Plan" adopted in 1974 divides the shoreline into three general zones. A "water zone" extends from the shoreline to approximately the 25-foot depth line in Lake Michigan. The "park zone" consists of the individual parks that comprise the present and future public park facilities within the city. The "community zone" is made up of the private and public lands adjacent to the lake, most of which are in residential use. Basic policies are set forth regarding the management of each zone.

Portland, Maine, and Plymouth, Massachusetts, also are using innovative zoning techniques to encourage waterfront development. In 1982, Portland's city administration recommended the creation of a special waterfront zone designed for greater flexibility of uses than was previously allowed.

Portland is presently confronted with parallel efforts to reindustrialize and redevelop its waterfront. In order to ensure that desirable and compatible development efforts would be encouraged, the city has based its waterfront management strategy on new zoning recommendations. The major recommendation is the creation of a new waterfront zone (W-2). This zone would be a specialty zone, designed for the unique nature and needs of waterfront dependent uses. The intent is to reserve a substantial portion of the waterfront for uses where waterfront access/location is critical. In addition, the W-2 zone is designed to protect waterfront dependent uses from other competing but noncompatible uses of the waterfront. W-2 is basically a marine and marine related use zone. Most nonmarine and nonfishing related uses would not be allowed (existing uses would be grandfathered). The new W-2 zone would provide some assurance to Portland's marine and fishing industries that the Portland waterfront will continue to remain a "working waterfront." Waterfront access for waterfront dependent uses would be guaranteed through the adoption of the W-2 zone. Noncompatible uses such as professional offices, hotels, convention centers, and residences would not be permitted in the W-2 zone.

The second major zoning recommendation is a change in the existing waterfront zone W-1. The W-1 zone currently allows a wide variety of marine, commercial, and industrial activities. For example, in addition to every type of marine and fishing activity, the existing W-1 permits hotels, convention halls, restaurants, professional offices, banking, theaters, museums, churches, and, as a conditional use, residential apartments and condominiums. The existing W-1 is excessively open to a wide diversity of uses. It is too liberal and does not provide adequate protection for uses which are dependent upon a waterfront location. The intent of the revised W-1 zone is to permit a diversity of uses which can coexist with each other. It is a mixed-use zone that would permit all of the marine and fishing uses of the W-2 plus a variety of commercial, industrial, and residential uses.

⁸ Cowey, et al, *Improving Your Waterfront*, page 29.

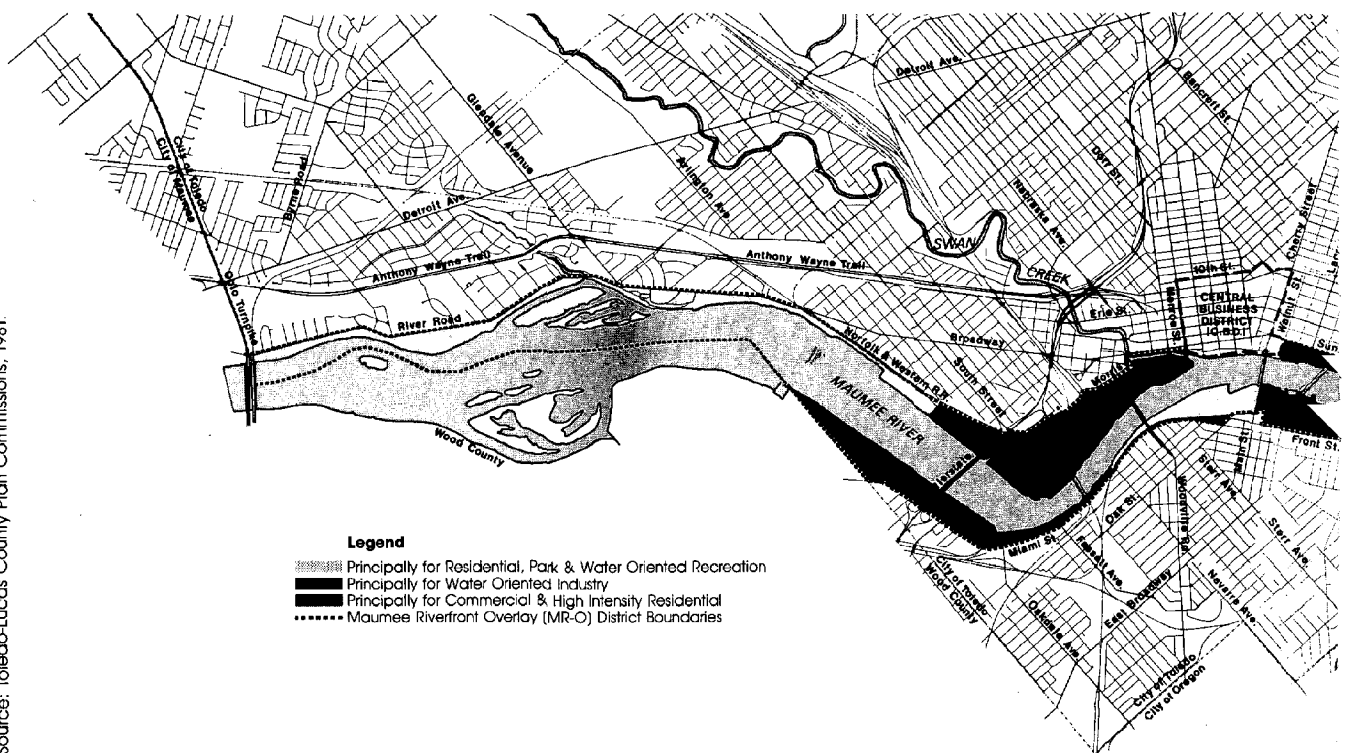
Plymouth, on the other hand, enacted a waterfront zoning bylaw in 1973 which created a waterfront district as part of the project design review procedure. The waterfront district is designed to encourage the development of marine, historic, and tourist uses along Plymouth's central waterfront. The zoning bylaw established three categories: allowed waterfront land uses; special permit uses, which must meet specified environmental design conditions and review procedures; and prohibited uses. The intent of the special permit uses is to require for certain types of development the coordination of site plans, pedestrian circulation, and compatibility with the adjacent historic area. Allowed waterfront land uses include boat sales, service, rentals, ramps and docks; commercial sightseeing or ferrying; marine railways, repair yards, storage yards, marine supply outlets; and commercial fishing and seafood wholesale or retail outlets and related outlets. Special permit uses include restaurants, recreation, motel, specialty shopping, and similar compatible facilities that complement and strengthen the function of the waterfront area, and multifamily and single-family attached dwellings.

Another type of zoning technique that is applicable to urban waterfronts is the use of "overlay" or "floating" zones. This technique avoids the static condition of traditional zoning by providing implementation flexibility. Overlay zones "float" over the community and are placed in specific locations where and when they are deemed appropriate by the local government. An overlay zone may contain regulatory provisions concerning use, height, and bulk as in a standard zoning ordinance, or it may have unique features that are incorporated into the language of the ordinance for a specific purpose, such as an industrial park or mixed-use development.

Toledo, Ohio, has successfully implemented overlay zoning as a public sector approach to waterfront development along the Maumee River. The Maumee Riverfront Overlay District was incorporated into the Toledo Municipal Code in 1979. In general, the special zoning classification is used to provide public amenities and facilitate development of a wide variety of compatible land uses along the riverfront. Specifically, the ordinance calls for increased public access to the water, improved scenic and aesthetic controls, improved transportation, and better coordination of recreational, commercial, and industrial land uses. In addition, several locations are identified as prime residential, park, and water-oriented recreation sites. These areas are to have a "superior level of public access, convenience, comfort, and amenity."⁹

⁹ Ibid, page 32.

Source: Toledo-Lucas County Plan Commissions, 1981



Many cities have stimulated waterfront development by utilizing incentive or conditional zoning. It has two basic advantages over conventional zoning: the incentives are used as a means of securing public benefits in exchange for some type of concession given to a developer, and it encourages innovative development and creative urban design. The most widely used type of incentive is known as a bonus provision. This approach allows the local government to grant additional densities or increased floor areas beyond those specified in the local zoning ordinance to a developer in exchange for a public benefit such as a dedicated open space or provision for public access. Incentive zoning has been used successfully by cities for years but only recently for waterfront development.

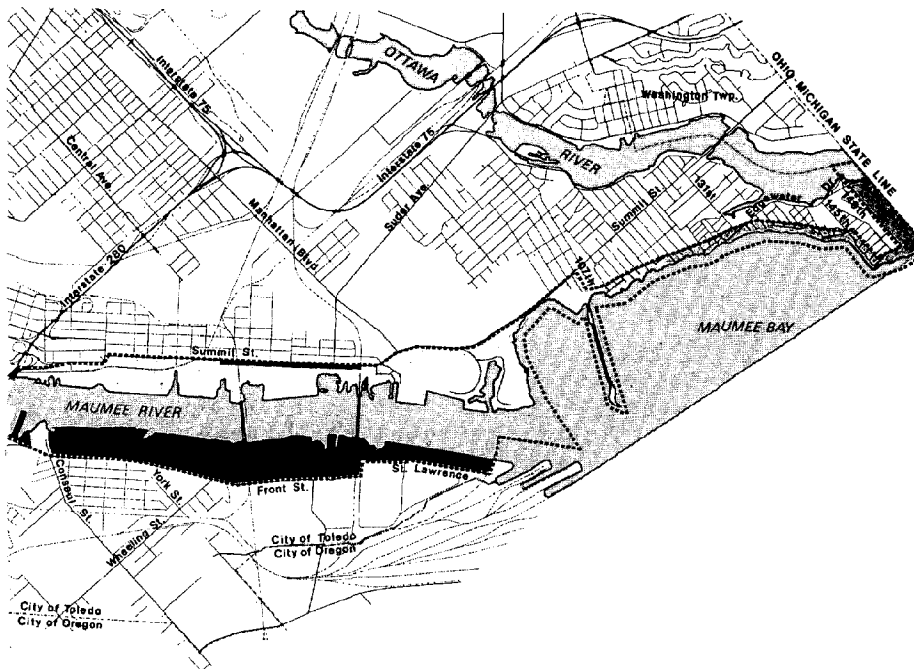
It should be noted that although the use of incentive zoning increases flexibility, it only does so to the extent stipulated in the zoning code. The type and amount of public benefits and private incentives available for bargaining are clearly established in the local zoning ordinance. This provides a fixed amount of potential trade-offs recognized by both public and private interests.

The Pickering Wharf redevelopment project in Salem, Massachusetts, is an excellent illustration of the use of incentives to encourage waterfront development. Prior to redevelopment, the site consisted of 11 abandoned oil storage tanks, a one-story block storage building in poor condition, and 1,000 feet of deteriorating bulkhead. The wharf had been used for administrative purposes since 1974, when an oil distribution center was closed.

In 1974, the Pickering Oil and Heating Company petitioned the city to construct a new oil distribution facility one-half mile from the wharf site. On behalf of the city of Salem, the city solicitor and the planning department began negotiations with the oil company to utilize its old site for a mixed-use redevelopment project. This action signalled the beginning of the development planning process. Because the oil company needed a city permit to move its storage facilities, the city was able to negotiate a trade-off, granting a change in zoning for an option on the waterfront site.

An agreement was reached between the city and Pickering Oil in which the city was given an option to buy the old property and resell it to a private developer. The sales price of the land was set at one-half the appraised value with the oil company paying for the appraisal. The city's initial intent was to develop the site as a hotel-mixed-use complex, but a market analysis suggested this approach was questionable.

In 1976 the city entered into an agreement with a development group to develop the site as a multi-use commercial zone. The project consisting of a 45-slip marina, 54 condominiums, four restaurants, 2,000 square feet of office space, and 70,000 square feet of commercial space was completed in 1980. Under the agreement, Pickering Oil Company received a rezoning for its new facility in exchange for an option for the city to purchase the property at a favorable rate and turn



3-16 Land use designations within the existing Maumee Riverfront Overlay (MR-O) District in Toledo, Ohio.

around and sell it to a private developer. Also, the city required that the developer include certain provisions in the development, such as public access to the waterfront for the entire site, and architectural and street design requirements that would blend into the maritime character of the area. Density zoning was provided so the developer could create a village atmosphere instead of the traditional zoning approach in this area of the city.

Districting is a public sector initiative that has been used for many years by local governments to provide goods or services to a particular area within a community. Special districts are usually formed when the needs of an area cannot be met sufficiently by the standard municipal government structure. They have specific, geographically defined boundaries and are managed by appointed or elected officials. Before implementation, state enabling legislation is usually required to grant local governments the authority to create special districts. This establishes a legal basis for action by the municipality.

There are as many types of special districts as there are types of community needs. Some are formed to provide essential utilities while others are established to protect the public interest in land allocation decisions and urban design issues. Nevertheless, in general terms, there are two broad categories of special districts: special service districts and special development districts.

Special service districts have been widely used by local governments over the years to provide a variety of public services. Cities commonly use this tool as a means of providing water, sewer, fire protection, sanitation, and health care. Districts are identified by distinct boundaries and have varying levels of political autonomy. For instance, some districts have many jurisdictional

powers, including the authority to set user rates, issue bonds, and levy taxes, while other districts have a very narrow range of responsibilities and limited authority. In cities where the development potential of a waterfront area is severely limited by inadequate public utilities, a special service district is an effective means of alleviating this problem.

In recent years the concept of special districting has been expanded to address a greater range of community goals. Local governments have established special development districts for such purposes as improving environmental conditions, preserving the character of an historic area, or encouraging private investment in a depressed area. Special development districts operate much like special service districts except for one important difference: development districts usually have more extensive governmental powers, such as eminent domain, urban renewal authority, taxation powers, and controls over planning, management, and urban design. The three major types of special development districts are economic redevelopment, historic preservation, and mixed-use development.

The concept of establishing economic redevelopment districts to stimulate the recovery of depressed areas of cities originated out of the urban renewal policies of the 1950s and 1960s. During that time project-sized districts for clearance and redevelopment were formed in many large and small cities. The land in these districts was condemned, cleared, and new buildings were constructed under an assortment of federal grant, loan, and guarantee or insurance programs.

Often the renewal process fell short of attaining its stated or implied goals. The failures of the past, however, have produced significant changes in the way urban redevelopment is implemented and economic redevelopment or renewal districts have clearly become viable tools for local governments.

In most cases, economic redevelopment or renewal districts are established by a local ordinance on the basis of recommendations from the city planning office, a local planning commission, or a special study group. Specific boundaries for the district are delineated, and an overall development program is created. This may include a variety of public and private projects for commercial, residential, industrial, and recreational development. The implementation of an areawide plan establishes the public purpose required for the use of eminent domain—either partial or total condemnation—under the landmark Supreme Court decision, *Berman v. Parker* (348 U.S. 26) in 1954.

One important advantage of economic redevelopment districts is that they are a planning mechanism that can be integrated easily with other redevelopment tools and techniques such as tax deferrals, tax increment financing, and less than fee simple land acquisition. This provides the institutional flexibility needed for local governments to respond to changing market forces as redevelopment proceeds.



3-17 The Pickering Wharf redevelopment project in Salem, Massachusetts.

Historic preservation districts are another type of special development district that communities have established to help stimulate waterfront revitalization. By preserving the unique character and aesthetic quality of a historic urban seaport or riverfront, cities have been able to enhance the development potential of their waterfronts. The most successful approach combines preservation with economic investment, allowing historically significant structures and sites to be adaptively used for new purposes.

Historic districts can be established at the state or local level, with or without federal sanction. Depending on the circumstances, it may be possible to set up a National Register Historic District that would qualify property owners for special federal grants and loans as well as tax incentives for redevelopment. While the register is a valuable tool, especially in providing the incentives to owners of historic buildings, such a designation carries with it strict regulations governing the use of funds within the district. Consequently, it is a good strategy to postpone creation of the district until the economic feasibility of the proposed uses has been clearly established.

Most states have provisions for establishing local historic districts. Typically, these districts are set up by a city ordinance that contains special zoning or performance standards and sometimes tax incentives to encourage preservation.

Redevelopment of a historic waterfront district can be expedited by the involvement of a local preservation organization. The group may be private, nonprofit, public, quasi-public, or have some other status. The key is for the organization to place a high priority on redevelopment and take an active role in making it happen. In this regard, organizations can obtain funds for restoration projects in historic districts by either directly financing projects or arranging loans and conducting fund drives. The Historic Savannah Foundation in Savannah, Georgia, and the Waterfront Historic Area League (WHALE) in New Bedford, Massachusetts, are two local organizations that have helped guide the successful redevelopment of a historic urban waterfront.

A third type of special development district that cities have established to guide and encourage waterfront development is a mixed-use development district. These districts are set up to accommodate a relatively new urban development approach: combining a variety of land uses into one comprehensively planned, large-scale project. This approach is a significant change from the traditional parcel-by-parcel pattern of urban development and offers private developers and public

officials many advantages in planning and implementing development proposals. In more specific terms, a mixed-use development is a relatively large-scale real estate project characterized by:

- three or more significant revenue-producing uses (such as retail, office, residential, hotel/motel, and recreation—which in well-planned projects are mutually supporting);
- significant functional and physical integration of project components (and thus a highly intensive use of land), including uninterrupted pedestrian connections;
- development in conformance with a coherent plan (which frequently stipulates the type and scale of uses, permitted densities, and related items).¹⁰

One of the primary applications of the mixed-use development concept has been in the revitalization of inner city areas in both large metropolitan centers and medium-sized communities. This is because innovative approaches and creative techniques were the only way to effectively deal with the complex economic and physical problems associated with redeveloping these blighted, depressed urban sites. Notable examples are Rockefeller Center in New York City, Charles Center in Baltimore, and Embarcadero Center in San Francisco.

There are two basic reasons why urban waterfronts are prime candidates for mixed-use development projects. First, many urban waterfront areas are in need of full-scale revitalization; in some cases, the urban fabric is so deteriorated that it can only be mended by providing a full complement of uses and services. Secondly, waterfront sites have special amenities and can accommodate a tremendous diversity of activities and uses.

Although special development districts are technically set up for either economic development (renewal), historic preservation, or mixed-use development, the three objectives are not mutually exclusive. In fact, the formal designation is more a reflection of a city's priorities and resources than its development goals. This is particularly true when special districts are established to facilitate waterfront development. The South Street Seaport Development District in New York City and the New Bedford Historic Waterfront District in New Bedford, Massachusetts, illustrate this point.

¹⁰ Robert E. Witherspoon, Jon P. Abbett, and Robert M. Gladstone, *Mixed-Use Development: New Ways of Land Use* (Washington: ULI—the Urban Land Institute, 1976), page 6.

South Street Seaport is a waterfront area located immediately south of the Brooklyn Bridge along Manhattan's East River shoreline. In 1973, it was designated a special development district in accordance with the Brooklyn Bridge Southeast Urban Renewal Plan. At the time it was established, the primary purpose of the Special South Street Seaport District was to encourage the preservation, restoration, and redevelopment of properties and buildings in the area. The district was targeted to be a type of "museum"—an area of the city with special cultural, recreational, and retail activities.

Although the district was not created solely for economic development purposes, improved economic conditions along with historic preservation and recreational and cultural activities are high priority goals for revitalization of the waterfront. Some of the specific project goals are:

- realization of the Seaport's full economic, cultural, and historical potential to strengthen tourism in New York City;
- diversification of Lower Manhattan's narrow economic base;
- revitalization of the local neighborhood and support of its growth into a viable community;
- protection and assurance of the future prosperity of the Fulton Fish Market;
- preservation and protection of the historic character of the district by generating sufficient revenue to rehabilitate its unique buildings and support its educational programs.¹¹

A number of projects have been completed at the Seaport that relate specifically to these goals, and several others will soon be finished. Two piers have been refurbished and five historic vessels are permanently moored there. The Seaport Museum and the state Maritime Museum are located in the district. In addition, the Fulton Fish Market, New York's primary fish market, is being improved rather than relocated. Plans call for extensive redesign of the processing system and major improvements to the structure, piers, and mechanical systems. Substantial commercial redevelopment has already taken place at the market, and considerable office space has been provided to adjacent properties through a transfer of development rights begun in 1974.

Millions of dollars in federal, state, and local grants have been spent at the Seaport, including \$8 million from the city's budget, \$5.4 million from the Economic

Development Administration's Federal Public Works Program, \$5 million in Urban Development Action Grants from HUD, and \$6.3 million from the state for the Maritime Museum. The public improvements have also captured the attention and imagination of the Rouse Company, which is currently spending \$60 million at the Seaport to develop 200,000 square feet of specialty retail and office space.¹²

In New Bedford, Massachusetts, historic preservation is the catalyst for waterfront redevelopment. The New Bedford Historic Waterfront District occupies approximately 15 acres between the central business district and the city wharfs. With the passing of the whaling industry, New Bedford's waterfront area slowly began to decline, and by the early 1960s, the city's urban renewal agency began making plans to tear down many deteriorating structures in the area. Local opposition to these plans led to the formation of the Waterfront Historic Area League (WHALE), a private, nonprofit corporation to help protect the historic character of the waterfront.

In 1963, a survey of the historic area was completed, and three years later the area was approved by the Department of Interior for inclusion on the National Register of Historic Places. After several years of economic stagnation, however, it became obvious that to maintain the viability of the historic district, preservation would have to be combined with waterfront redevelopment.

WHALE accepted this challenge. In 1970, WHALE began purchasing property using a revolving fund, and soon became the largest landowner in the district. Other significant landowners are the Old Dartmouth Historical Society, Bedford Landing Taxpayers Association, and the New Bedford Redevelopment Authority. Together, these private and public groups have played a guiding role in the redevelopment of the waterfront historic district.

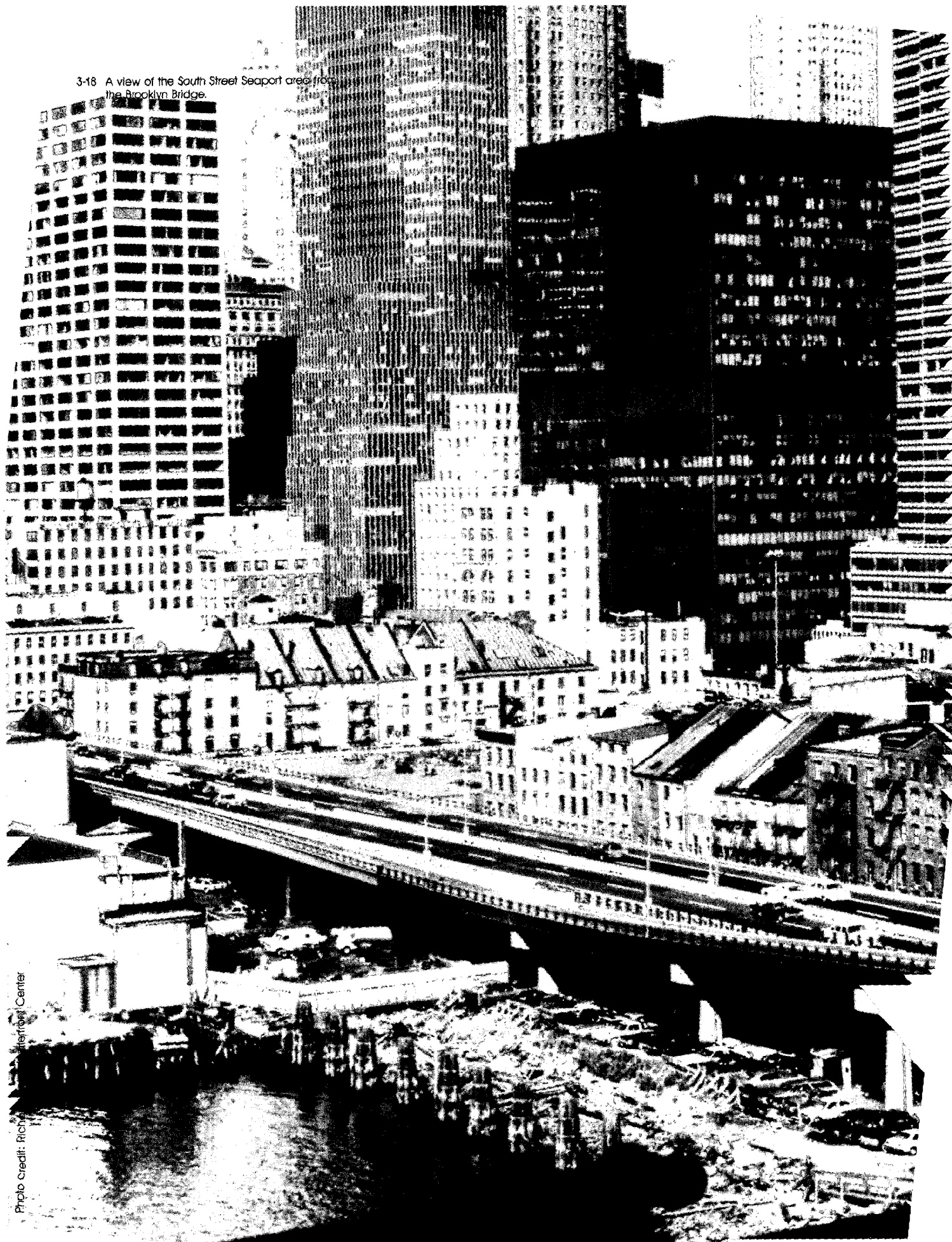
The city and private groups launched a major revitalization program. In 1975, public improvements for streets, sidewalks, utilities, and landscaping were begun with a grant from the Housing and Urban Development's Community Development Block Grant program. Since that initial investment, more than \$5 million in public and private funds have been invested in the district. Many structures have been rehabilitated, piers refurbished, gardens planted, and a variety of commercial enterprises, such as hotels, restaurants, shops, a candle shop, and a glass museum, have appeared. Improvements just underway are expected to push the private investment figure toward \$4 million.

The South Street Seaport Development District and the New Bedford Historic District are both good examples of how special districts have helped to facilitate waterfront development. In each case, there is a great deal of public and private cooperation in the planning and management of the waterfront district. Without this key ingredient, the special district designation will be of little value.

¹¹ Cowey, et al, *Improving Your Waterfront*, page 38.

¹² Ibid, page 39.

3-18 A view of the South Street Seaport area from the Brooklyn Bridge.



Urban Development Incentives

Alternative organizational structures to implement and manage waterfront projects and innovative zoning and districting techniques are not the only options available to the public sector to encourage waterfront development. In fact, some cities have been very successful in stimulating waterfront development by using conventional urban development incentives. The basic purpose of the incentives—to alter downtown market conditions to promote development—is directly applicable to most urban waterfronts. To achieve this purpose, the public sector can increase the demand for developed space, assist in land assembly, invest public funds in waterfront improvements, provide special taxation policies, simplify the regulatory process, and provide public facilities.

Inducing Demand

The key to the success of waterfront development projects is the leasing or selling of space at a price high enough to cover development costs and ensure a reasonable profit for the investors and the developer. Demand is the primary variable in determining whether or not private development will occur. In some urban waterfront areas, the amenity of the water's edge is not enough by itself to stimulate the level of demand necessary to cover the high costs of land acquisition, relocation, demolition, and public improvement.

Local officials can stimulate demand for private development in a number of ways. One way is to institute recreational and cultural programs that will attract people to a waterfront location. In Baltimore and Toronto, for example, if private development had been initiated before the implementation of cultural programs (fairs, concerts, parades, art festivals, etc.) then it most likely would not have been successful. In each city, the waterfront had a tarnished image. To overcome this perception, events were staged that attracted people to the water's edge and provided them with positive, rewarding experiences once they were there.



3-19 An outdoor music festival at Harbourfront in Toronto, Ontario. Recreational and cultural programs that will attract people to a waterfront location are ways to stimulate demand for development.

Tax incentives for developers are another effective tool. By reducing taxes, the local government can increase the attraction of an urban waterfront project. Favorably pricing public services like water and sewerage can also reduce the cost of doing business for private firms, increasing the demand for space in the jurisdiction offering favorable rates.

The public sector itself can be a major source of new demand for space. A public lease commitment for space in the new development sometimes makes it considerably easier for the developer to obtain financing. By carefully structuring the terms for rent escalation and renewal options and through special arrangements, a municipality can minimize the cost of space at the same time it encourages private development.

The public sector's decision to lease space should be based on an analysis of the direct costs of the alternatives. Subsidizing private real estate development should not be the main motive for public leasing. But if leasing is the most cost-effective alternative, the municipality can use its leverage as a major grade-A tenant to make possible a real estate venture that might otherwise not have materialized. The overall impact can be substantially greater than if the public space were in a single-purpose government complex.

Assisting in Land Assembly

In many cities the major obstacles to waterfront development are problems related to land acquisition. Efforts by private developers to assemble land for waterfront projects are often unsuccessful. This is because developers typically encounter a fragmented pattern of property ownership, restricted property rights in the form of easements and deed restrictions, railroad and utility right-of-ways, and absentee owners who are difficult to identify and locate. In addition, special waterfront features such as eroding shorelines and legal questions concerning ownership of submerged lands and riparian water rights may present more problems.

The most direct means of obtaining property is purchase of fee simple title. This includes acquisition of complete ownership in property by outright purchase, gift, or condemnation. It is, however, the most expensive method of obtaining land, and cost often becomes the limiting factor in acquiring necessary properties for waterfront development.

Given these circumstances, local governments can help facilitate development by taking steps to alleviate land acquisition problems. In this regard there are several different techniques that can be used to make land available for urban waterfront development. The techniques that might be used separately or in combination are quick take by eminent domain, ground leases, inverse leasebacks, land writedowns, land banking, land exchange, and relocation assistance.

Quick Take by Eminent Domain. Eminent domain is the power to take private land for public use, compensating the owner based on the value of the land for its current use. It is the major tool that redevelopment authorities possess to create parcels of land for new development. Quick take is a mechanism that allows immediate public possession. Final disposition of the action is accomplished after the taking, either by negotiation or by court-determined compensation. This technique considerably reduces the time required to assemble and develop waterfront sites. It enables the redevelopment agency to negotiate an agreement with a developer and commit itself to a delivery date for the site before the assembly of land.

Ground Leases. Long-term ground leases are commonly used in publicly assisted waterfront development because of their mutual public/private benefit and flexibility. In fact, some states prohibit the sale of state-owned tidelands to private interests. Under this procedure, a local government purchases property for development and then leases it to private interests under an agreement. The lease arrangement allows a local government to both encourage development projects and control the manner in which they are operated. The lease normally provides for a minimum base payment plus a percentage of income generated by the project. Thus, if the project does well, the city shares in the income and can recover its costs. The Rouse Company's Harborplace project in Baltimore's Inner Harbor is a good example: the city receives \$100,000 unsubordinated ground rent with escalations over time as well as a kicker on the land rent of 25 percent of net cash flow of the project after certain pro forma returns to the developer. Ground leases, moreover, can often be subordinated; that is, the city can execute a mortgage of its land as security for the development loan made to the lessee. If the ownership cannot legally be subordinated by the city, as a public body, then it is still possible to subordinate the ground rent, thereby making most of the same mortgage security value available for development.

For the developer, such long-term leases can greatly improve the net return on investment through improved financing terms, reductions in equity outlays, and tax advantages. With a subordination clause in the lease, the advantages are even greater. The disadvantage is that cash flow is reduced when the land is leased rather than purchased.

201 Harborplace in Baltimore's inner harbor was developed using a waterfronting ground lease between the city and the Rouse Company.



A properly structured ground lease can have the same effect as a loan, decreasing the required equity investment (by eliminating the purchase price of the land) or the developer's risk exposure. The decrease in equity tends to increase the developer's return on investment. The developer can deduct the full amount of the lease payment from his income taxes. Had the land been purchased and financed, only the interest payments would be deductible. Of course, the lessee can still depreciate the improvements.

Long-term subordinated ground leases also benefit the city. Default on a lease could mean that the city loses its land, but the default provision in the lease can be worded so that only rent payments are lost until income increases or some other event takes place. The land and improvements both revert to the city eventually.

Leasing increases a developer's leverage at little cost to the city. Subordinated leases provide even greater leverage at even less cost to the city if the project succeeds. Although subordinated leases are highly cost-effective, municipalities have seldom used them to attract real estate investment, perhaps because of restrictive state legislation or because of local governments' unfamiliarity with them.

By leasing its land or other property to private developers, the city can specify in the lease how the property is to be operated and thus exercise greater control than if it were sold outright even with covenants, because covenants are notoriously difficult to enforce. Leasing can also stimulate real estate development by structuring payment terms adapted to the project's requirements for cash flow. In other words, the ground rent can be postponed until a stable, profitable return has been achieved for the project.

Inverse Leaseback. A unique variation of the lease-back arrangement has been instituted by the city of Baltimore. This program uses a three-pronged contractual arrangement between the city, an industrial development authority (IDA), and private interests. The goal is to entice commercial and industrial operations back into the city. The basic procedure involves the city's selling newly renovated city property to private investors and leasing the property back from them at relatively low rates. Lease payments are based on the owner's costs for items such as taxes, debt amortization, and investment premiums. The industrial development authority's role is in financing the initial purchase of the property by private investors. Because of its special legal status as a public authority, the IDA can borrow money at tax-exempt rates and in turn loan it to private investors at low interest rates. This allows the private party to borrow at a low interest rate from the IDA, purchase usable property from the city, and lease it back to the city at a rate that just covers the debt service on the loan and some other expenses.

The main advantages of such a program are that the city can obtain large amounts of capital to purchase space at low cost and relatively small risk. In addition, investors will be able to deduct building depreciation from their taxes, because technically they are the owners of the buildings and property. Eventually, all properties will revert to the city. The primary advantages for Baltimore are that the city obtains capital for public facilities at a low rate while stimulating inner city revitalization, and does so without increasing the city debt, issuing municipal bonds, or providing tax incentives to individual owners.

Land Writedowns. Land writedowns have been widely used by local governments as an incentive for private investment in urban renewal projects. This procedure involves purchase of blighted properties by the local government, clearance of dilapidated structures at public expense, and resale of the land to private development interests. The incentive for redevelopment of these properties typically occurs because the land can be sold by the local government below the purchase price for land and improvements.

Land writedowns reduce the amount of capital needed by developers to finance local redevelopment projects. This, in turn, reduces their equity requirement. In addition, the sale of property at an attractive price may allow the local government leverage with the developer in providing amenities, such as public access, open space, or other provisions that can be included as restrictive covenants attached to the land transaction. The theory is that the tax revenues generated by the new development will eventually cover the public's investment expense.

Land Banking. Land banking allows a local government to acquire and assemble land suitable for development and hold it until a suitable user is identified. By using this technique a city can reserve waterfront land when it becomes available and assemble over time a waterfront parcel of sufficient size to support the desired form of development.

Large-scale land banking has had little practical application in North America because it requires initial capital outlays that are excessive for most municipal budgets. Furthermore, large-scale land banks are usually long-term programs covering at least 20 years with significant influence over land values and the location and timing of private development. Because so much land development control is left to the discretion of the local government, large-scale land banking often lacks public acceptance and is therefore a politically unsatisfactory approach.

On the other hand, small-scale land banking programs are less expensive and more politically acceptable. These are usually labeled "advance acquisition programs" and are implemented by local governments as a hedge against inflation in land values or to obtain optimal locations for future public facilities.

Short-term land banks can be especially useful in redevelopment of blighted areas. In these cases, land banking consists of purchasing existing dilapidated structures, possibly rehabilitating them and then disposing of the property at a rate that best meets the goals of the community at the particular time.

Land Exchange. Land exchanges or land swaps can be used to reorganize land ownerships. The trade between public and private parties is based on values set by an independent appraiser so that each party has a consolidated and usable land parcel. While land exchange programs are used to achieve various goals,

one objective has been to consolidate waterfront properties for development. Private owners of industrial zoned waterfront land, for instance, may have the opportunity to exchange their property for city-owned lands that are better located or have easier access to transportation facilities. This technique has been successfully used in the development of many urban waterfronts including Boston, Toledo, and New Orleans.

A land exchange was a key element in the development of Canal Place—a \$500 million large-scale mixed-use riverfront project currently under construction in New Orleans. The project is being developed by Joseph C. Canizaro Interests. The land exchange provided a mechanism for satisfying both the needs of the developer and the city of New Orleans. In 1974, the city of New Orleans was in the market for property upon which to build a plaza (later named the Piazza d'Italia). Canizaro owned just such a piece of land. The result was a mutually beneficial land exchange. Canizaro relinquished 1.5 acres of prime real estate valued at \$2.2 million near the riverfront and fronting on Poydras Street, the main CBD thoroughfare. In return, the city surrendered 3.7 acres adjacent to Canal Street consisting partly of unused street right-of-ways valued at \$1.7 million, but with several stipulations attached. The city would have four years in which to exercise its right to build a riverfront roadway link to the tunnel near the Rivergate, an exhibition center across the street from Canizaro's Canal Place. (The city did not exercise this right.) The city would be held harmless in the case of



3-21 The development of Canal Place, a \$500 million large-scale mixed-use riverfront project currently under construction in New Orleans, was facilitated by a land exchange.

any law suits filed against Canizaro claiming the development devalued adjacent land because streets would be closed in the area. (There have been no such lawsuits.) Canizaro would bear the cost of relocating New Orleans Public Service Incorporated's (NOPSI) high power lines and towers, then estimated at a cost of \$400,000.¹³

Relocation Assistance. Even though a public agency may not directly aid site acquisition, it may help a private developer to assemble a waterfront site by helping to relocate space users occupying the property slated for development. Relocation assistance can take the form of loans and grants to pay moving expenses or aid in finding or developing a new site for those who must move. Both parties benefit: The relocated activity has a chance to leave obsolete facilities and an inadequate location, and the community gains economic benefits from new businesses.

Public Financing Assistance

A major part of local public assistance to urban waterfront development is funding. The infusion of public funds can tip the balance between feasibility and infeasibility, and public financing can be used to leverage loans, grants, or equity funds from other sources. The underlying objective of direct public assistance normally is to stimulate private investment. To this end, the type and character of public financing assistance and the timing of its availability (before, during, or after private development) must be carefully planned.

The market for both equity and debt capital for real estate development is fairly well organized and operates nationwide. Therefore, most large projects compete for funds with other similar projects throughout the nation and with other investment instruments such as stocks and bonds. In a highly competitive capital market, a project that may benefit the community may not be able to attract the necessary financing from the private market at affordable interest rates. Direct loans from the public sector at below-market interest rates are a solution to this situation. The public sector can borrow money at a lower interest rate because the interest it pays is tax exempt. The interest it earns on money it lends can therefore also be at a lower rate. Thus, many projects that would not be feasible with private financing only can be made feasible with a public loan at lower rates, for part or all of the needed financing.

Direct loans can fill a gap when no private funds or insufficient funds are available for a particular portion of a project's financing needs. Beyond the benefit of encouraging new development, local government gains

another major benefit from this kind of participation, in that it enables the local government to exercise some control it would not ordinarily have. The city may wish to offer a below-market direct loan even if a project does not require it financially when the city's interests are at stake.

Developers find direct loans attractive for two reasons. The lower interest rate means the developer's cost is lower. If the loan is in the form of a second mortgage, private lenders may be more willing to finance the remainder of the project because the risk is less. Should the project fail, first mortgage lenders are repaid before second mortgage lenders. However, most state constitutions prohibit the use of public funds for direct loans, investments, or grants for business development. Many states have resolved this problem by enabling legislation allowing the creation of economic development corporations or other such special vehicles that serve as a conduit for city grants, loans, and contracts to private entities. In Virginia, for example, the Norfolk Redevelopment and Housing Authority has special status that allows it to act as a codeveloper with private entrepreneurs. The Authority is currently involved in several commercial and residential projects planned for the city's waterfront.

The public sector can also influence the availability of financing for private development projects by stipulating that certain types of loans be made in return for deposits of government funds in private financial institutions. This technique is gaining in popularity as cities realize the concessions that banks are willing to make to receive large government deposits. While not a direct loan program, it can have somewhat the same effect in that it creates a supply of loan funds that otherwise would not exist.

If funds are not available for direct loans, cities can also achieve somewhat the same results by guaranteeing loans, thereby shifting some of the lender's risk to the local government. If a public agency agrees to guarantee repayment of a loan from a private lender, the chance of the developer's obtaining private funds improves significantly, again because the risks to the lender are reduced. Similarly, if the local government agrees to lease or purchase the project at a percentage of projected market value in the event the projected return does not materialize, the project becomes more attractive to equity and mortgage investors.

¹³ Jane Brooks and Deborah Weeter, "Canal Place: A Clash of Values" *Urban Land* (July 1982), page 5.

Assistance Through Taxation Policy

Taxation policies have a strong influence on urban development, and local governments have adopted special policies specifically to encourage waterfront development. Property tax incentives, tax abatement, special taxation districts, and tax increment financing are four methods used by cities to facilitate waterfront development projects.

Property tax incentives aid waterfront development in two ways: First, they eliminate uncertainties about taxes for the developer, and, second, they improve the developer's cash flow by reducing taxes, particularly during the early months of a project when income and expenses are unbalanced. Evidence on how effective property tax incentives are for stimulating real estate investment is inconclusive. Unless concessions are carefully tailored to specific real estate objectives and offered selectively, they can become subsidies for construction that would have occurred in any case. Conversely, they can make possible marginal development that should not occur.

Tax incentives, however, are not necessarily the best way to encourage development. The local government must weigh the benefits and consequences to select the most effective type of incentive at the lowest public cost. The analysis should determine whether the tax incentive is critical in securing development and whether benefits exceed the taxes the city would have received.

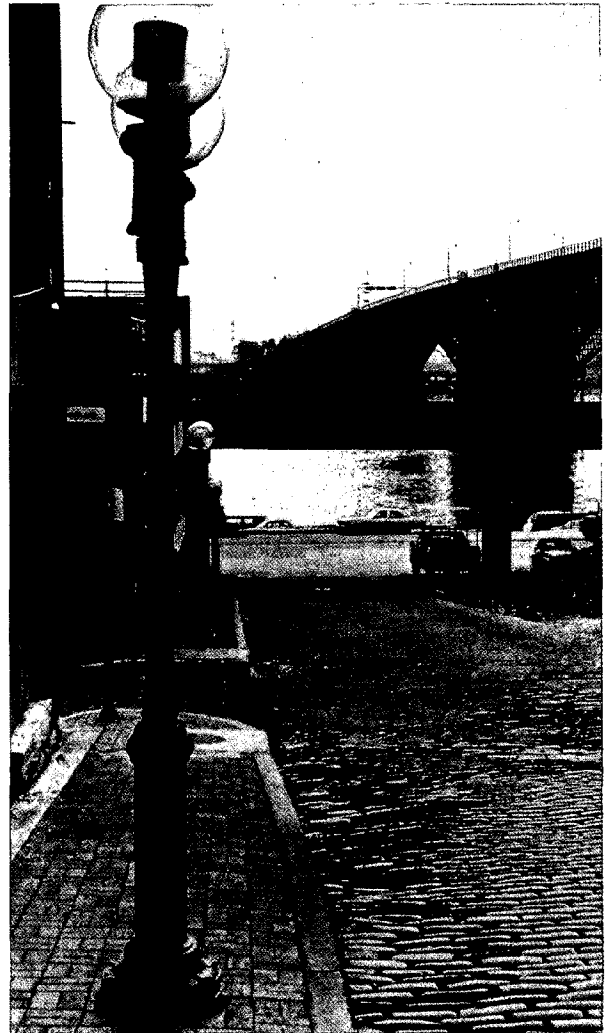
Tax abatement incentives are addressed to specific types of developments, projects, or areas rather than to changes in the overall taxation system. Tax abatement—in the form of tax stabilization, a tax freeze, or a tax exemption for a limited time—means that the city encourages privately financed improvements in waterfront areas by not collecting the real estate taxes on those improvements for a number of years or by freezing the assessment at the predevelopment level. The developer gains by not having to pay real estate taxes for a time, and the city gains from the economic growth that development encourages. The Laclede's Landing Development Corporation in St. Louis has been granted the following property tax advantages:

- During the first 10 years, the corporation pays taxes on the value of the property at the time of acquisition. No additional taxes are paid on improvements made to the site during that time.
- In the next 15 years, the land and improvements made on the site are taxed at 50 percent of the assessed value.
- After 25 years, the corporation pays full taxes on the property.

This tax incentive program has been instrumental in the redevelopment of the city's waterfront.

Because commercial waterfront projects tend to generate substantially more tax revenues than they require in servicing costs, cities can negotiate with developers to reduce the surplus as a development incentive. This is possible if a project will have a multiplier effect on local economic activity by generating increased tax revenues from other sources. The increased tax revenues from new adjacent development can be used to retire the debt on the public portion of the development.

Many states have adopted legislation that allows local governments to establish taxation districts. This approach institutionalizes the tax incentive mechanism and allows it to cover a broad area. The goal is usually to stimulate private investment in specific areas of the community by reducing the tax burden on existing properties in the district. In this way, the tax district serves as an incentive for private investors to locate new enterprises in the area or improve and expand existing structures.



3-22 The redevelopment of Laclede's Landing has been aided by tax abatement incentives.

Depending on the specific state enabling legislation, special taxation districts can be used to levy either regular *ad valorem* property tax assessments or special benefit taxes based on the value of the land excluding improvements. Regular *ad valorem* property taxes depend on market value and are based on the entire floor footage of a building as well as unpredictable market changes (for example, revenues received from the property).

Special benefit taxes levied through special taxation districts, in contrast, are assessed using a fixed formula based on the predictable factors of the property's front footage or square footage. Revenues may be included in the formula as well, and the formula can provide a sliding scale for payments.

Tax revenues are used to retire bonds issued by the city (or the district itself) to pay for the improvements and services in the district. Depending on the specific state legislation, the bonds can be included in or excluded from the city's debt and tax levy ceilings. The bonds are repaid directly from the tax revenues collected or from the city's general fund, which is later reimbursed by the special tax revenues.

A city can choose what kind of development it wants to encourage in a waterfront area by selecting the factors in the formula. Allocations based on front footage benefit large multilevel buildings; those based on square footage benefit small businesses. From the viewpoint of the general public and the city government, special benefit assessments allow the cost of providing public services in development areas to be passed on to the parts of the private sector that benefit most directly from the improvements. One drawback of the method is the difficulty associated with allocating additional tax liability among the various private parties.

To attract private investment in the underutilized, decayed central waterfront, the city of Boston had to be in a position to offer development incentives to the private sector. The city officials did this by granting concessions to developers that would help to reduce the risk of investment. For instance, the ownership agreement for the Faneuil Hall Market was written so that the owner has a 99-year lease on the buildings and land, and these are covered by a special tax arrangement. The owner pays no taxes for an initial period of time and then pays on a basis of a predetermined percentage of the gross revenue produced by the businesses in the market. City and state officials promised developers in the urban redevelopment project area that the Boston Redevelopment Authority would maintain control of the waterfront sites for 40 years from the start of the redevelopment program in 1964. This commitment assured developers that the redevelopment program in which they were investing would not be abandoned or significantly altered in future years.

Mercantile Wharf is another good example of Boston's early effort to use tax incentives to stimulate waterfront development. The wharf was rebuilt as a mix of small retail shops and residential units. Under Chapter 121A of the Greater Boston Real Estate Laws, a lease subsidy

was offered for any building which included some low-income housing. The building and land are exempt from taxation. In lieu of property taxes, the owner pays an excise tax based on five percent of the gross income of the complex plus \$10 for every \$1,000 of assessed valuation. The result is that owners of residential buildings pay 12 to 14 percent of gross income in taxes while other building developers are more likely to pay 23 percent.¹⁴

Urban redevelopment projects often result in substantial increases in local property values, both on the actual site and in the surrounding area. Depending on the local laws, these higher assessments can generate greater property tax revenues for local governments, and tax increment financing is a method of temporarily using these increased assessed values to provide funds for redevelopment projects.

Tax increment financing establishes a method of financing urban redevelopment projects outside the general fund of a local government, which is derived principally from property taxes. This technique isolates the additional property tax revenues produced by redeveloping and upgrading deteriorated properties and uses these revenues to repay the development costs, including retirement of the municipal bonds that were sold to finance construction of the public's share in the project. A general description of the procedure follows. State laws differ in some details.

- A local government adopts a plan for a redevelopment area and sells special tax increment bonds to finance the necessary capital outlay for facilities such as streets, bulkheading, parking, or land acquisition.
- A redevelopment district is established in which the property values of all parcels within the district are considered to be "influenced" by one or more of the projects. In other words, property values within these boundaries are expected to rise as a direct result of the project. The total value of the property in the area is assessed and this becomes the "tax base" for the district.
- Each year, the additional tax revenue generated by higher assessed property values in the redevelopment district (the amount above the base level) is collected separately from other taxes and is used specifically to retire the bonds issued to help finance the redevelopment project or to directly pay some of the project costs.
- When all outstanding debt is repaid, the tax increment process ceases. Thereafter, the increased assessed value from the project creates additional tax revenues for the local government or results in a lowering of general property tax rates.

¹⁴ Farrell, *Development and Regulation of the Urban Waterfront*, page 11.

Tax increment financing has proven most useful in projects where relatively high-value business activities dominate. Industrial and commercial office buildings and shopping centers are the most common applications, although housing can also be integrated into these development proposals. These types of land uses must be included so that a sufficiently large tax increment will be insured and the outstanding debt will be retired within a reasonable time.

Portland, Oregon, has recently used tax increment financing as part of its plans for renewal of the downtown business area and adjacent waterfront. In April 1974, the city council adopted the Downtown Waterfront Urban Renewal Plan, which designated a large portion of the waterfront and surrounding commercial district as a redevelopment area. The plan was general in nature, recognizing that details would be filled in as the planning process continued. Later that year, the citizens of Portland voted to remove the legal restrictions that limited the use of tax increment financing and opened the way for its use in the combined central business district and waterfront program.

In 1975, a completed master plan for the waterfront was officially adopted by the city council, along with a plan for downtown transportation and parking. The plan called for a series of public improvements that would encourage private investment in the downtown area, such as replacing a four-lane highway with a mile-long waterfront park, providing free bus service in the downtown, and constructing short-term parking garages to serve downtown patrons. The added revenues from the private development could then be used to fund community improvements and a portion of the waterfront park.

With these developments underway and others anticipated, Portland sold \$10 million in urban renewal tax increment bonds during 1976 and another \$15 million in 1978. These funds were used to finance the first two phases of the Waterfront Park, preservation and improvements in two historic districts within the urban renewal area, land acquisition for a parking structure, and other related actions.

Major private development began shortly thereafter. The U.S. National Bank of Oregon and a federal office building built for and leased by the General Services Administration added \$23 million to the assessed valuation of the area by 1977. Far West Federal Savings and Loan Association and Portland General Electric constructed facilities valued at \$60 million. These projects alone have generated nearly \$2 million a year in added tax revenues for the city.

The initial phases of the Waterfront Park have recently been completed, and the third phase is under construction. The park is scheduled for development over another three- to five-year period and will eventually include an esplanade on the riverfront, plazas, extensive open grassed areas, a public boat facility, community activity centers, and a larger center suitable for restaurants, retail activities, and entertainment.

There are many positive implications for local governments that choose to use this technique. Tax increment projects are designed to enhance the economic vitality of depressed central city commercial areas. They can be especially useful for revitalizing deteriorating waterfronts situated near older commercial and industrial enterprises with a high potential for adaptive use.

In addition, this approach requires that those who benefit directly from public investment in urban redevelopment pay the majority of the initial costs involved. This is a more equitable arrangement than funding by general obligation bonds where all taxpayers bear the expense equally. This technique may provide a new source of revenue that a community can use without the need for special bond elections. In times of tight budgets and antitaxation sentiments, this can be critical for local governments.

The long-term nature of the increment bonds demonstrates a commitment on the part of local governments to revitalize urban areas. This can be an important factor in attracting other investments to the area. In addition, these projects normally produce immediate and highly visible results, where returns on investment are realized soon after occupancy of the new structures.

There are also some negative aspects of tax increment financing. It may not be possible to integrate such programs with other tax incentive proposals that encourage private investment. Tax abatement, for instance, would not be compatible with tax increment financing because there would not be an increase in tax values for the length of time the abatement was in effect. In addition, projects funded in this manner must clearly obtain land uses that are reasonably certain to produce sufficient tax revenues to meet debt repayment schedules. This tends to limit the range of elements that can be included in redevelopment proposals.

The need to convince potential bond investors that the development needed to repay the bonds will, in fact, occur also discourages the use of tax increment bonds to finance initial or "up-front" costs. Investors in bonds prefer to have the development completed or at least substantially underway before the bonds are sold. Consequently, other sources of money are sometimes necessary to finance initial costs.

It is sometimes necessary to wait for private development to occur. The increased taxes from this development then can be used to finance the project's public costs. Finally, tax increment financing may require special legislation that specifically grants local governments the power to use this technique.

Regulatory Simplification

The regulatory patchwork that accelerated during the late 1960s and early 1970s was, in part, a response to environmental concerns and a public desire for greater participation in local land use decision making. In urbanized areas, these additional regulatory measures were placed on top of existing zoning ordinances, building codes, and other requirements. In many jurisdictions, the result has been a complex maze of overlapping, and sometimes contradictory, regulatory specifications and permit requirements from various levels of government.

Urban waterfronts are directly affected by these additional regulations, especially in cases where dredging, filling, or construction in floodplains is included in project proposals. The result is a system of permit requirements and regulatory controls that can take months or years to pursue. Cumbersome regulatory procedures can therefore obstruct implementation of urban waterfront projects.

There are ways in which the regulatory system can be streamlined or otherwise improved as a means of encouraging waterfront redevelopment. Many communities supply developers with booklets and other explanatory materials regarding the regulatory process. While not changing the system, this technique helps to reduce confusion and misunderstandings about specific requirements and procedures. Pre-application conferences serve a similar purpose. Local jurisdictions use this technique to discuss potential projects with developers and determine if a proposal is clearly inconsistent with existing policies or regulations.

Other communities have significantly improved the regulatory process by increasing the speed in which public agencies review applications and grant approvals. To improve the system, local governments have implemented the following techniques:

- reorganization of review staff and planning staff into geographic teams;
- computerized application processing and management;
- "fast track" processing of minor applications;
- joint review committees;
- preparation of master environmental impact reports by local government agency;
- delegation of some approval authority to staff;
- elimination or consolidation of some review steps.

These improvements should be used as examples of regulatory reforms rather than as models that can be reproduced in all situations. Each regulatory system is unique and requires special adaptations to a particular set of circumstances.

Public Improvements

To attract private investment in urban waterfront areas, local governments can provide a range of improvements either adjacent to or on the project site. Since waterfront areas are frequently characterized by outdated, dilapidated public facilities and inadequate public services, a city's investment can be the catalyst for private development. Public improvements can include upgrading elements of citywide services (streets and parking, storm and sanitary sewers, transit systems, utilities), providing waterfront facilities (bulkheading, piers, breakwaters, boat ramps), or constructing public amenities (plazas, pedestrian pathways, landscaping, observation decks).

A city's investment in major public facilities can generate demand for specific kinds of private investment. For example, convention centers, transportation terminals, public office buildings, and public recreation facilities can spur the development of hotels, restaurants, and shops. By selecting waterfront sites for public facilities, local governments demonstrate a commitment to waterfront development that encourages private investors and developers.

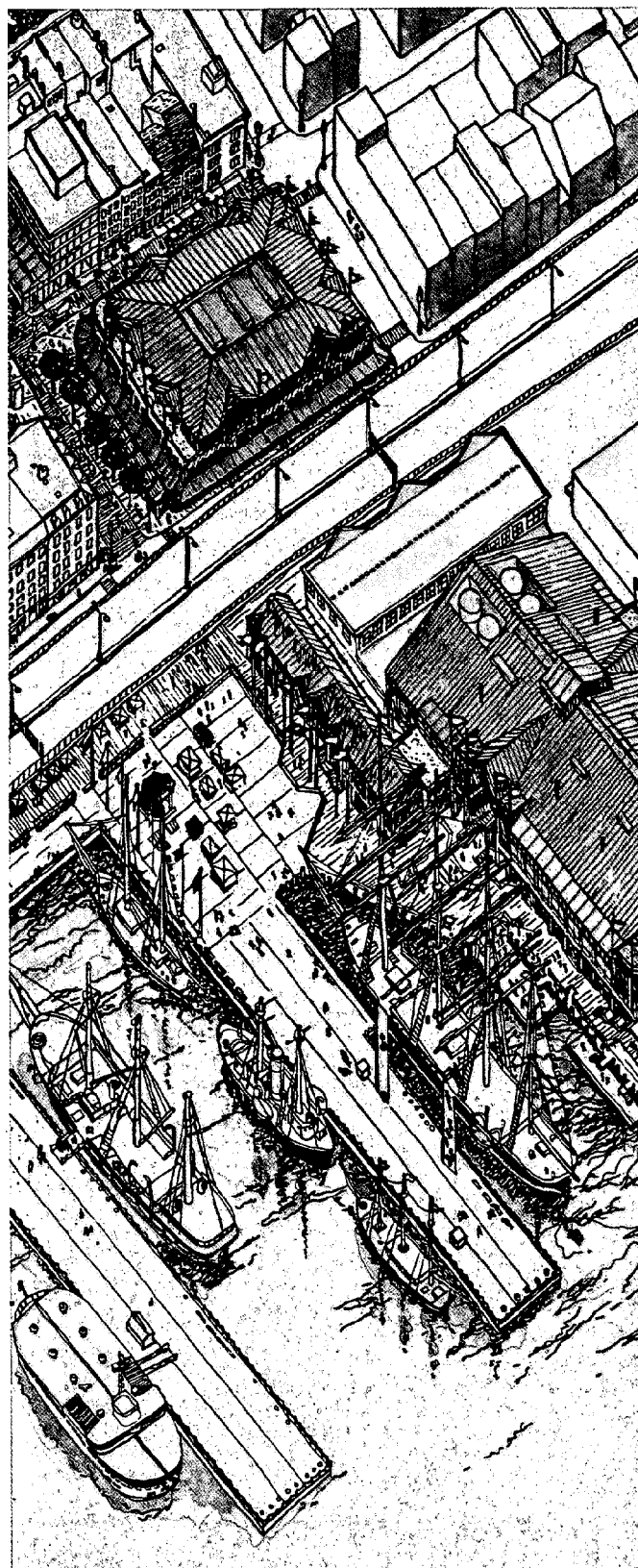
Many communities have provided public facilities as a means of stimulating private development. New York City, for example, is providing major utility improvements at South Street Seaport; St. Louis has spent over \$1 million at Laclede's Landing for public facilities; and Tacoma, Washington, has invested more than \$8 million in public funds to facilitate the redevelopment of the City Waterway.

While a broad range of public sector initiatives can be used to stimulate urban waterfront development, the diversity of approaches and techniques reflects the tremendous variety of circumstances creating opportunities for development. The key for local governments is to select an initiative that best responds to shoreline conditions and civic goals. The initiative must, above all, relate to the needs of the development industry in order to effectively generate the amount of private investment necessary to implement a viable urban waterfront project.

IV. The Development Process

The opportunity for urban waterfront development exists when the difference in an existing property's value and its value in a changed state exceeds the cost of conversion. While numerous circumstances can create this fundamental condition necessary for development, a few factors are common to urban waterfronts. Demand by current users of a waterfront site can erode and thereby reduce values to the point where new development is feasible. Changes in environmental quality or revisions of land use ordinances and regulations can allow a type of development not previously allowed. Changes in public facilities may also make new uses feasible. Finally, subsidies offered by local governments can create a difference in the property value.

While the basic economic conditions leading to waterfront development are relatively simple, the application of these concepts to real situations is more intricate. This is because there is a limited, relatively fixed amount of waterfront land in an urban area. Despite the deteriorated condition or underutilization of an urban waterfront, the amenities and special opportunities associated with a shoreline location create a value potential that tends to raise existing land values. In addition, higher than average development costs, public sector objectives regarding shoreline access and use, jurisdictional overlap in governmental responsibilities, and climatic variables can all increase the complexity of development.



Regardless of how waterfront development opportunities are created, certain requirements are common to all project proposals if they are to proceed. These include:

- either a commitment to lease or purchase the finished space at a price that will cover costs plus a return or tax benefit sufficient to attract investors, or strong evidence that the space will be rented or purchased within a reasonable time after the project is finished;
- a site on which to build the project;
- the necessary public services (water, sewer, gas, electricity, roads, telephone, and transit);
- the capital required to acquire the land and to design and build the project;
- the public approvals (zoning, design, and building regulations, streets or highway access, sewer connections, environmental clearances, and so forth) required to permit the project to be developed.

Meeting these requirements in order to produce a waterfront project is the essence of development and the developer's basic function. The developer is the individual or organization—whether public or private—that performs this function, regardless of that person's or organization's other responsibilities or duties. The developer is the manager of the development process and is

responsible for making sure that each of the many phases in the development process is carried out expeditiously and efficiently. For urban waterfront development, management is crucial. It is a complex production process, and cost control, resource allocation, and scheduling are keys to the project's success.

Typically, there is a high level of public sector involvement in urban waterfront development projects. This characteristic reshapes the traditional role of the private developer. More often than not, the developer acts in response to a public sector initiative instead of the other way around. Private developers' reactions to public sector initiatives are influenced significantly by the attitudes public officials have regarding the development industry. For instance, if officials are antagonistic, do not respect the legitimacy of the developer's activity, and take an excessive amount of time to approve or deny requests, the pragmatic developer will look elsewhere for opportunities.



Photo credit: Norfolk Redevelopment and Housing Authority.

4-1 The Waterside is a 125,000-square-foot festival marketplace under construction on the Norfolk, Virginia, waterfront.

The Predevelopment Stage

The predevelopment stage of a waterfront project begins with the initial perception of a need or opportunity for development and ends with the project packaged for implementation and construction. The three phases of activities—project planning and initiation, project analysis, and project packaging—are directed toward identifying opportunities for development, formulating and testing alternative development strategies, preparing a program for project development, and securing agreements between public and private interests. During the first phase, the general nature of the project is defined and the development entity organized. During the second phase, economic, environmental, financial, social, political, and regulatory factors are evaluated in detail. This analysis leads to a specific strategy for development and design. During the third phase, the necessary agreements and commitments for construction and managing the project are drafted, negotiated, and approved by the various parties involved in the process.

The predevelopment stage ends when all of the project characteristics are firmly defined. This means specification of the site, building size and configuration, space users, major tenants and/or operations, public and private shares of development costs, sources of financial support, and the composition of the development entity. During the predevelopment phase it is essential to continually reevaluate the development concept and refine the building program in light of changing circumstances, new information, and clearer projections.

Although the public sector involvement in waterfront projects varies, the development process is basically the same. Waterfront development projects proceed in three stages that include five basic steps:

Predevelopment.

- project planning and initiation (those actions that lead to an idea for a project and the subsequent steps toward implementation);
- project analysis (feasibility evaluation and preliminary design);
- project packaging (obtaining the formal agreements, decisions, and approvals required to proceed with implementation and construction of the project).

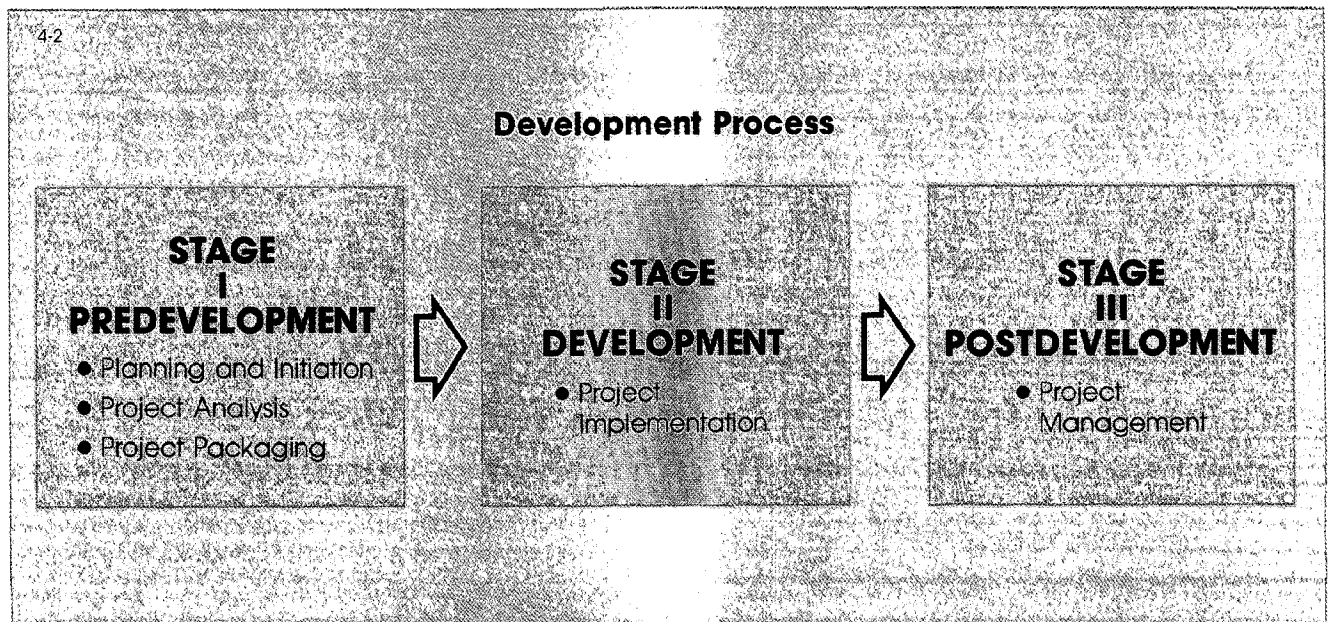
Development.

- project implementation (financing, leasing, design, and construction).

Postdevelopment.

- project management (management and maintenance of the project).

It should be noted that this sequence is a simplification of an enormously complex process. In actuality, the five fundamental steps are not necessarily discrete and may merge or overlap in time. Furthermore, each step represents specific actions and decisions that are inevitably influenced by a variety of unique circumstances.



Given the time, range, and cost of activities involved, the predevelopment stage is without a doubt the most critical part of the entire waterfront development process. The importance of detailed predevelopment planning is magnified greatly by the special physical characteristics of waterfront sites and the complex jurisdictional structure typically governing urban waterfront areas. Without careful research and comprehensive analysis the development potential of a waterfront site may not be fully realized, or the motivation might not be sufficiently credible to induce all of the necessary government actions.

Project Planning and Initiation

The basic initial activities in the predevelopment stage are to establish a development entity, to analyze basic economic and physical conditions, and to formulate a general design and development strategy. The objective is to create a development organization and approach that will effectively respond to the unique development opportunity and produce a viable project. The general planning and feasibility studies done at this time shape the profile of the development project and provide a basis for the more detailed studies required later on.

The Development Entity

The composition of a development entity inevitably varies from city to city depending upon the nature of public and private leadership, specific shoreline characteristics, the financial requirements for predevelopment planning and project implementation, legal and political constraints, and the individuals and organizations having a special interest or involvement in the use of a city's waterfront. The development entity can be either an association of participants from the public sector, an organization formed by private enterprise, or an entity composed of both public and private interests.

Public or quasi-public development organizations are empowered to participate in development projects to achieve public objectives—perhaps to revitalize an underutilized waterfront district or to encourage the preservation of structures in an historic area. Public development entities can use public funds to finance waterfront development projects and the power of eminent domain to acquire land.

While public development entities offer certain advantages, waterfront development projects have also resulted from private developers responding to market incentives with little participation by the public sector. The development entity is commonly composed of local business leaders concerned about generating commercial activity or investors speculating on the potential value of waterfront land. Active participants frequently include landowners wanting to redevelop their properties or businesses needing new or renovated spaces.



4-3 Harbourfront in Toronto is an example of a waterfront project that combines public and private development.

Although many urban waterfront projects have been developed exclusively by public sector or private sector organizations, the type of development entity frequently best suited to deal with waterfront areas is composed of both public and private interests. While they remain essentially separate, these interests agree contractually to perform services, provide funds, or make commitments to build facilities. Harbourfront in Toronto, Ontario, is an excellent example: the public sector is investing \$27.5 million in site and infrastructure improvements required to support \$200 million in private development.¹

There are several different forms of public/private development entities. The key is to tailor the partnership in a way that is responsive to the unique combination of public and private interests and is capable of resolving waterfront development problems. The public sector often takes the lead in stimulating private participation because it has the necessary management responsibility but lacks the capital resources to initiate development.

Almost all urban waterfront development projects have been initiated by one of the following types of development entities:

- long-term property owners who, as a result of their knowledge of the market and conditions affecting their own property, recognize an opportunity for development and pursue it, either individually or by joining with a professional developer;

¹ "Harbourfront: A Look at the Future," (Toronto, Ontario: Harbourfront Corporation, October 1980), page. 2.



4-4 Harbor Plaza, located near downtown Stamford, Connecticut, consists of three five-story office buildings containing 650,000 square feet of space.

- major space users such as corporations, hotel chains, or retail and restaurant operations requiring space in a given area who work through professional developers, act as their own developer, or develop space in partnership with a professional developer;
- public agencies such as development authorities or port commissioners;
- for-profit partnerships or corporations composed of entrepreneurs or local corporations who use investor equity to develop projects;
- local nonprofit, tax-exempt development corporations, either privately, publicly, or jointly funded and governed.

Property owners sometimes initiate waterfront development projects because they wish to maximize the value of their properties or because they want to invest in development without selling the property and paying capital gains taxes on it. In contributing part or all of the development site, the landowner becomes a key participant in the project.

A case in point is the Freemason Harbour project in Norfolk, Virginia. In 1973, the Norfolk Redevelopment and Housing Authority (NRHA) was preparing a neighborhood development plan that included portions of the central city waterfront. At about the same time, representatives from Chessie Resources, a subsidiary of the Chessie Railroad, expressed interest in redeveloping its waterfront properties. Originally, Chessie wanted to develop the site on its own, but the tremendous costs involved in providing the necessary public parking, street improvements, and bulkheading made it advantageous to work with the NRHA. The authority and the railroad agreed to proceed as a joint venture and divided the cost of predevelopment studies and other activities.

Space users—offices, hotel managers, and cultural and recreational facility operators—also initiate development projects. In some cases the business is water-related and a shoreline location improves operation. In many instances, waterfront sites are selected because the amenities offered by the shoreline setting provide the business with a competitive advantage in the marketplace or an image in the community. Thus, companies such as banks and insurance firms place a high value on the exposure and prestige that can accompany an urban waterfront location. These project initiators usually enter into lease agreements with developers or contract with developers to have the space constructed.

Harbor Plaza, located near downtown Stamford, Connecticut, is a good example of how major space users generate waterfront development. Constructed by the Collins Development Corporation at a cost of \$80 million, the project consists of three five-story buildings totalling 650,000 square feet. The site offers spectacular panoramic views of Stamford Harbor and Long Island Sound. This attribute certainly helped in convincing the Continental Group, Inc., to locate their world headquarters at Harbor Plaza. The company signed a 20-year lease for 500,000 square feet of office space.

Local governments, through various public agencies such as development authorities and port commissioners, can take the initiative to stimulate waterfront development. The type of government involvement varies from programs designed to actively stimulate project development, through direct assistance to private developers, to policies that passively encourage development by indirectly supporting private investment. The role depends primarily on the need for development and the need for public intervention in the private market. While public agencies can be relatively passive when development requires only the usual planning and management of municipal responsibilities, urban waterfront development is rarely limited to this function.

Public agencies can provide a more positive climate for investment in urban waterfronts by taking an active role to facilitate development. Some cities have successfully encouraged waterfront development by paying for some front-end planning, by providing public improvements, and by implementing zoning incentives and regulatory revisions.

Many cities have taken the lead in generating waterfront development projects. Depending on the circumstances, local government actions range from land assembly and writing down the cost of sites to acquiring, restoring, and leasing buildings for private use. Direct public assistance is justified if development of the waterfront is intended to enhance recreational opportunities or be a catalyst for urban revitalization.

Profit-making development entities are the primary instigators of urban development projects. The entities are traditionally partnerships or corporations composed of entrepreneurs or corporations who use investor equity to develop projects. Although in some cases private developers and investors have been hesitant to pursue urban waterfront development opportunities because of the unusually high risks involved, they, nevertheless have initiated waterfront projects in cities throughout North America.

A professional developer's primary job is to combine the technical and financial resources needed to successfully implement a project. In organizing the development entity, the developer's objective is to blend technical expertise and detailed knowledge of local conditions with strong management capabilities. The development team may be made up of professionals from a number of organizations but must have strong central leadership. Since urban waterfronts have special physical characteristics developers usually contract for the technical capabilities required to develop a site. Specialists with experience in waterfront development may be asked to handle market and financial feasibility studies, leasing, engineering, design, marketing, and property management. Few private developers maintain in-house technical staffs to perform all of these tasks. In either case, developers maintain close contact with real estate brokers and major landowners who are familiar with waterfront properties which have the potential for development. Developers also maintain close contact

with sources of equity and mortgage money. With direct access to this type of information, the private developer has a finger on the pulse of the real estate development industry and is the most likely candidate to initiate waterfront projects.

Investors seldom elect to initiate waterfront development projects. Only when other investment opportunities are not available or when those that are available do not meet their particular requirements do investors take the lead in predevelopment planning. Development projects compete for investment equity and available projects may be priced to yield inadequate returns for the investor. If this is the case, then an investor will either choose to make investments in alternative markets, initiate a project in partnership with an experienced developer, or initiate a project on his own. On occasion, banks and insurance companies, which provide long-term financing of real estate development as part of their business, use their knowledge of real estate to initiate projects for their own investment account.

The Pickering Wharf project in Salem, Massachusetts, is the result of investor interest in a particular waterfront area. The mixed-use project is a joint venture with the Salem Five Cent Savings Bank, a primary participant. The bank's participation in the development, as 50 percent owner, added credibility as well as financial stability to the development entity.



4-5 Investor interest in a particular waterfront area led to the redevelopment of Pickering Wharf in Salem, Massachusetts.

The Laclede's Landing Redevelopment Corporation in St. Louis, Missouri, illustrates a somewhat different approach. In 1974, the Landing was 75 percent vacant, populated by only a few small companies. Late that year, a group of businessmen, property owners in the Landing, and local government officials met to discuss how the Landing could be redeveloped. A new approach was formulated allowing the Landing to be redeveloped as a large-scale mixed-use project involving a number of owners. This concept called for the formation of a for-profit redevelopment corporation half owned by property owners and half owned by members of the business, financial, and institutional community. The corporation was formed under Chapter 353 of the Urban Redevelopment Law of the state of Missouri and



4-6 The redevelopment of Laclede's Landing in St. Louis is being directed by a for-profit redevelopment corporation.

has the ability to grant property tax relief to individual property owners as a redevelopment incentive. The Laclede's Landing Redevelopment Corporation is now in the seventh year of the development program. Over \$38 million has been committed by investors to acquire and rehabilitate 30 buildings. When completed, the project will consist of 45 rehabilitated buildings containing one million square feet and another one million square feet of new construction.

The nonprofit development corporation is another vehicle that can involve local public and private leadership in waterfront development. Corporations shield both sectors from many of the liabilities and risks that may be incurred during project initiation and development. By creating a separate corporate entity the coordination of both public and private resources is much less complicated and difficult. This approach has a number of other advantages:

- independence from city government: Private corporations are not restrained by limitations often imposed on public agencies—lengthy reviews, red tape, restrictions on operations, and uncertain budgets.
- expansion of public powers: Private institutions can acquire property and finance real estate ventures using procedures and techniques for negotiating, contracting, and financing that would not be permissible for a public agency, and they are free to employ professional expertise without lengthy hiring processes.
- privacy of negotiation: The sale or lease of property, including public property, technical services, and construction contracts, can be negotiated without continual public scrutiny or restrictive bidding procedures.

Local nonprofit development corporations can be either privately, publicly, or jointly funded and governed. Public corporations, in addition to the general advantages of corporate status, have important powers that can be used to initiate waterfront projects: the power of eminent domain, the power to sell tax-exempt revenue bonds, the right to receive revenues from the sale or lease of property, and the authority to levy property taxes, special assessments, or fees for specific public improvements. With a separate nonprofit development corporation, several previously dispersed management functions are centralized under one organization. This situation greatly increases a city's ability to coordinate public and private actions and respond to the jurisdictional complexities of waterfront areas.

Potential Development Approaches

From the individuals or organizations interested in waterfront development an entity is selected or formed to undertake actual planning and development of the project. The development entity must be meticulously constructed to suit the particular requirements of the project in the specific conditions of its location. While it is true that the development entity will differ for almost

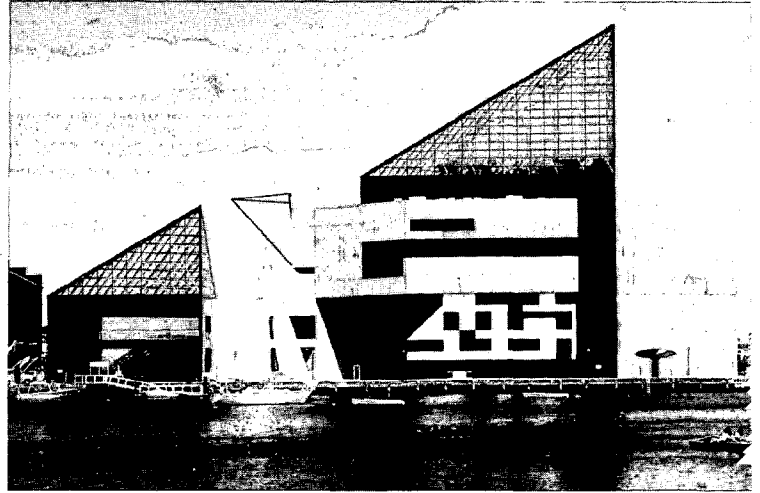
every waterfront project, the variation reflects the tremendous importance of assembling the proper mix of interests and expertise to develop a project. Without an organization that is finely tuned to the special circumstances associated with waterfront development, a project may fail in spite of its other commendable attributes.

In a strong market, private developers and investors can proceed with development without soliciting public contributions or special assistance. Having selected a project that can be fully supported by an existing market, the private sector may elect not to seek public involvement beyond the usual regulatory requirements. Although many waterfront projects have been privately implemented without direct public involvement, this approach remains the exception rather than the rule for waterfront development, the reason being that within a strong urban market, waterfront sites must compete with other city locations for new development. Unless there is a tremendous demand for some type of water-dependent use, the benefits associated with locating by the water's edge may not outweigh the additional costs involved with waterfront development. As a result, public sector involvement often occurs even within a city with a strong development market in order to make waterfront sites competitive with other city locations.

For a development project that is to combine the public and private sectors, there are three alternative approaches: A private development entity can be responsible for overall project development. A development entity that directly combines public and private development under the terms of a legally binding joint venture agreement can direct project development. A public development entity can manage project development and subsequently involve the private sector. Of the three approaches, the last one has been used the most often to develop urban waterfront projects. It is a more conventional approach: the public sector alone carries out predevelopment to the point where it offers a specific waterfront site on the market for development. This approach has been employed successfully in the development of large-scale waterfront projects such as Harbourfront in Toronto, the Embarcadero in San Diego, and Baltimore's Inner Harbor.

The tremendous success of these three waterfront projects clearly demonstrates that public agencies need to be cautious about proceeding too far before involving the private sector. If public improvements are not compatible with private sector requirements or unrealistic constraints are written into a request for development proposals, then the waterfront site may be unattractive to potential private developers. It is desirable to have private sector experts in financing and marketing on hand to ensure that the public sector expectations are reasonable.

Photo credit: Greg Pease/Baltimore



4-7 The National Aquarium has been a valuable addition to Baltimore's Inner Harbor.

Public implementation of waterfront development without direct private involvement usually occurs when public entities construct buildings or facilities for their own use. Convention centers, aquariums, public office buildings, parks, and public marinas are examples of such projects. The only potential private involvement comes if the local government hires a private architect and retains a contractor to design and construct the facility. Funding comes directly from public monies or from a publicly secured source.

Typically, urban waterfront development involves some type of public/private partnership. In recent years a few local governments have emerged as entrepreneurial partners in waterfront projects by adopting a more business-oriented stance toward development and assuming a direct share of the risks and rewards in development projects. This type of aggressive approach necessitates an agreement between public and private sectors very early in the predevelopment process.

The willingness of the public sector to enter into sophisticated arrangements with the private sector is primarily the result of recognizing that waterfront redevelopment ultimately requires the attraction of continuing private investment to be successful. The special physical and institutional constraints to waterfront development can be overcome by public assistance, but the continued viability of the waterfront cannot be supported by public assistance alone. Private market forces simply cannot be left out.

Once the decision has been made to work with a private developer, the public sector should solicit its participation early in the predevelopment stage. Early selection of a development team is especially important for a high-risk project in a poor market because the decisions made during predevelopment affect the success of the project. For the developer, early involvement ensures coordination and proper management of a complex process and provides lead time to test the local market. For the public sector, it means that the initial concept and later evaluations and refinement are based on informed and experienced judgment. By encouraging participation and competition, a developer can be selected after technical studies are completed and the development agreement formulated, and the public sector can be assured that decisions are based on realistic appraisals of financial feasibility. When developers are not formally involved early in the process they should at least be approached for consultation and advice.

There are several other reasons for involving developers early in the predevelopment stage of a project. For one, developers will have ample opportunity to attract prospective tenants to the project, thus making the proposal more financially secure. Secondly, the direct involvement of developers with project conception and refinement provides a balance between creativity and financial practicality. And finally, developers are in a position to supply reliable projected cost estimates and operating budgets for various elements of the project.

Despite these important advantages, this early participation in a public/private project may also create a few problems. For instance, from the viewpoint of the developer, entering a partnership with a public entity usually means greater risks and longer lead times for project financing and construction. A developer normally spends as little front-end money as possible before securing short- and long-term financing. Public entities, however, often conduct long, drawn out feasibility studies and negotiations before committing to a specific approach and financial participation. To overcome this conflict in operating styles, many local governments have picked up some of the private costs incurred during predevelopment.

Project Proposal

Once the need for a waterfront project has been identified and the development entity organized, the participants must agree on a general development concept for the project. This initial proposal should embody the goals and objectives of the development entity as well as reflect the development potential of a particular urban waterfront. Since this concept will begin to define several of the general characteristics of the

project, it is important to examine a number of factors at this time. Basic studies should be performed to determine site suitability, the scale of the project in terms of physical size and equity investment, probable capital costs, and potential sources of financing. Preliminary planning and design activities should be initiated to define the project's characteristics for later evaluation and refinement.

In choosing an available site, the development team must be aware of the potential limitations of any particular site. Public or private landowners may actively promote the use of their properties or an existing user may wish to relocate, thus making the site available. However, it is not uncommon for waterfront property owners to promote potential sites that require extensive preparation for development and, in fact, may be unsuitable for a major development project because of physical constraints or use restrictions. In many cities, waterfront sites are offered for development as part of an overall urban redevelopment program administered by a public agency. These sites may carry stipulations designed to achieve a particular environmental or social objective that is not realistically attainable under existing market conditions.

Any false assumptions made by the development entity during the site selection process can prove to be very costly later on. To judge the merits of a waterfront site, the development team should compare it with alternative sites in terms of the following criteria:

- general location with respect to urban centers of activity and major transportation patterns;
- cost of land acquisition, clearance, and site preparation;
- potential difficulties in assembly—multiple ownerships, land with title problems, and dislocation of existing businesses and residences;
- special use restrictions or regulatory controls;
- potential compatibility of surrounding land uses;
- requirements for supporting public improvements such as access roads, public piers, bulkheads, parking facilities, or utility systems;
- unusual site conditions—either land- or water-related—that can provide special opportunities or pose problems for development;
- the size and shape of the site;
- the property owners' willingness to sell or lease the property or to participate financially in development or as a tenant.

When public agencies analyze sites in conjunction with waterfront revitalization programs, the sites must be evaluated in terms of the public objectives they might serve—possibly generating new activity in a declining area of the central city, providing a public recreational opportunity, or improving public access to the water's edge. Site evaluations by public agencies, however, should be supplemented by private sector expertise to formulate a realistic judgment regarding development feasibility.

Site evaluation usually results in a single site's identification for further investigation. Occasionally one or two other sites will be considered viable alternatives through conceptualization, and occasionally the selected site will have options for adding or subtracting adjacent parcels, which will be evaluated as the project is analyzed and defined. Narrowing the options to a single best site reduces the need for multiple analysis and design studies.

The initial analysis of opportunities in the private market and potential public contributions generally determine a waterfront project's potential uses. Obviously the preliminary analysis of economic opportunities does not have the scope of detailed market studies. Nevertheless, it should provide a sound basis for making some fundamental decisions regarding the project's scale, type and mix of uses, and space allocation. By conducting interviews with knowledgeable public officials and private individuals who can identify possible tenants or uses for the project and reviewing available data and studies, the development entity can formulate a general picture of the market opportunities in terms of land and water use. For each project use under consideration, information and data should be collected concerning the current space on the market, the lease terms of the space, the availability of vacant prime space, preliminary identification of potential major tenants, and the level of support for financing and constructing a project and the potential for a waterfront location to enhance the value of the use. The developer should also examine the geographic variation of the market by looking at regional characteristics, expressed in terms of population, income, expenditures, and primary competition.

Based on this preliminary evaluation of the project site and market, the development entity is in a position to consider the potential mix of project uses. The assessment should be a comprehensive review of the potential for integrating land and water uses. In determining the project components, extreme care should be taken to investigate the special regulatory implications of selecting a certain use for a waterfront location.

In Tacoma, Washington, for example, the decision to include marinas in the redevelopment of the City Waterway created the need for extending state harbor lines out from the shoreline. After about a year and a half of discussions, applications, and hearings, the state approved extension of the harbor lines for about half a mile on each side of the Waterway, opening the way for marina development. Nothing could be built over the water until the state created these new leasable areas. The existence of a dilapidated marina on the site of the Palmer Point project in Greenwich, Connecticut, provided the developer with a special opportunity. Since the marina was already in place and simply required upgrading, it was not subject to the numerous regulations and permits that generally pertain to marina

development. This factor greatly enhanced the feasibility of the project. These two contrasting situations show the impact of regulations on the development process.

During this embryonic stage of project development, the development entity must identify the potential spectrum of public sector initiatives that could aid the project. In many North American cities government participation in waterfront development has been extremely valuable if not essential. City governments have recognized that waterfront areas represent major community assets demanding special public sector involvement. As part of the preliminary economic analyses, the developer should investigate opportunities for local, state, and federal participation in the project in terms of providing a share of the physical components, financial support, and technical assistance.



4-8 Marina development in Tacoma, Washington's City Waterway could not take place until the state government had approved an extension of the state harbor lines.

In assessing the public contribution to a project, the development entity must evaluate the public sector's commitment to waterfront development. The importance of this factor cannot be overemphasized, particularly when development phasing may extend for several years. Both the strength and durability of the commitment should be carefully evaluated. If public sector support is strong but subject to change with every election year, then the value of the support may be questionable. A review of the records documenting involvement in previous projects should reveal the reliability of the public sector to cooperate and respond positively to unforeseen problems and conflicts. If no other waterfront projects have been recently developed, then a developer should at least review public plans and proposals to gain an understanding of the public sector attitude toward waterfront development.

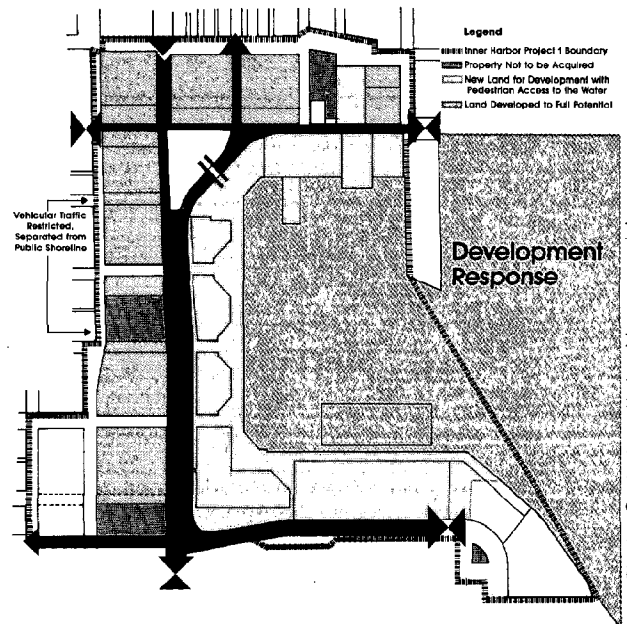
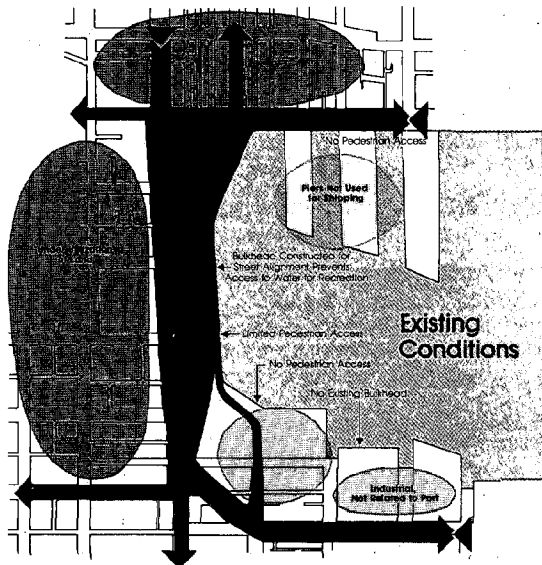
The design of a waterfront project is not an isolated activity that takes place as one step in the development process. Rather, it begins with formulating the project proposal and continues throughout development. During predevelopment, design activities range from initial site evaluation to the preparation of preliminary plans detailed enough for financial analysis of the project. During this initial effort, alternative sites can also be analyzed.

The initial design analysis begins with an investigation of the site and the factors influencing its condition. Waterfronts are dynamic environments and many interrelated variables must be carefully assessed. The objective is to determine the development's feasibility and suitability for the site within the context of changing environmental characteristics. The preliminary design effort focuses on major parameters such as the size and combination of project uses instead of design details.

The analysis should include a complete reconnaissance of the site and its surrounding environment, interviews with local officials and citizens, and a review of existing plans and reports pertaining to the site. When completed, the investigation should reveal the following:

- neighboring land and water uses;
- access to the site by highway or railroad;
- shoreline configuration and erosion potential;
- water resource characteristics (water quality, water depth, flow dynamics, flood potential, etc.);
- soil and subsoil conditions and depth of bedrock;
- extreme climatic variations;
- exceptional views of and from the site;
- pedestrian circulation;
- the relationship at ground level with surrounding buildings and open spaces;
- the type and location of utility services;
- easements, covenants, and deed restrictions;
- distinctive natural or cultural features.

Furthermore, an attempt should be made to learn about the heritage of the study area and previous uses of the site. The site reconnaissance by all means should



4-9 The basic site investigation was a fundamental step in the development of Baltimore's Inner Harbor.

Source: Charles Center-Inner Harbor Management, Inc.

include a tour of the waterfront by boat. Surprisingly enough, designers sometimes work on urban waterfront projects without ever viewing the sites from the water. This omission defeats the general purpose of the site analysis.

It is helpful to document the observations and findings made during site analysis on a base drawing or map of the project area. Graphic presentations of this information form a composite picture of the problems and opportunities influencing project development.

Following the site and vicinity analysis, the design group prepares several conceptual site development designs based on the initial findings of the economic and site analysis. These reflect responses to questions of land and water use, density, building type, relationship between activities, land assembly, open space and pedestrian movement, vehicular circulation and parking, and utility systems.

During the preliminary design of a waterfront project it is advisable to explore the development cost and time implications of basic alternative design concepts. The design group should focus on practical solutions to satisfy functional and aesthetic objectives. If a design alternative is going to dramatically change the cost or time period required to implement the project then its merits should be viewed in relationship to those changes.

Given the costs of preparing permit applications and the potential delays associated with the review and approval process, it is frequently a good design strategy to seek a development concept that will avoid any modification of the water resource. This approach eliminates the need for dredge and fill permits, harbor line extensions, and impact mitigation measures. In the redevelopment of Baltimore's Inner Harbor the decision was made not to request the Army Corps of Engineers to periodically dredge the harbor. The decision was based on two factors: the existing water depth was sufficient to allow for the planned recreational uses, and the involvement of the Corps of Engineers would have significantly delayed the shoreline development schedule.

The design group and the development entity work closely together to establish a relationship between the project's marketability and its physical form. The goal is to produce an initial proposal that expresses the character and major components of a project that can be developed over time and will attract both tenants and patrons for the proposed uses. The team examines the degree to which shoreline conditions, water quality and flow dynamics, parking and access requirements, floodplain and building height restrictions, and historic designations affect each proposed use. The conclusions generated by this analysis are correlated with an interpretation of the results of initial marketability studies to obtain fairly specific building envelopes and deter-

mine the intensity of water uses. This initial architectural interpretation should not be carried so far into the design process, however, that it becomes insensitive to the financial advantages of staged development that might be identified later.

The initial design investigation, the alternative programs for site development, and their associated implications provide the basis for creating a development strategy. The preliminary design effort serves as a vehicle for testing the site's capacity to accommodate alternative proposals for development and reveals the limits that may be imposed on a project. If site limitations unreasonably confine development, the development entity can investigate alternatives and may, in fact, discover new opportunities for development. The initial definition of pedestrian and vehicular access, dredging and bulkheading requirements, and related site improvements may show the need for greater development to support the project costs or a change in the activities to reduce development costs.

Formulating a Development Strategy

After initial economic and design studies have delineated several development options, the development entity must formulate a preliminary conception of the project or projects worth investigating in greater detail. This will establish a framework for creating a development strategy. For example, a single project concept may immediately appear superior and simply require further detailing and evaluation. On the other hand, the project concept may have several possible variations meriting further consideration and study.

It is to the developer's benefit to limit as much as possible the number of options for further study. Restricting the alternatives not only reduces time and expense of subsequent analyses, but also simplifies the relationships among the interests involved in the project. Development options, however, should not be rejected without careful study. Predevelopment is a time when creativity and innovation can be easily integrated into a project and the developer should recognize this and be receptive to new ideas. Furthermore, large-scale projects are usually more complex with a greater number of tradeoffs to consider.

The development strategy should contain the following elements:

- a concise statement of the project's principal function;
- a development program that lists the components of the project, their approximate square footage, probable public and private responsibility, possible staging, and potential major tenants;

- schematic designs that identify the boundaries of the site and illustrate specific relationships to adjoining properties and existing water dependent uses;
- preliminary cost estimates, based on sizes of uses multiplied by unit costs, plus any unusual cost elements;
- a list of all regulatory requirements and a schedule of target dates for obtaining approvals and permits;
- an estimate of income and expenses, debt service, and equity return for each participant and the probable funding sources for each project element;
- a definition of the type and amount of public sector participation in the project;
- a general plan and schedule for proceeding with the project, including target dates for completion of detailed planning and design, construction and occupancy, and critical decisions to be made.

This information is a preliminary, general statement rather than a highly detailed description. Its credibility is established by the results of analyses supporting the strategy's feasibility. It should contain enough information to provide a basis for completing predevelopment activities, yet be kept deliberately flexible in order to allow for further evaluation and refinement. The objective at this juncture is to define the options that can be molded into a specific project and development program.

Project Analysis

The second phase of predevelopment is devoted to the intensive analysis, evaluation, and refinement of the development strategies. The development factors identified and examined during project initiation must be thoroughly investigated and evaluated in terms of both their immediate influence on project feasibility and their susceptibility to change in the future. Three major studies—a market analysis, planning and design analysis, and a financial analysis—are undertaken to make this evaluation. Consultants with experience in waterfront development are usually called on to conduct these studies.

Market Analysis

At this point, the development entity must study general market conditions and the demand for specific types of activities the project could satisfy. Analyses of regional population trends and characteristics, employment projections, distribution patterns, and data about disposable income supply clues to the general market. An analysis of the volume and origin/destination characteristics of existing water traffic will begin to define the general market for various water dependent uses. Specific market studies determine the demand for a

highly specialized water-related use such as an aquarium or ferry, as well as the magnitude of demand for residential, retail, and office space. These studies should not only estimate current demand, but also include a projection of future market expectations as well as determine the market premiums a waterfront location could generate for each use. This information will help determine the timing and phasing of the project as well as the potential mix of uses.

The method of evaluating potential markets for specific uses varies among developers. While general agreement exists concerning which factors to examine, there are differing opinions about the relative significance of each indicator. To avoid misinterpreting market information, it is sometimes best to rely upon consultants with local experience.

The first step in evaluating market demand is to review the regulatory and legal controls relating to waterfront development. Federal, state, and local laws and policies have a major impact on waterfront use and may encourage or discourage certain types of development. If, for example, regulations do not permit office or residential development under any circumstances, then the market analysis should be altered accordingly. The market analysis should be structured to reflect other regulatory and legal conditions. In many cities, waterfront projects are approved for development only if a water-related activity is included as part of a mixed-use concept. If the required use is either nonrevenue producing (fishing pier, waterfront park, docking facility), or not supported by market projections, then the overall project feasibility will depend on whether or not the markets for the other uses are strong enough or the premium associated with a waterfront location high enough to offset the cost of providing the water-related use. Furthermore, some jurisdictions have placed a moratorium on development that requires changing the configuration of the shoreline. This type of restriction creates a pent-up demand for marina space and docking facilities that a developer may or may not be able to take advantage of. Whatever the circumstances, it is extremely important for the market analysis to account for the impact of regulatory and development controls.

There are a number of factors that are usually examined to determine the market for traditional urban uses. The markets for retail development, office development, hotel development, and residential development are commonly tested by studying certain basic indicators. These factors are:

Retail Development.

- annual growth rate of retail sales in the region and a comparison of downtown and suburban locations;
- the relationship of the regional growth rate of retail sales and population;
- the waterfront area's historic share of regional retail sales;

- trends in the type of retail activity in the downtown area—specialty retail outlets, personal services, or competition with regional and community shopping centers;
- total current and projected employment downtown, its geographic location relative to the waterfront, and the disposable income of downtown employees;
- survey of retail space existing, under construction, or planned for development in the next five years;
- the impact of publicly sponsored waterfront improvements;
- the existing mix of commercial activity in the waterfront area of the city.

Office Development.

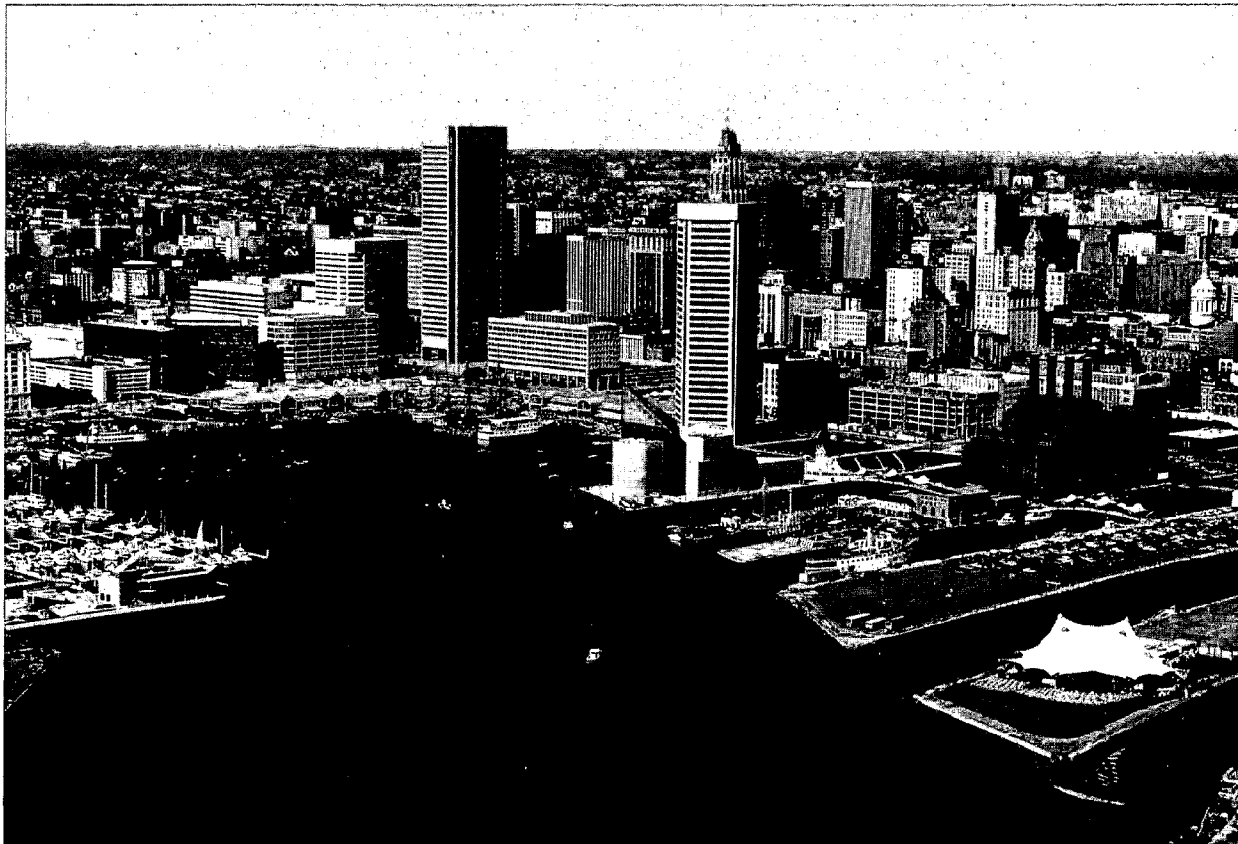
- survey of existing office space to determine total leasable square footage, amount of square footage occupied by primary and secondary tenants, and amount of vacant space;
- rent and lease terms of existing and future tenants;
- information about plans for future building renovation and office development;
- survey of firms likely to consider expansion or relocation and their present lease terms;
- current and projected trends in business functions.

Hotel Development.

- survey age of existing hotels, the total number of rooms, the annual occupancy rate, the average room rate, the yearly number of rooms sold, the annual gross income, and meeting room capacity;
- total air and rail passengers to and from city;
- trends in nonagricultural employment in the region;
- location of existing or planned convention facilities and hotel development.

Residential Development.

- existing employment levels by type of occupation and projected trends in industrial growth and employment distribution;
- disposable family income;
- age grouping, marital status, and family size of regional population;
- rate of population growth and household formation;
- market absorption rate for the past 10 years and existing vacancy rate;
- survey of existing and proposed housing stock.



4-10 Market synergy was an important factor in the development of Baltimore's Inner Harbor.

The market analysis of a mixed-use development concept is somewhat more complicated. It must take into account the market synergy created by combining three or more mutually supporting uses into one large-scale waterfront project. Market synergy alters the market potential of each individual use in two ways.² First of all, it provides on-site market support through the interplay of economic activity among project components. For example, a person in a mixed-use project (residential) may also work (office), shop (retail), and accommodate (hotel) visitors there. Secondly, it creates an improved market image and penetration. That is to say, the combination of multiple uses in an integrated development with special waterfront amenities creates a "special address" and thus enhances the marketability of all project components.

When waterfront areas are in need of full-scale revitalization the mixed-use concept is particularly appropriate because it produces the critical mass of development necessary to create an attraction and provides the full range of services and facilities necessary to support a variety of project uses. Some of the more successful large-scale waterfront redevelopment programs, such as Toronto's Harbourfront and Baltimore's Inner Harbor, have used the mixed-use concept. A mixed-use development magnifies the importance of project phasing and management.

Regardless of the development concept, the market analysis defines the range of possibilities for attracting activities and tenants to a project. The results, however, must be qualified to reflect the specific conditions of a waterfront location. The analysis may conclude, for example, that because the water is an amenity, the project will attract a larger share of the regional market than similar projects without this advantage. Or it might reveal that despite the amenities offered by a waterfront site, limited access to the property negatively affects the marketability of particular uses. The point is that for waterfront projects, conventional market studies must be finely tuned to account for the influences of various site characteristics. The analysis is valuable in two ways: it provides technical data the developer can use to select the specific project components, and it also adds a great deal of credibility to the proposal in negotiations with public and private participants in development.

Planning and Design Analysis

During this phase of predevelopment an intensive planning and design analysis is performed to test and refine the design concept and its alternatives. The objective of the analysis is to arrive at a schematic

design plan. In this respect, the design is not a highly polished plan or set of detailed drawings but rather an interim statement of planning and design decisions based on the in-depth analysis of specific factors.

Since this work takes place more or less concurrently with the detailed market analysis, significant findings made during the market study should be communicated to the design team. Likewise, the interim results of the planning and design analysis should be shared with the consultants conducting the market analysis. This interaction will allow the development team to assess the environmental, legal, and financial implications of each development option at the same time as it makes a market evaluation.

The planning and design analysis should begin with a general assessment of the environmental impacts produced by each development alternative. In most cases, the feasibility, cost, and timing of waterfront projects are significantly affected by environmental concerns. Just because a shoreline development site is in a highly urbanized, intensively used location, a developer cannot assume that the impacts of the project will be inconsequential. For waterfront developments, the most severe impacts frequently occur off-site and a few years after a project has been constructed.

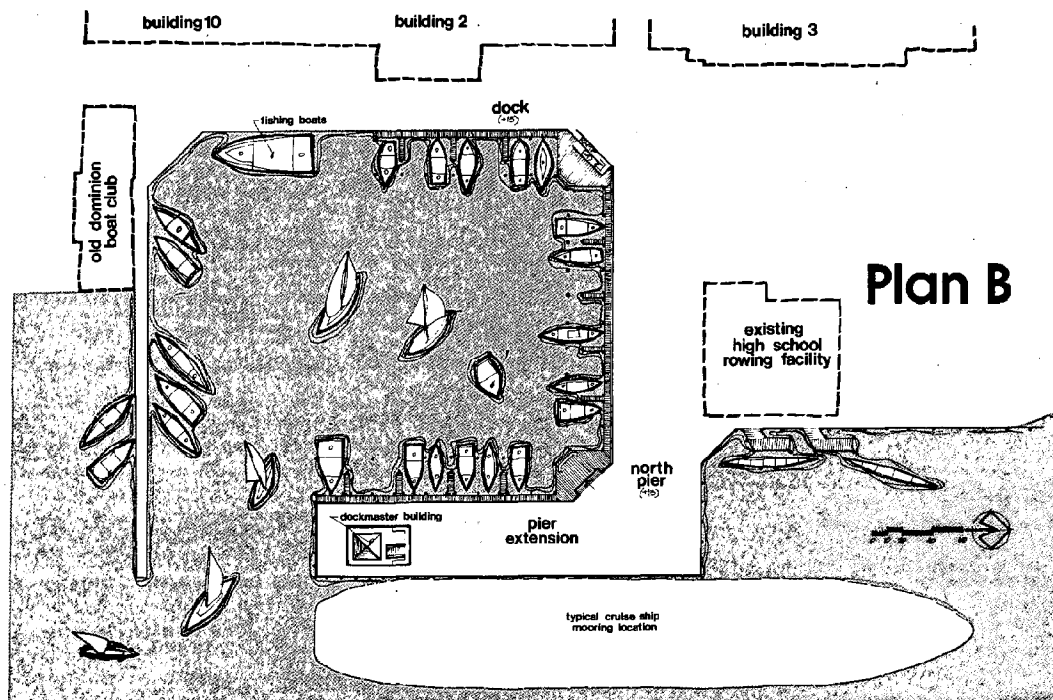
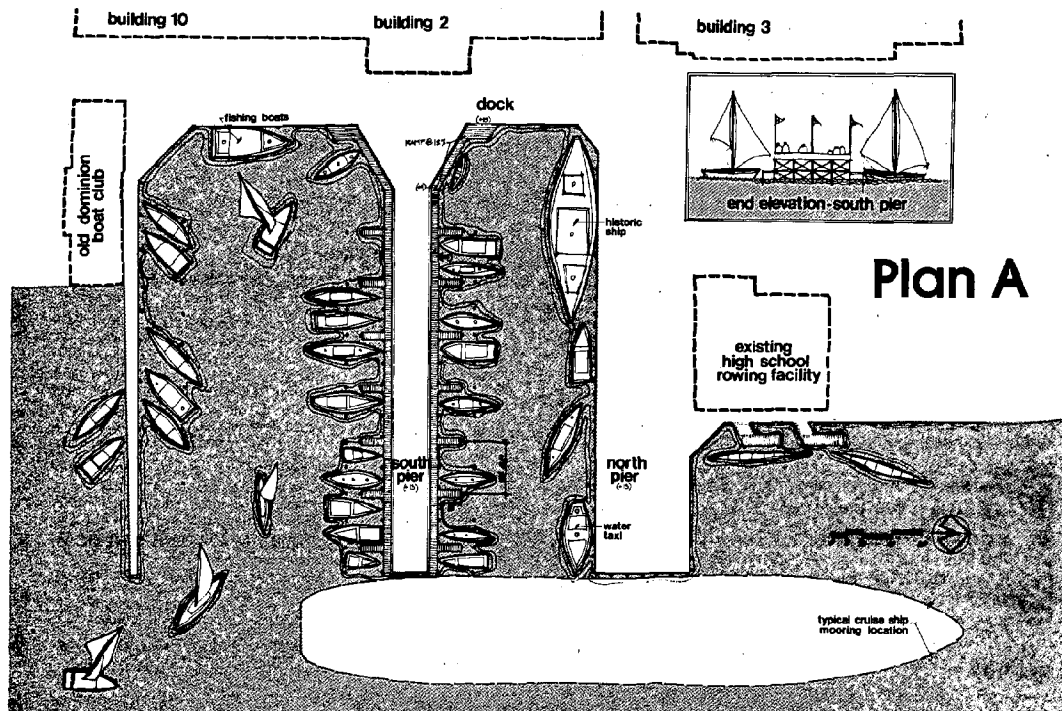
An environmental impact statement (EIS) may be required for a federally assisted project or in jurisdictions specifically requiring one. Preparing the report may entail special studies and could result in extended and expensive delays; therefore, the need for an EIS should be determined early to allow sufficient time for studies and reviews. In addition, all federal, state, and local laws and policies concerning waterfront areas should be reviewed to determine their influence on project feasibility.

Specialized planning and design studies conducted during this phase may include investigations of any potential problem areas identified by the initial site analysis or design study. Questions regarding such factors as dredge and fill requirements, the load-bearing capacity of existing pier structures, drainage conditions, traffic and parking demands, and special climatic conditions must be answered to determine the feasibility of a preliminary design. These studies should be structured to assess both the immediate impact and the long-range implications of each factor.

Engineering studies of existing piers, docks, and water resource dynamics are often conducted at this time to quantify existing and future conditions. The importance of this information cannot be overemphasized. In Alexandria, Virginia, for example, a study was made of a city-owned industrial site located along the Potomac River to provide the technical analysis needed to complete a comprehensive design plan for development of the site.³ Among its many findings, the report stated that one pier was in generally good condition but

² Robert E. Witherspoon, Jon P. Abbett, and Robert M. Gladstone, *Mixed-Use Developments: New Ways of Land Use* (Washington, D.C.: ULI—the Urban Land Institute, 1976), page 74.

³ *Torpedo Plant Dock and Piers: Technical Analysis and Design Recommendations* (Alexandria, Virginia: City Department of Planning and Community Development, July 1979), page 28.



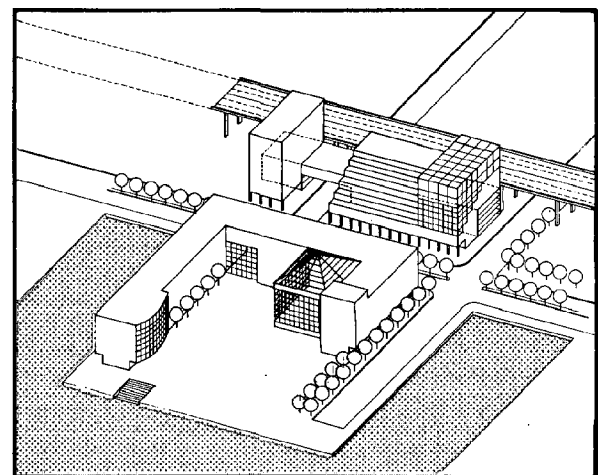
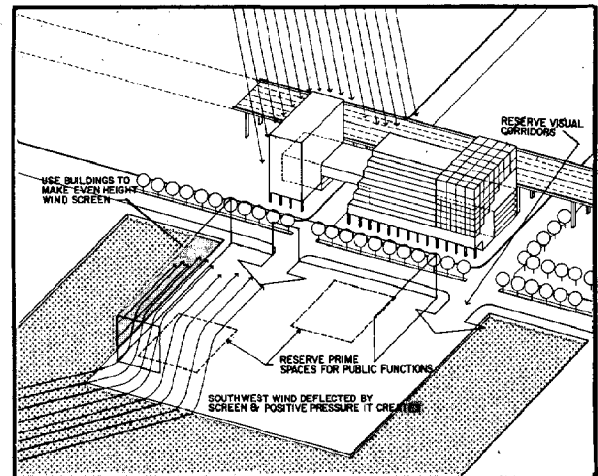
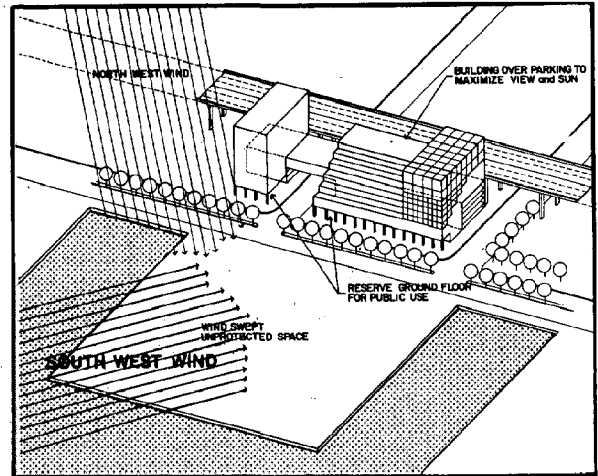
4-11 Two preliminary site designs were prepared for the development of a marina and docking facilities in Alexandria, Virginia.

another one needed a new superstructure, the dock needed minor repairs and rebuilding, and 8,000 cubic yards of silt would have to be dredged from the basin to provide a satisfactory water depth (10 feet) for use by small pleasure craft. Two preliminary site designs were prepared for the development of a marina and docking facilities to complement the total redevelopment of the Torpedo Plant complex (four buildings on a five-acre site, two constructed during World War I and two during World War II). The report estimated that the pier improvements and dredging called for in Plan A would cost \$1,667,000. If Plan B were implemented the cost would be \$1,881,000. In order for the developer of the Torpedo Plant complex to absorb these costs, the return from the redevelopment of the buildings must be high enough to satisfy this requirement.

Traffic and parking studies are frequently made to allow project designers to identify major access routes, available parking, and primary pedestrian routes within the existing transportation system. The key is to balance the activities in the project and the demand generated for access and parking with the capacity of the system. It should be noted that certain mixes of office, residential, shopping, and entertainment uses encourage the efficient use of access and parking because each use generates a peak demand at different times. Furthermore, with a large-scale, multiphase redevelopment program, sites marked for future development can be used as interim surface parking facilities to accommodate the initial demand for parking. Structured parking can be added later as the program nears completion. While many urban waterfront sites are accessible by alternative forms of transportation (bus, subway, ferry, bikeway), the extent to which these alternatives reduce the demand for automobile access and parking will depend on many secondary factors. Furthermore, requirements for public access to urban shorelines may significantly alter the type and location of the project's transportation elements.

A key element of the development plan for Laclede's Landing in St. Louis, Missouri, was a strategy to accommodate pedestrian and vehicular movement within the redevelopment district. This strategy, to be implemented on a phased basis over a five-year period, called for most of the vehicular parking to be located on the perimeter of the district with new construction required to contain some parking capacity for its proposed uses. Within Laclede's Landing the pedestrian was given first priority and the development plan stated which streets should be closed or partially closed to vehicular traffic to attain this development objective.

In some cases specialized studies are made of specific conditions or seasonal variations in the micro-climate of a waterfront site or area. Climatic conditions may dictate covered pedestrian spaces and pathways,



4-12 Response to climatic variations was one of the main principles guiding the design of Harbourfront in Toronto.

Source: Harbourfront Corporation, Toronto, Ontario, Canada.

affect the costs for heating and cooling, and require alternative building arrangements. These considerations should be made prior to selecting a final design.

Response to climate was one of the main principles in planning the development of Harbourfront in Toronto. While the city's summer climate is pleasant with fresh breezes from Lake Ontario, from November to May the weather can be very bleak and severe with the coldness made more extreme by icy winds. The development framework for the project articulates several design concepts to mitigate climatic impacts. Buildings, for example, should be arranged to shelter people from the westerly winds and contain features, such as covered walkways along the ground floors, which can be glass enclosed in winter and opened in summer.

Financial Analysis

Once the design and market studies have begun to narrow the project alternatives and provide more detailed information and data about project components and activities, it is possible for the development entity to prepare a preliminary estimate of development costs, refine the pro forma analysis, and identify public and private funding sources. The rough calculations made earlier can be refined based on better information and more exact data. Project cost estimates, equity and mortgage requirements, and public capital requirements can be calculated with the degree of certainty necessary to formulate a final project plan.

Cost estimates are made by determining the unit costs for each component of the project. The cost of a marina, for example, is calculated by estimating the cost of construction, building, materials, and equipment per boat slip. All cost estimates should be prepared by qualified cost estimators with waterfront development experience in the vicinity of the project site. Regional experience is very important in preparing cost estimates for waterfront projects because of the impacts environmental variables (climate, tidal and flow dynamics, soil and subsurface conditions) can have on engineering and construction techniques. Although this is a preliminary analysis, the estimates should be calculated within 10 percent of the final cost figures. Failure to do so will create problems either by producing a false sense of economic feasibility or constraining any change in the project that may increase costs.

The earlier estimates used to prepare the pro forma analysis should be refined at this point. The new pro forma evaluation should correspond with the more accurate project cost figures. The detailed pro forma analysis must be done when a preferred design and development program has been selected.

After the preliminary cost estimates are prepared, the development entity is in a position to consider funding sources for the project alternatives. Potential major tenants who can contribute to the basic financing structure and who will attract other tenants can be identified from the list prepared during project initiation.

For each development alternative, specific conditions should be defined. While it is usually not possible at this time to obtain a firm commitment from a major tenant, the developer must be certain that such space users can be attracted to the project alternatives. It would be senseless to consider an alternative calling for a major hotel tenant or marina operator if market studies cannot identify a potential candidate. Typically, each development option will influence the probability of attracting such a tenant. This relative probability is a significant factor in selecting a final development program and must be weighed against other project benefits.

Private sources of equity for each alternative are also evaluated at this time. Investors may wish to syndicate a for-profit group or enter into a limited partnership. The developer and major tenants may also contribute equity. Preliminary financial decisions must be reached for each critical element of project financing.

The development entity must also identify potential sources of public financing for each alternative. This can take two forms: either direct contributions of facilities or a percentage of overall development funding. Since many public objectives (improving shoreline access, enhancing recreational opportunities, rebuilding deteriorated urban facilities) can be integrated into a waterfront development project, there are typically excellent opportunities to secure public sector financing. For each potential source of public financial participation, however, the developer must examine the possible political problems which may exist.

In assessing the advantages and disadvantages of alternative funding arrangements, the developer should realize that financing requirements can change significantly as economic conditions, the money markets, and government policy change. If the developer is counting on certain circumstances to remain constant throughout the development process, then these assumptions must be articulated and objectively evaluated.

Preferred Design and Development Program

The development team at this point in predevelopment has determined the following information for each of the alternatives defined in the development strategy:

- site requirements, cost, and potential difficulties in acquiring property;
- a preliminary design portraying the project in two- and three-dimensional form;
- the potential advantages or disadvantages of the project in terms of regulatory, environmental, timing, and political issues;
- an assessment of the project's market, including the size and characteristics of the demand and the impact of the waterfront location on the demands for particular uses;
- a development program listing all components, land and water use relationships, and the general space allocations of the project;

- cost estimates for constructing and equipping the project described in the development program;
- a refined financial pro forma analysis;
- a preliminary definition of public and private financing sources and potential problems concerning them.

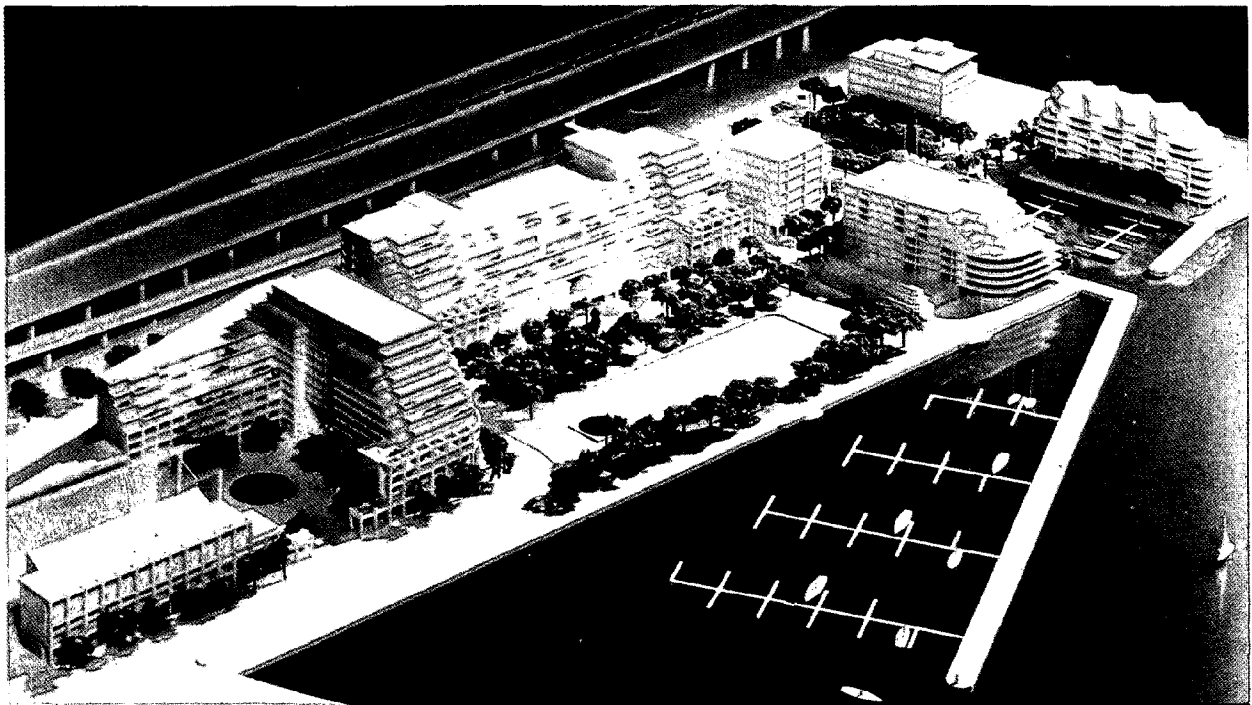
Based on a comprehensive evaluation of this information, the development team must define a preferred project. Because of the complexities involved in waterfront development, this decision should only be made after carefully studying the positive and negative implications of each alternative. In many cases this evaluation leads to the formation of a composite project from two or more alternatives.

The development team must also determine the degree of risk associated with each element of the preferred project and prepare a contingency approach to allow for future adjustments. This is absolutely essential for large-scale mixed-use projects that include major public facilities or require construction over several years. Thus, a project incorporating 100 luxury condominium units in an uncertain market should have an option for a smaller number of units that will be consistent with future market conditions. It is often necessary to reduce high risks and increase low yields by publicly funding parts of development components such as piers, bulkheads, and plazas. Furthermore, private uses that are marginally cost-effective (water taxis, entertainment establishments, exhibition space) can be rescheduled to later stages of development after the high-yield components are in operation.

While it is necessary to scrutinize each alternative in detail, selecting a preferred development program should not become painfully difficult or time-consuming. The objective is to reach agreement on a single project and to define that project in terms of its scope, financial feasibility, timing, and management. Once the final decision has been made, the development team is capable of preparing the final preliminary design, development schedules, and operating plan, cost estimates, a financial pro forma analysis, the financing program, and a cost/benefit analysis. These activities provide the framework for all subsequent project negotiations.

While financing and design issues may demand immediate attention, special care should be taken by the development entity not to overlook the importance of maintenance and management as a factor in selecting a preferred development program. Without a doubt, one of the most common deficiencies in waterfront development is a failure to estimate the need for postdevelopment operation and maintenance. Urban shorelines are subjected to corrosive environmental forces (wave action, high winds, saltwater, freeze/thaw cycles, and marine organisms) that can dramatically increase the operation and maintenance requirements of a development project. A marina basin, for example, may have to be dredged every five or 10 years depending on the expected siltation rate. Bulkheads and pilings may need replacement after a few severe storms.

Another reason why waterfront development generally has higher maintenance and operating costs is because



4-13 A model of the preferred design and development program for the Spadina Quay portion of Toronto's Harbourfront project.

the projects usually contain a large percentage of public areas and facilities. In many cities, public access to the waterfront is not simply permitted, it is actively encouraged. This commitment for public use must be matched by an equally strong commitment of public funds to maintain the facilities.

Operating funds, however, are difficult for local governments to provide consistently. For this reason, a municipality may elect to hire the private developer to maintain public areas in a joint development. This kind of arrangement has certain advantages: it is more economical because two management entities will not be necessary for the same site, and it avoids potentially uneven levels of maintenance or subsequent disagreements over quality of care. In addition, most developers prefer private sector responsibility of a joint project. Although a specific agreement is not negotiated at this stage, the feasibility of such an arrangement should be determined. Whatever the arrangement, the development team must identify operating and maintenance expenditures that will be required for all uses.

Given the final preliminary design, development schedule, and refined cost estimates, the development team must recalculate the costs for each component of the preferred project and the cumulative total project cost. If the project is a joint development, then the public capital program and public operating costs for public components are included. The completed cost estimate summarizes all private costs and public costs for the project.

The financial pro forma analysis and the cash flow analysis constitute the two most important tools for evaluating the financial merits of a project.⁴ The pro forma analysis combines estimates of all capital and operating costs and revenues to paint a financial picture of the entire project in operation. Its objective is to indicate the probability of a successful project by indicating expected income, operating expenses, and net operating income.

The analysis is a process of determining a project's financial feasibility. From a first cut it evolves through several refinements to an adopted pro forma analysis and budget for design and cost control. It is refined further after preliminary cost estimates until it is ultimately adopted and backed up by contracts. Preliminary pro forma analyses can be used to determine optimal financing conditions and to negotiate public contributions that will make the project financially possible.



4-14 Enhancing waterfront areas and providing public access to the shoreline generate economic returns that are difficult to quantify.

The pro forma analysis is best accomplished after cost estimates have been prepared and after basic assignments of responsibilities for construction and operation have been agreed upon. Most developers, however, insist on various degrees of pro forma analysis much earlier to evaluate alternatives.

The next, somewhat concurrent step in determining the feasibility and desirability of the preferred development project is the establishment of a financing program that identifies all requirements for private and public funding in each phase of development and operation. The program reflects the assumptions and findings of the pro forma analysis and development schedule. The principal purpose of the financing program in projects involving public/private partnerships is to reach a full understanding between the public and private participants about each party's financial obligations.

A cash flow analysis is based on the initial formulation of the financial program and evaluates its feasibility. The cash flow analysis defines cash requirements at any point during the life of the project. Its primary purpose is to test the project's capability to generate a sufficient return to make it a viable investment compared to other investment opportunities. The focus on investment over time is its essential difference from the pro forma analysis.

The cash flow analysis can also be considered a refinement of the pro forma analysis, representing a more comprehensive financial evaluation. It does not account for other reasons that a project may be desirable—for example, civic betterment or corporate image—but it does provide potential equity and long-term investors with an assurance that the project will stand on its own financial feet. It also provides a way to identify the need for greater front-end or long-term public participation.

⁴ For a more thorough discussion of pro forma financial analysis and discounted cash flow analysis, see David Sirota, *Essentials of Real Estate Investment* (Chicago: Real Estate Education Company, 1978); Lincoln W. North, *Real Estate Investment Analysis and Valuation* (Winnipeg: Sauls and Pollard, 1976); John L. Hysom, "Financial Feasibility Analysis" in *The Real Estate Handbook* (Homewood, Illinois: Dow Jones-Irwin, 1980); and Urban Land Institute, *Optimizing Development Profits in Large Scale Real Estate Projects*, Technical Bulletin 67 (Washington, D.C.: author, 1972).

A cost/benefit analysis is the public sector's technique for evaluating the "profit" to the community from public investments. It attempts to quantify public costs (in many instances, these costs cannot be measured in dollars) and compare them to benefits (which may be even harder to quantify). The tangible economic returns generated by enhancing waterfront areas and providing public access to the water's edge do not reflect the total value of a development project in terms of civic pride and urban identity. Obviously, a meaningful cost/benefit analysis for a public/private waterfront development project can be very difficult to devise. The inherent problem of placing a dollar value on aesthetic and social benefits is further compounded by the inability to determine the market impact of the project. For example, the construction of a new waterfront retail center may be viewed as a source of totally new taxes, but the tax income generated by a new retail facility does not necessarily represent totally new income because many of the shoppers expected to use the new center are already served by existing retail stores. To the extent that the new retail facility will capture market growth rather than absorb an existing market, the center will generate new revenues. This condition is also true of other forms of development such as restaurants, office buildings, and hotels.

The cost/benefit analysis must also give consideration to the proposed staging of the project. Typically in the development of urban waterfronts, public costs are concentrated in the first phase of a project to provide infrastructure improvements, dredge and fill operations, and pier or bulkhead reconstruction. The first phase, however, is when there is the greatest risk and lowest return on investment. While the investment in public facilities may be needed to stimulate private development, there is no guarantee that later phases of private development will materialize. Therefore, if public benefits depend primarily on the second or third phase of development, then it may be difficult to establish the public justification for the project in strictly financial terms.

Another important factor in determining the project's benefits is the impact of not proceeding with the proposed development. If the decline in the physical and economic condition of the waterfront is allowed to continue then the city's overall financial health is adversely affected. On the other hand, if the proposed project will serve as a catalyst for economic expansion, the city's financial situation is positively affected.

When assessing project costs it is important to consider the opportunity cost of a project. Urban shorelines are limited resources and using a waterfront site for one project precludes its use for other forms of development. Unless there is strong competition among various land and water uses, the opportunity cost of a specific project may be somewhat theoretical. Conversely, if

there are solid markets for a variety of uses, then the opportunity costs of a project can be significant.

To a large extent, the cost/benefit analysis is a reflection of a community's values and priorities. It is sometimes helpful to identify the highly subjective factors contained in the evaluation and deal with them separately. If the analysis is objective and factual, then it will have greater credibility and usefulness.

Packaging the Final Product

All of the designs, analyses, and plans completed during earlier phases of predevelopment must now be translated into contractual agreements that commit each participant to specific management and financial obligations. The commitments deal with land disposition, conditional leasing, and public funding, and they form the basis for the final development agreement between all participants.

The negotiations that take place at this time are based on the knowledge and information gained through previous evaluations and a willingness to deal with economic realities. Some amount of trust on the part of the development team, the public officials, and citizens must be present. Any of the participants involved in the negotiations may employ consultants experienced in complicated real estate transactions either to conduct negotiations or to advise negotiators.

Site Acquisition and Disposition

Acquiring the waterfront site on which the development will take place is one of the most critical phases of predevelopment. Most developers will not sign land acquisition agreements or general development agreements until they have secured sufficient lease commitments to receive permanent financing on the project. Typically, there are three times during the development process when land can be acquired: (1) before the project initiation, (2) during predevelopment, with the public sector often bearing the risk before the development agreements are executed, or (3) during design, which takes place in the development stage.⁵

As previously discussed, in many cities the major obstacles to waterfront development are problems related to land acquisition. More often than not, developers encounter a fragmented pattern of property ownership, restricted property rights in the form of easements and deed restrictions, railroad and utility rights-of-way, and legal limitations related to the ownership of submerged lands and riparian water rights. Overcoming these obstacles can be difficult and time-consuming.

There are basically three approaches private developers can use to acquire waterfront land for development. If few parcels are involved, and if all the owners agree to sell, the best approach is to assemble the

⁵ Ralph Basile, et al., *Downtown Development Handbook*, (Washington, D.C.: Urban Land Institute, 1980), page 82.

required parcels as rapidly and quietly as possible. This is particularly true if land prices are escalating rapidly because of speculation. On the other hand, if many parcels are necessary, then it is advisable for the developer to acquire the key parcels first.

The second approach is for a developer to deal with a real estate investor who has assembled a site by gradually purchasing properties when they became available. While this approach is clearly less desirable because land prices are usually higher, it may be the only feasible alternative for an outside developer.

The third approach is to assemble a site from waterfront property owners who are interested in equity participation in the project. The Johns Landing development in Portland, Oregon, is a good example of this approach. Land assembly for the \$100 million project occurred when owners of the Jones Lumber Company entered into a limited partnership with developer John D. Gray and other Portland investors to acquire the land of the B.P. Jones Furniture Company, and, subsequently, other properties adjacent to the lumber company property along the Willamette River. Of the 11 limited partners, seven were lumber company property owners. There was one general partner, Car Barn, Inc., a corporation owned by John P. Gray, which was formed to develop, manage, lease, sell, and dispose of the 75 acres of declining industrial land. The project has been built in phases, with a construction time of about 10 years. It contains about 500 dwelling units including both apartments and condominiums; several waterfront res-

taurants; a variety of office projects including new speculative buildings, small corporate buildings and industrial building renovations for office use, totalling about 600,000 sq.ft.; a public waterfront pathway system; a specialty shopping complex; and an athletic club.

The private developer can secure land by a contract of lease or sale or by an option agreement. In a contract the buyer and seller agree to terms and conditions for sale or lease, whereas in an option agreement the prospective buyer has the right, for a consideration and within a specified time period, to lease or purchase the property at a prearranged price.

Lease arrangements are more common for waterfront projects than projects in other urban locations. In many cases, waterfront lands are in public ownership and managed or controlled by a public agency. For instance, in San Diego most of the waterfront property up to the high water line is under the jurisdiction of the San Diego Unified Port District Commission. The Commission leases parcels to developers in conformance with an accepted master plan. In other cities waterfront lands are part of a downtown redevelopment area and parcels are leased to private developers for projects that meet the objectives stated in redevelopment plans. In Boston, the central waterfront is included in a 100-acre redevelopment area that has been the responsibility of the Boston Redevelopment Authority since 1956.



4-15 The Johns Landing development site in Portland, Oregon.

Private Sector Commitments

One of the final predevelopment responsibilities of the development entity is to secure preliminary commitments from the potential tenants and lenders. While typically it is still too early in the development process to obtain binding agreements from these private sector interests, the developer is in a position to solicit a conditional expression of intent. This is a key step in completing the preparations for project development because the preliminary leasing and lending commitments enable the development entity to assure both public and private participants that the project is receiving sufficient support in the marketplace.

Obtaining tentative lease commitments is critically important because it is a direct reflection of the viability of the development program. In this respect, it is usually necessary to have commitments for 40 and 60 percent of the project in order to persuade lenders to support its development. In addition, preliminary commitments by major tenants, such as a hotel operation or a corporate headquarters, helps to convince other potential tenants to make a similar commitment.

Depending on the financial requirements of the project, the development entity may wish to solicit equity participation from one or more of the primary tenants. Since this type of agreement is more definitive than a preliminary lease commitment, the negotiation process is longer and more involved. The exact terms of a tenant's financial interest in a project must be clearly spelled out prior to implementation of the project.

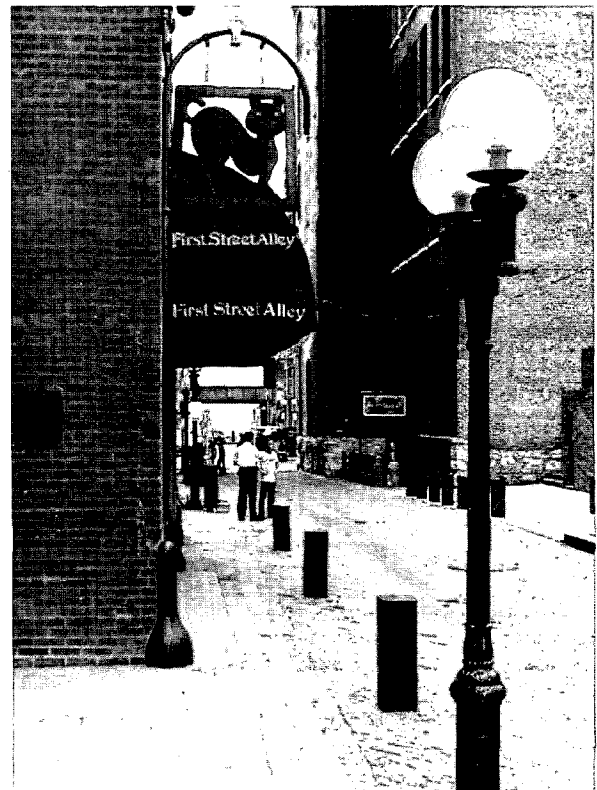
Public Sector Commitments

The implementation of an urban waterfront project cannot occur until public and private sector development responsibilities are clearly stated and formally agreed to by all of the parties involved in the project. While this requirement could conceivably be satisfied by one development agreement between the developer and the city, typically it requires a series of formal commitments involving other parties such as redevelopment authorities, port commissions, and federal agencies. Generally, the set of agreements is determined by the complexities of a particular project.

When several interrelated development projects are included in a large-scale waterfront redevelopment program the initial requirement is to formulate a cooperative agreement between the city and the organization managing the development program. The cooperative agreement typically states the city's justification for implementing the project, authorizes the managing organization to acquire and dispose of land

if necessary, allocates funds for the organization's activities, establishes a schedule for development, and commits the city to the construction of specific public improvements or the provision of certain services. The organization managing the redevelopment program, in turn, negotiates separate development agreements with private developers for each element of the program.

The redevelopment of Laclede's Landing in St. Louis, Missouri, was facilitated by a very special cooperative agreement between the city and the Laclede's Landing Redevelopment Corporation. The corporation prepared a development plan and submitted it to the community development agency. Once the plan was approved by the agency and the city's board of aldermen, the mayor of St. Louis signed a contract with the Laclede's Landing Redevelopment Corporation, thereby designating it as the official developer of the area. The cooperative development contract enabled the corporation to grant property tax relief under Chapter 353 of the Urban Redevelopment Law of the state of Missouri. Furthermore, it clearly stated the intention to mix the rehabilitation of existing structures with new construction, specified the intensity and type of uses on a block-by-block basis, committed the city to spend approximately \$1 million for site improvements, and outlined how the Redevelopment Corporation would receive income.



4-16 Redevelopment of Laclede's Landing in St. Louis was facilitated by a special cooperative agreement between the city and the Redevelopment Corporation.

Once the Redevelopment Corporation was designated as the official developer of Laclede's Landing, it created two other vitally important documents that are still instrumental in its development activities. The first document is the Parcel Development Agreement—an agreement between the property owner and the Laclede's Landing Redevelopment Corporation setting the terms and conditions under which the property owner can proceed with plans to develop Landing property. It allows the Redevelopment Corporation to provide planning and analysis for any given parcel. The property owners must submit development plans, architectural specifications, and a financial strategy for their parcel to the Redevelopment Corporation for review and approval. Once the plans are approved, a contract is signed permitting the property owners to receive a tax abatement for 25 years. Thus, the agreement provides the stability lenders and investors are looking for while maintaining the flexibility necessary to accommodate changes dictated by various development factors.

The second important document is the "Urban Design Guidelines" which expands upon and refines the Laclede's Landing Development Plan.⁶ These guidelines were formulated to: (1) assist the Laclede's Landing Redevelopment Corporation in determining policy for a wide range of environmental design issues, (2) provide developers and architects with preliminary design criteria to avoid duplication and lower front-end costs, and (3) assist the Redevelopment Corporation and agencies of the city of St. Louis in the development of standards for the design and maintenance of capital improvements.

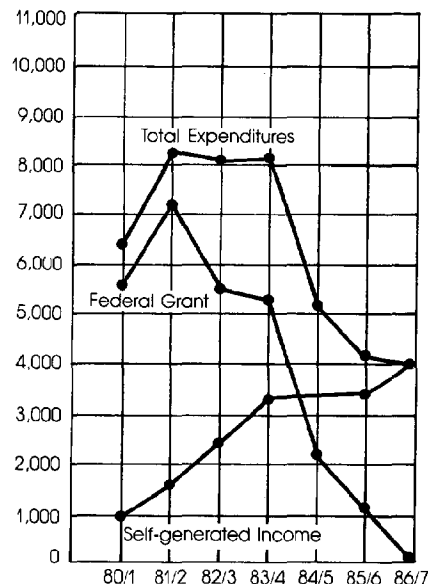
The Harbourfront Development Program in Toronto, Ontario, is based on a cooperative agreement between the Canadian government, the city government of Toronto, and the development corporation. Harbourfront Corporation was chartered in 1976. The shares of the corporation are owned by the federal government, which also owns the 92-acre Harbourfront development site. The nine-person board of directors of the corporation is appointed by the federal government in consultation with the chairman of metropolitan Toronto and the mayor of Toronto.

In June 1980, the federal government gave final approval to a development framework, committing itself to a seven-year plan, financial scheme, and necessary funding. An operating agreement between the government and the Harbourfront Corporation was then entered into, which gave the corporation the authority to manage and develop the site in accordance with the principles in the framework.

Also in June 1980, the city of Toronto passed final bylaws amending the official plan and zoning bylaw with respect to the Harbourfront site. A comprehensive master agreement between the city and Harbourfront was also approved. Taken together, these city approvals regulate specific plans and the form of development on

Long Range Financial Plan

1980 dollars
\$000's

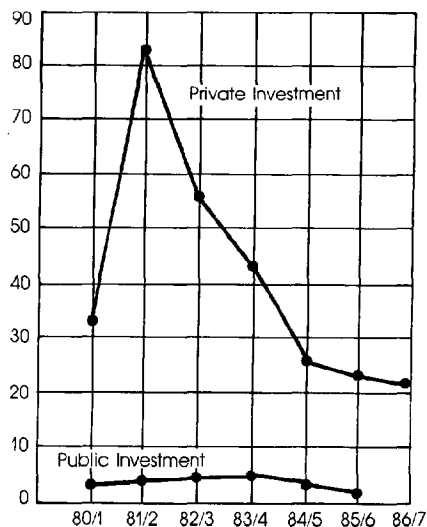


Private Investment Plan

Total Federal Investment to the End of 86/87: \$20 million

Total Estimate of Private Capital Invested to the End of 86/87: \$241 million

1980 dollars
\$000,000's



⁶ "Urban Design Guidelines," (St. Louis, Missouri: Hellmuth, Obata, and Kassabaum), page 1.

4-17 These two graphs illustrate the financial and investment commitments contained in a cooperative agreement between the Canadian government, the city government of Toronto, and the development corporation for the development of Harbourfront in Toronto.

the site. Detailed quay-by-quay plans were subsequently drawn up and reviewed by the city.

A request for proposals is issued by the Harbourfront Corporation for every major component of the development program. The corporation negotiates a separate development agreement with the private development firm selected for each project.

Every development agreement is tailored to fit the particular project or set of participants. In general, however, the agreement states the intent of the parties to undertake and complete the project, which is described in appended drawings and statements, sets forth each party's responsibilities, and spells out the financial requirements and commitments for each party. It includes safeguards for ensuring appropriate timing and availability of funds and conditions for each party to allow for project changes because of inescapable changes in conditions.

Some urban waterfront projects are initiated using an interim agreement to proceed with design and construction before more detailed agreements can be worked out and approved. This procedure was used in the development of the Georgetown waterfront area of Washington, D.C. A 1979 cooperative agreement was entered into by the mayor of the District of Columbia, the chairman of the National Capital Planning Commission, and Georgetown Harbour Associates to initiate and ensure the coordination of public and private planning and development of the waterfront area along the Potomac River (between the Francis Scott Key Bridge and Rock Creek extending from the shoreline to K Street).

The parties involved in the redevelopment thought the joint public-private agreement was necessary for several reasons.⁷ First, the Georgetown waterfront consisted of land owned by various public agencies and private parties. Second, exemplary redevelopment of such a large area under multiple ownership required a coordinated planning effort by the concerned public agencies and private interests. Third, it was in the public interest to achieve a lesser intensity of development than that permitted under existing zoning regulations. Fourth, implementation of a coordinated plan required mutual assurances that the plan would receive continued support by the public and private redevelopers.

The execution of agreements between the public and private entities signifies the end of predevelopment activities. Many of the activities initiated during predevelopment—design, leasing, and financing—are refined and completed during the next stage, development.

The Development Stage

During the second stage of the development process, project implementation occurs. The start of the development stage signals the completion of several important preliminary activities. By this time the project's major objectives and components have been established, the development entity has been organized, and preliminary plans, designs, and feasibility studies have been completed. Furthermore, a development program has been clearly defined, permits and approvals obtained, public and private financing responsibilities agreed upon, and a general development schedule established.

The predevelopment events define a project's location, scale, use, and cost. The activities in the second stage of the development process focus on financing, leasing, design, and construction. While these basic tasks transform a project proposal into physical reality, the timing of financial support and the activities of the professional designers and building contractors must be carefully coordinated to produce the project that meets the objectives formulated during predevelopment.

Financing

Following the completion of predevelopment negotiations, the development entity concentrates on financing and leasing the project. While the two objectives can be pursued independently, it is important to closely coordinate these efforts in order to firmly establish the project's financial basis and meet cash flow projections. Securing financing and leasing agreements may entail both firming up commitments made during predevelopment and initiating negotiations with other potential lenders and tenants.

Project financing is without a doubt the most fundamental element of the development process. It ultimately determines the fate of a development proposal by governing how much of the project will be implemented and when it will be built. In this respect, investors are faced with a basic question: Does the potential return on investment in a waterfront project justify the level of financial exposure? Many different factors related to the strength of the primary tenants, the financial objectives of the developer, and the nature of a particular project determine the answer.

When potential lenders and investors are not comfortable with the financial risk they think is associated with a waterfront project, then the developer is usually required to satisfy certain conditions to obtain financing. The developers of Union Wharf in Boston, Massachusetts, for example, had difficulty securing financing because the project combined residential and office uses and required both renovation and new construction. In addition, all units were to be sold as raw space with no finishing provided. Consequently, the financing commitment the developers obtained included conditions for

⁷ "Memorandum of Agreement Relating to the Georgetown Waterfront in the District of Columbia" (Washington, D.C.: Georgetown Harbour Associates, 1979), page 1.

presales as well as specific equity requirements. The developers were required to presell 30 percent of the total number of units to prove the validity of both pricing and marketability. Furthermore, a number of units were sold at a substantial discount to provide additional equity.

A waterfront development project requires financing for land acquisition, site improvements, project construction, and the many indirect costs associated with each stage of the development process. To meet these costs the development entity must obtain four types of financing: (1) funds for predevelopment activities; (2) short-term loans to finance construction before the permanent or long-term mortgage becomes effective; (3) long-term mortgage loans to provide the basic funds; and (4) equity financing for the share of the cost and initial funding not covered by the mortgage. Commitments for all four are necessary before construction can begin.

Waterfront development projects usually require a tremendous front-end investment. Frequently specialized design and engineering studies are necessary to analyze dredge and fill requirements, the load bearing capacity of existing pier structures, and other site conditions. Furthermore, the regulatory requirements imposed on waterfront projects add significantly to the initial cost of development.

City governments have realized that waterfronts represent major community assets demanding special public sector involvement. To facilitate waterfront development projects, many local governments have provided funding for various redevelopment activities. The Inner Harbor Development Program in Baltimore is a good example. In that case, public expenditures of \$55 million (\$35 million in federal grants and \$17 million in city bonds)

have been spent on acquiring and clearing the land and preparing it for new development. If public funding does not cover the cost of predevelopment activities, then equity investment by the development entity is essential.

Short-term construction loans provide working capital during project development. They are usually advanced in installments based on the lender's evaluation of progress or on completion of predetermined stages of the project. First mortgages provide the primary financing for almost all projects. Typically, first mortgages provide up to 75 percent of the appraised value of the project, to be repaid with interest in installments over periods of 25 to 35 years or more. The property and improvements are pledged as collateral or security for the mortgage loan.

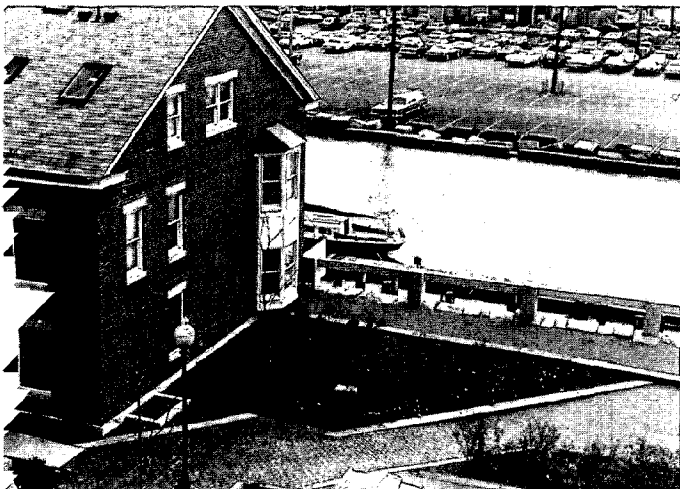
Long-term equity financing provides the difference between the cost of the project and the mortgage loan. Methods of acquiring equity funds depend almost entirely on the development entity, who will shape the venture to fit their particular financial objectives. The development entity may rely on their own financial resources or form a partnership or joint venture with one or more associates or corporations interested in investing or speculating in waterfront development.

Sources of Financing

Financing may be obtained from individuals, banks, insurance companies, pension funds, foreign investors, savings and loan associations, public bonds, and government grants.⁸ Investments are structured in a variety of ways, such as conventional mortgages, loans with equity kickers, loans with options to acquire ownership, and joint ventures. The private financing commitment comes when design development drawings are complete. Before that time, lenders can be encouraging but noncommittal. With drawings in hand, the development entity prepares a loan package, making sure that it provides all the essential information required to persuade the lender of the project's feasibility.

To attract investors and lenders to high-risk projects, the public sector may have to finance some of the project, either directly by supplying cash or improvements, or indirectly by underwriting private financing. The motivation for public involvement in waterfront projects is to spread the risks and costs of development.

⁸ For a more detailed discussion of financing sources, see Basile, et al., *Downtown Development Handbook*, page 95.



4-18 Because Union Wharf combined new residential with residential and office renovation, the developers had difficulty obtaining financing.

The degree of public involvement is determined well before this point in the development process. No developer would negotiate with key tenants, finance preliminary design, and then attempt to negotiate public participation. At this point, the public entity would be involved in preparing bond prospectuses and issuing bond obligations. During the development stage, the developer deals with finalizing private short-term and permanent financing.

Innovative Public/Private Financing Techniques

The role of the federal government in financing urban waterfront development changed significantly in recent years. Attempts in the 1960s and 1970s to reverse the process of urban decay with the massive urban renewal projects were generally unsuccessful. The tools of public participation and environmental regulation emerged in the 1970s as a means of containing federal bureaucracy and addressing specific local needs and conditions. During the late 1970s, however, the involvement of local government and business leaders in urban development increased. Large-scale federal programs were replaced by smaller federal programs offering matching funds as incentives for municipal and private investment. In the past two years many of these more limited federal programs have been eliminated.

The lack of federal funding has generated many creative approaches to financing urban waterfront projects. In St. Louis, for example, stock in the Laclede's Landing Redevelopment Corporation is half owned by property owners in the redevelopment district and half owned by members of the city's business and financial community. This generated the working capital necessary to initiate predevelopment activities. The city, in turn, agreed to spend \$1 million for infrastructure and site improvements. To guide the redevelopment of Laclede's Landing and encourage lenders to finance projects, the Redevelopment Corporation created the Parcel Development Agreement—an agreement between the property owner and the Redevelopment Corporation setting the terms and conditions under which the property owner can proceed with plans to develop Landing property. It calls for the property owners to submit development plans and a financial strategy for their parcel to the Redevelopment Corporation for review and approval. Once the plans are approved, a contract is signed permitting the property owner to receive a tax abatement for 25 years. The agreement also requires the property owner to make a financial payment to the Redevelopment Corporation that is five percent of the project's construction cost. Thus, the

Parcel Development Agreement supports the operation of the Redevelopment Corporation and provides lenders and investors a strong incentive to pledge permanent financing for individual development projects.

The Inner Harbor Development Program in Baltimore relied initially on federal funding but more recently depended primarily on other sources of project financing. For instance, the convention center project required a \$35 million funding commitment from the state. To obtain this commitment, the city government agreed to include a provision in the bond issue that lists the anticipated state revenues from the project and requires the city to reimburse the state for debt service on the \$35 million bonds to the extent that the revenue goals are not achieved.

The financial structure of the Hyatt Hotel project near Baltimore's Inner Harbor illustrates the complexity of financing major waterfront development ventures. Both the city of Baltimore and the Hyatt Corporation have made substantial loans subordinate to the project's first mortgage. Both parties will be more than compensated for their investment but not for awhile. The total expenditures, other than the land and improvements by the city, amounted to \$40 million:⁹

- \$20 million (10 percent), a first mortgage furnished by a savings and loan plus about one percent kicker
- \$12 million, a second mortgage by the city (mostly through UDAG with interest at seven percent)
- \$4 million, a garage by the city (payable out of garage income)
- \$1 million, invested up-front by Hyatt
- \$3 million, additional loan by Hyatt at prime plus one percent.

⁹ "A MXD Takes Off: Baltimore's Inner Harbor," *Urban Land* (March 1982), page 16.



4-19 The key to the development of a Hyatt hotel near Baltimore's Inner Harbor was an innovative public/private financing arrangement.

Hyatt manages the property under an agreement in which it receives four percent of the gross revenue plus an incentive fee. This fee cannot exceed 20 percent of the gross operating profit. The gross operating profit is the profit before mortgage requirements, land rent, insurance, taxes, and depreciation over and above the amounts set aside for repairs, maintenance, etc. The incentive fee is subordinate during the first 10 years to the first mortgage requirements and thereafter to the second mortgage as well.

The land has been leased to Hyatt for \$200,000 a year during the first 34 years and thereafter for 20 years at \$400,000 a year. The profit, after payment of all the loans and advances are divided, is one-third to the hotel and two-thirds to the city. There are no tax refunds or rebates.

The hotel opened in October 1981 and all of the partners in the deal are very enthusiastic about its future. The Baltimore Hyatt has started under circumstances and conditions much better than Hyatt has started any other hotel. Both the city and Hyatt believe that the hotel is a valuable addition to the Inner Harbor.

Securing Lease Agreements

While obtaining financing is a top priority of the development entity, securing tenants to occupy the space programmed for the project is also critically important. The commitments for space potential tenants made during predevelopment must be formally executed. Since it is much easier to design space for a known tenant than it is for a hypothetical tenant with unknown needs, obtaining lease agreements before final building design can greatly enhance the project's success. In general, the earlier leasing agreements are obtained, the more favorable the financing, the more accurate the cost estimates, and the fewer the design changes.

It is necessary to secure lease agreements early in the development stage of a project to ensure that cash-flow projections are met. The financing structure typical of waterfront projects requires the development entity to successfully lease space and generate cash for short-term construction loan amortization payments. Long-term mortgage loans usually are not executed until this is accomplished. In almost all cases the lender will expect a certain amount of space to be leased before agreeing to provide long-term financing. The amount of leased space usually regarded as acceptable is 40 to 60 percent for 75 percent financing.¹⁰



4-20 Fishmarkets and restaurants are two types of potential tenants that value urban waterfront locations because of the unique amenities offered by shoreline sites.

To effectively lease a waterfront project it is necessary to conduct a marketing program to promote the attributes of the project that will appeal to potential tenants. The primary factor is location. Since the amount of waterfront land is limited within an urban area, there often is a great deal of prestige associated with a shoreline address. Furthermore, the unique amenities offered by a waterfront site enhance the value of the location for some potential tenants. Waterfront restaurants, for example, historically have very high per square foot revenues. Another important factor is the project's design. An exciting concept including the adaptive use of an existing building or the construction of a new contemporary structure may persuade potential tenants to locate in the project. Finally, the identity and space demands of the project's prime tenants will often attract other potential tenants. For example, the commitment of a major tenant such as in hotel or corporate headquarters could attract other tenants who feel that proximity will offer a significant advantage.

¹⁰ Basile, et al., *Downtown Development Handbook*, page 102.

The objective of the marketing program is not only to secure lease agreements for the project, but also to obtain a complementary mix of tenants that will optimize the project's value. The Rouse Company, for example, carefully selected the tenants for its Harborplace project in Baltimore to create the desired marketplace atmosphere. Over 2,000 potential operators were interviewed before Rouse decided on the 140 who would occupy Harborplace.¹¹ The space allocation for specific types of tenants is shown in Figure 4-21.

Number of Merchants	Percent of Gross Leasable Area
12 restaurants and cafes	40.7 percent
20 market and other foods	13.7 percent
37 small eating places	10.6 percent
36 specialty shops	25.0 percent
35 pushcarts and kiosks	5.3 percent
2 flowers and produce	4.2 percent

4-21 Harborplace space allocation by tenant type.

The developer of Seaport Village in San Diego specifically selected tenants to complement the project's design theme. In addition, he purposely tried to avoid having duplication and competition between shops with similar goods because of the relatively small size of the businesses. The result has been a very low turnover in tenants and virtually no vacancy.

The mix of tenants is critically important for waterfront projects combining two or more different uses. Converting Pickering Wharf in Salem, Massachusetts, into a retail and residential complex required the developer to select retail tenants with businesses that would be compatible with the residents of the project in terms of hours of operation, noise, traffic, and other considerations. For large-scale waterfront redevelopment programs, such as Harbourfront in Toronto or Laclede's Landing in St. Louis, it is imperative for the main development entity to coordinate the tenant selections made by other developers constructing projects in the redevelopment district to ensure that synergistic relationships are maximized. If one developer is leasing office space to prestigious law firms and financial consultants, then the developer of nearby retail and restaurant facilities should try to attract these office workers. This

simple example actually represents a complex set of separate incremental decisions. It is incumbent upon the entity directing a large-scale waterfront redevelopment program to carefully manage the tenant selection process.

There are many different types of lease agreements. Leases are distinguished by the method that rent is set and by the period for which the agreement is written. The type of lease agreement and tenants depends on project characteristics, the business involved, and existing market conditions.

Several methods have been used in leases to set rental rates. Percentage leases apply to retail business with sales on the premises. Net leases shift burdens of rising taxes and other costs from the developer to the lessee. Escalated leases are intended to counteract the effects of inflation and higher costs. Graduated leases are used to encourage new businesses which are expected to grow in the future.

Seaport Village is a specialty shopping complex and one element of San Diego's Embarcadero development program directed by the San Diego Port District. The project developer, San Diego Seaport Village, Ltd., is responsible for project management. The land is leased from the San Diego Unified Port District which must approve all subleases, tenants, building construction, alterations, signs, and any activities not specified in the master lease or subsequent subleases. Rents for shops are \$1.50 per square foot per month plus 10 percent of the gross. Fast food shops pay \$1.66 per square foot per month plus three percent of food sales and five percent of alcoholic beverage sales. The three major restaurants (occupying over one-third of the project's total floor area) have customized leases. Seaport Village, Ltd., pays to the Port District 10 percent of the rents plus the three percent food and five percent alcoholic beverage assessment.

The Harbor Plaza office project, located in Stamford, Connecticut, commands rents at \$28.50 per square foot of net rentable area. The rental rate is increased after the first five years and is monitored by the current market rate at 10-year intervals. This arrangement protects the developer from inflation and higher maintenance costs in future years.

To obtain the exact mix of tenants desired for Baltimore's Harborplace, the Rouse Company devised various types of lease agreements with rents from \$15 to \$40 per square foot for different types of tenants. For example, in order to ensure the viability of less profitable produce, fish, and meats, a low-rent aisle was placed in the center of one of the pavilions. The merchants of the stalls and push carts located in the same building sign week-to-week or month-to-month leases to allow a constant renewal and change of handcrafted or other specialty merchandise. This requires no capital investment in a store's fixtures on the part of the merchants and provides a constantly changing array of merchandise for visitors.

¹¹ "A MXD Takes Off: Baltimore's Inner Harbor," page 15.

Design

Project design is an integral part of the development of urban waterfronts. A development project will not be successful unless it is designed to satisfy certain functional and aesthetic requirements within the bounds of specific environmental, legal, and financial constraints. Achieving this goal is an enormously complex and challenging task.

Designing an urban waterfront project is an activity that bridges the first two stages of the development process. During predevelopment three fundamental tasks are accomplished: a conceptual plan is formulated based on the development entity's goals and objectives, an intensive design analysis is performed to test and refine the design concept, and a final preliminary design is prepared and submitted for governmental approvals. The final preliminary design provides the basis for all participants in the project to negotiate the development agreements required to implement the project.

Once the development entity has obtained the government approvals necessary to proceed with project implementation, detailed design and engineering is initiated within the guidelines provided by the approved general plan. At this point in the development process, much more information is available to designers and engineers. The initial design ideas proposed during predevelopment are refined in response to several factors such as the needs and desires of major tenants, the management and legal structure being developed, and a more precise definition of the market.

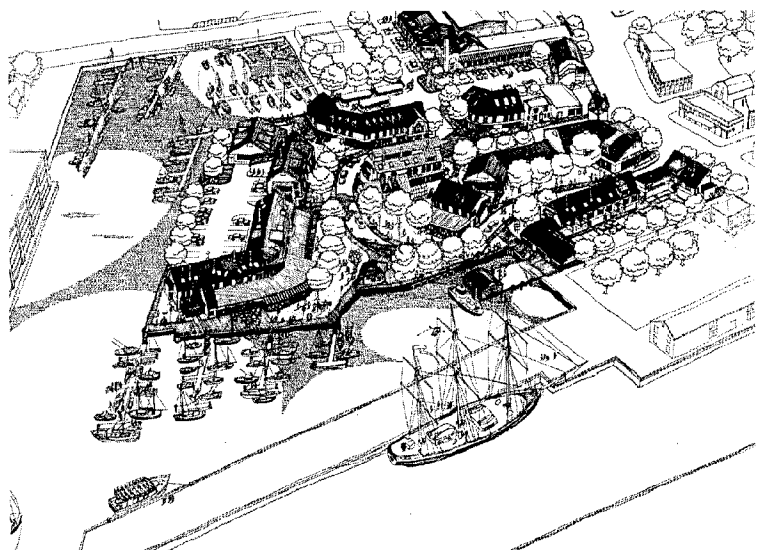
Armed with a greater knowledge of all aspects of the project, the design team enters into design development focusing on the technical details of how to construct the project. This effort includes designs of basic structural and mechanical systems; drawings of elevations, sections, and typical exterior walls; detailed landscaping and drainage plans; specifications of building and plant materials; and confirmations of cost estimates. Typically, illustrative renderings of the project are prepared at this time for use by the development entity in negotiations and public meetings.

Following the completion of design development, the design team prepares the final working drawings for the project. The working drawings comprise a mass of very detailed specifications that guide the construction of the project. They are the basis for establishing construction bids, contract documents, and construction schedules.

The design team assembled for a waterfront project will vary depending on the location and type of project. An architectural and engineering firm or an architect affiliated with various engineers typically forms the nucleus of the design team, with specialists added to the group as appropriate for the project. The design

team usually includes engineers specializing in mechanical, structural, and electrical systems, environmental management experts, foundation engineers, and landscape architects. In addition, specialists in marina design, shoreline stabilization, and pier construction may be asked to assist the design group and address specific design problems related to shoreline development.

When a large-scale waterfront development program involves more than one design group working on various individual projects, then design coordination must be provided to ensure overall functional and aesthetic compatibility. Typically, this important responsibility is delegated to a coordinating or master architect of the entire development area. The Johns Landing project, located on a 75-acre site along the Willamette River in Portland, Oregon, is a good example of this organizational relationship. The development program calls for about 500 dwelling units; several waterfront restaurants; a variety of office projects including new speculative buildings, small corporate buildings, and industrial building renovations for office use; a specialty shopping complex; and an athletic club. Since 1975, Griggs, Lee, Ruff, Ankrum/Architects have been managing architects for the development program. In addition to designing many of the buildings, the firm has coordinated the



4-22 Illustrative renderings such as this drawing of Pickering Wharf in Salem, Massachusetts, are usually prepared for use by the development entity in negotiations and public meetings.

planning and design efforts of the other architectural and engineering firms working on projects in Johns Landing. By carefully orchestrating the planning and design of each component so that it complements the others, the coordinating architects have significantly improved the quality of development.

One of the first steps taken by the Laclede's Landing Redevelopment Corporation in St. Louis was the adoption of "Urban Design Guidelines." The document was prepared by Hellmuth, Obata, and Kassabaum, Inc., to assist the Redevelopment Corporation in determining policy for a wide range of environmental design issues, providing developers and architects with preliminary design criteria to avoid duplication and delays, and helping the Redevelopment Corporation and agencies of the city of St. Louis develop standards for the design and maintenance of capital improvements. The "Urban Design Guidelines" successfully address design issues which affect the Landing, including both interior and exterior concerns.

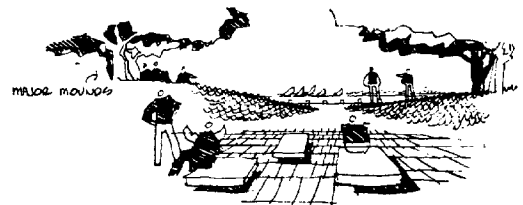
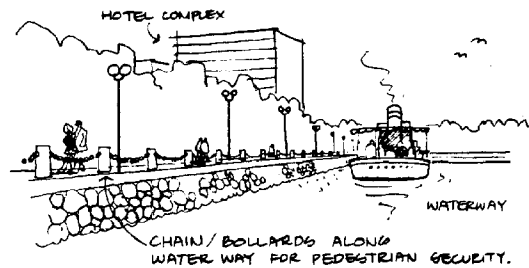
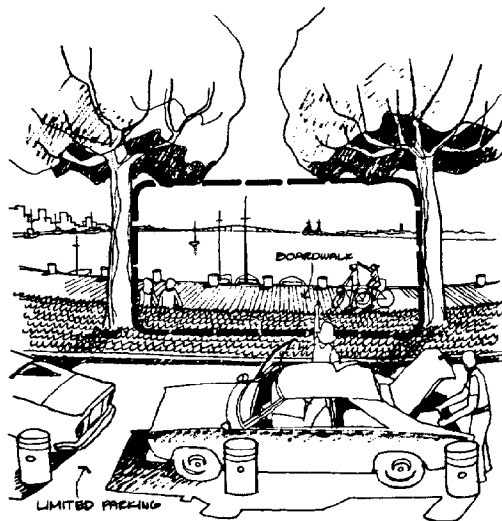
The document provides a flexible framework which encourages diversity. Individual developers are able to make changes to buildings to fit their various tenants' needs but changes or additions incompatible with the Landing's overall character are prevented. This flexible framework avoids rigid controls which can stifle creativity and individuality. In practical terms, the document offers

design standards for an area where as many as 15 different architectural firms are involved in a diversified range of projects. Stability is thus guaranteed, which is essential to the long-term success of the redevelopment of Laclede's Landing.

Urban waterfront sites require special consideration by design professionals. The interface of land and water within an urban context creates a distinct physical environment for project designers to deal with. Although each setting is a unique expression of a city's age, size, location, and cultural heritage, there are a few basic principles that apply to the design of most all urban waterfront projects.

A project's design should take full advantage of the shoreline setting and the amenities offered by the water's edge. One of the major considerations in the development of a waterfront site is to ensure that views from the city to the water will not be blocked by new buildings. In this respect, the places where streets meet the water are special places. If left in public open space, then city streets can provide view corridors directly to the shoreline. Furthermore, view corridors can be greatly enhanced by siting buildings to frame views through spaces to the water.

This design principle has been effectively used to guide the development of Harbourfront in Toronto. Open plazas and walkways have been constructed where the major connecting views to the city's center—Bathurst Street, Spadina Avenue, and York Street—terminate at the waterfront. As a result, Harbourfront has successfully reunited the city's downtown with its waterfront and become a primary destination in Toronto.



Another major consideration is the design of public areas along the water's edge. Public spaces such as walkways, plazas, and parks will not effectively serve their purposes unless they are both interesting and inviting. An undulating walkway that follows the shoreline or reaches out over the water and back on piers or quays is far more dramatic and exciting than a straight pathway across a waterfront site. When an individual moves along a meandering walkway the views of the water and the buildings change with each turn of the path. In effect, a person is "pulled along" by the expectation of seeing something new or different. Furthermore, a promenade along the water's edge can be enhanced by providing a variety of public spaces; in some places it may be a wide paved area where people can sit and enjoy looking across the water, and in other places it may be a large landscaped area for outdoor concerts and other cultural activities. Existing and new waterfront buildings can be used to create variation in the size and character of public spaces.

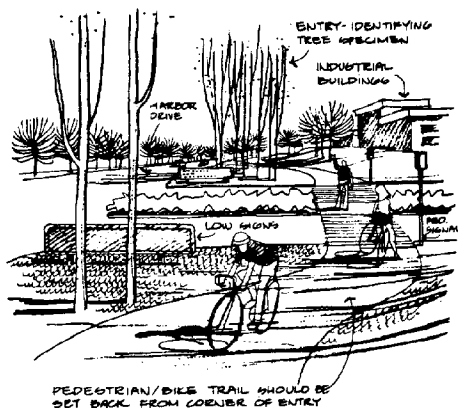
The redevelopment of San Diego's Embarcadero has benefited greatly from the attention given to the design of public shoreline areas. The development plan clearly stated the importance of creating a strong and inviting pedestrian character for the Embarcadero with numerous opportunities for visual access to the water and a diversity of leisure activities. More importantly, the shoreline improvements have significantly enhanced private development opportunities in the area, as evidenced by the success of Seaport Village.

The strength of a project's design can be measured in part by how effectively it responds to its location. In this respect, the phrase "out of place" succinctly describes buildings with designs that do not relate to their settings.

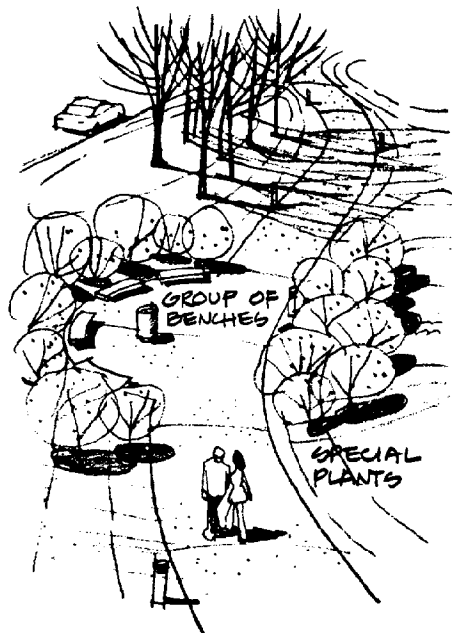
Therefore, it is very important for architects of waterfront buildings to consider not only the functional uses of the structures, but also the conditions that distinguish shoreline sites from other urban settings.

Baltimore's Harborplace is an excellent example of a project that relates to its waterfront environment. The design of the project is sensitive to the configuration of the harbor and to people's strong and legitimate desire to have visual and physical access to the water. The project is on the waterfront but at the point where it is closest to the downtown office district. Because of its location, Harborplace was separated by a 200-foot plaza/amphitheatre into two buildings to reduce its mass and to preserve a view to the center of the waterfront. The two-story structures have glass facades which allow the lights and activity of the pavilion to sparkle out to the city at night, roll-up exterior doors which open the buildings to the water by day, and outdoor but covered porches and terraces from which the public may view the harbor.

In form and scale Harborplace echoes the wharf buildings that once occupied the site. The buildings have no front or back, given that the project needs to open up to both the harbor on one side and downtown on the other. "Porticos" spread along each building allow people to see through the structure as well as invite entry. As a result, Harborplace relates to the city, to the waterfront environment around the project, and to the people the project serves.



4-23 The attention given to the design of public shoreline areas along San Diego's Embarcadero as illustrated in these drawings has significantly enhanced private development opportunities in the area.



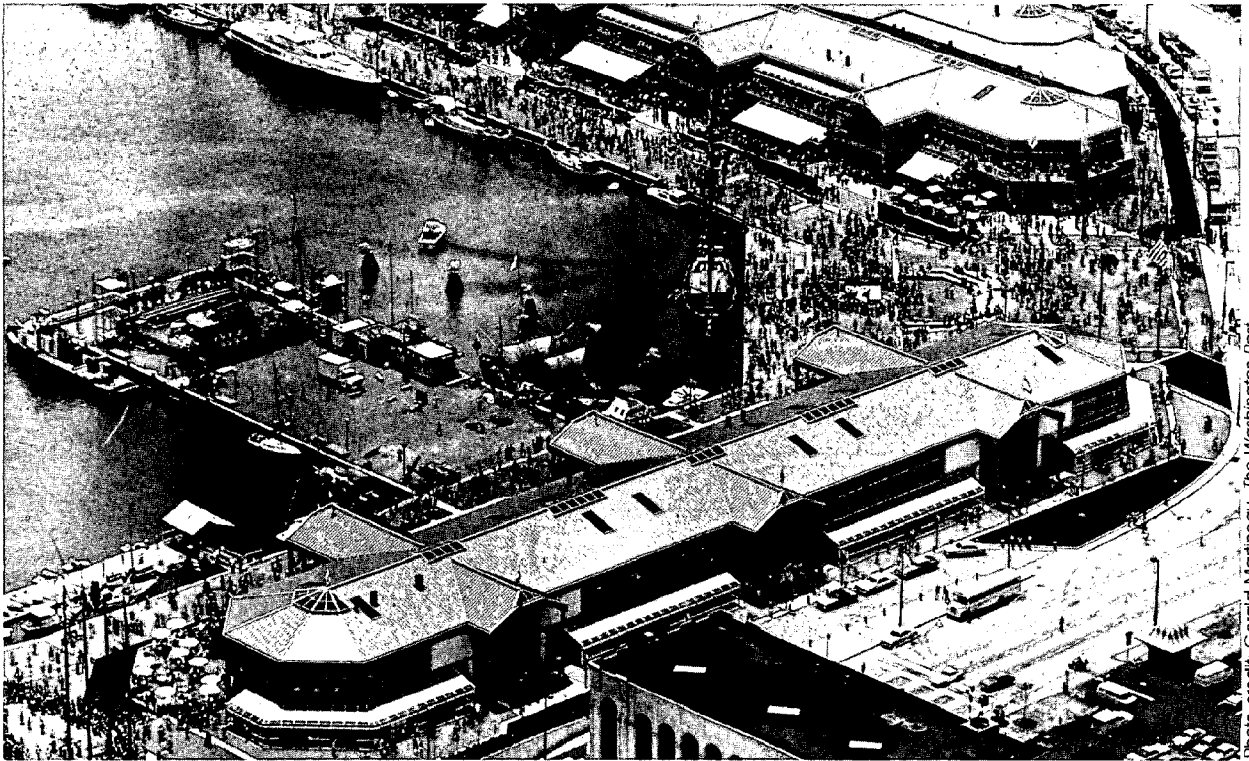
Source: The San Diego Unified Port District.



4-24 The architectural style of the Palmer Point project in Greenwich, Connecticut, is a contemporary expression of the New England maritime heritage.

Palmer Point, a residential/marina development located along the Mianus River in Greenwich, Connecticut, is another project that was carefully designed to complement its waterfront location. The residential units at Palmer Point are oriented to take advantage of the waterfront setting. The structures are clustered on the site to provide physical as well as visual access to the water's edge. All of the units have balconies, with many of them directly overlooking the river. Outdoor open spaces within the project are carefully defined. A pedestrian walkway system covers the site with curved walkways and boardwalk along the water's edge. The project is intensely landscaped with plant materials and stone walls to provide screening and privacy, soften building surfaces, and create comfortable attractive areas for outdoor activities. Outdoor lighting is provided by brass and copper marine lanterns. The architectural style is sophisticated and modern. The primary exterior building materials are pale red brick and natural wood. The combination of brick and wood, which is often used diagonally, is appropriate for the waterfront setting. The brick detailing is used throughout the project and conveys a sense of warmth and sturdiness. The overall effect—a contemporary expression of the New England maritime heritage—is highly appropriate for its waterfront location.

While every urban waterfront site represents a unique set of conditions for project designers to deal with, the objective should always be to produce a design that satisfies its functional requirements and is in harmony with its setting.



4-25 Harborplace in Baltimore was designed to relate both to the water's edge and the city's downtown.

Photo credit: Gerald Martineau, The Washington Post

Project Construction

Project construction is a pivotal step in the development of urban waterfront projects and requires the management of intricate contractual arrangements, complicated delivery and completion schedules, and a diversified workforce. The primary management objective is to produce a high quality marketable project at the minimum price within the shortest feasible time period.

Along with the developer, those directly involved in the construction process include the architect/engineer, the construction manager, the construction contractor and/or subcontractors, and the material suppliers. Each of these individuals has a particular role in the construction of the project. The architect/engineer's principal concerns are making sure that the project is constructed as specified in the construction drawings and specifications, and that required changes are within the cost, quality, and time constraints established by the developer. The construction manager is the prime link between the developer and the subcontractors and material suppliers and supervises the various construction contractors and subcontractors. The contractors' and subcontractors' concern is to complete specified portions of a building or building system. The material suppliers' concern is to provide all of the physical parts of the building as specified by the designers and ordered by the contractors.

While each of these participants share management functions, it is the responsibility of the development entity to coordinate construction activities. The development entity cannot rely totally on drawings and documents to transmit a perfect understanding of the project to the contractor. Furthermore, the magnitude of risks and liability associated with construction management decisions requires the continuing presence of the development entity.

The concept of construction management is partly the result of the special requirements of long-term complex development programs such as the Charlestown Navy Yard in Boston and False Creek South Shore in Vancouver, British Columbia. These waterfront development programs require phasing projects over several years with some components under construction while others are being designed. Mixing public and private interests increases the importance of a firm managerial focus to guide construction activities. The complexity of managing the construction of a public/private large-scale waterfront development program is reflected in a project management report submitted early in the construction of the Charlestown Navy Yard project. The report covered all the various development activities relative to the project area and identified key issues crucial to the continuation of each activity.

Scheduling is one of the most important facets of managing the development of a waterfront project. It begins early in predevelopment and continues through

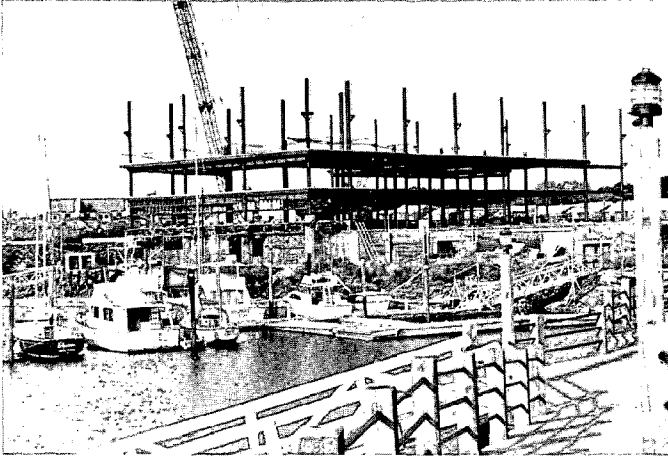
construction. Overall schedules establish general target dates for completion and occupancy of major components of the project, and detailed schedules show dates for procurement and delivery of materials and labor. Schedules are a key part of managing a project: they serve as the basis for measuring progress, approving requests for payment, evaluating the potential effects of delays or changes, and maintaining an accurate account of costs and cash flow.

In order to accelerate the construction of a project, thereby reducing the interest costs for interim construction loans, many developers overlap design and construction periods to shorten the time required to complete the project and to save construction costs by obtaining early bids, smaller packages, and shorter-term financing. This method, known as accelerated, fast track, or phased development, emphasizes concurrent contracts and a sophisticated level of construction management. Each major building system is designed, contracted, and constructed on separate but coordinated time frames.

In any building project, some decisions made early in the design phase can lead directly to construction contracts. Determining the basic building siting, for example, allows a contract for rough site work to be awarded. Decisions on basic structural elements permit foundations and structural contracts to be let and early decisions on materials or equipment requiring a long lead time allow advance orders to be placed.



4-26 Construction management was crucial in the redevelopment of the Charlestown Navy Yard in Boston.



4-27 Many developers overlap design and construction activities to accelerate project development.

The Postdevelopment Stage

The development process does not end with the completion of project construction. Once a project has been built, it must be managed and maintained to realize the full potential of its market. In this respect, postdevelopment activities determine to a large extent the long-term viability and success of an urban waterfront project.

Decisions made during the predevelopment of a project will have a great influence on the type and cost of postdevelopment activities. The appropriate type of development, suitable in scale and design and properly constructed, will no doubt be easier to manage and maintain than a project lacking those attributes. For this reason, it is incumbent upon the development entity to have, prior to construction, a clear understanding of the tasks required to manage and maintain the project as well as an estimate of the costs of "providing" such services. Even under the best of circumstances it is difficult to estimate maintenance costs. For example, common area maintenance at Seaport Village in San Diego has been higher than anticipated due to the type of facility and its popularity.

Although the specific requirements for managing and maintaining a project are identified before the start of construction, the formal agreements pertaining to the performance of these tasks are not signed until the postdevelopment stage of the process. For large, complex waterfront projects that combine several uses within public and private areas, agreements must clearly define which party will be responsible for the management and maintenance of each portion of the project, and who will pay which costs on what basis. While the general trend for public/private development projects is to consolidate most management and maintenance responsibilities under one entity with other participants paying for their share of services, the actual agreements vary considerably and are evolving quickly as experience is gained.

Determining Maintenance Responsibilities

The specific management and management activities associated with an urban waterfront project can vary a great deal depending on the project's use, density, and proximity to the water's edge. In general terms, however, the development entity is responsible for providing basic operating services and maintaining the project's physical viability, administering the financial accounts and tenant relations, and marketing the project and promoting community relations. To meet these responsibilities, the development entity might control management directly or a professional manager or management company might be contracted to provide management services for a fee.

Providing operating services and maintaining a project's physical condition is a primary area of responsibility and accounts for a large portion of a project's postdevelopment costs. Basic operating services include:

- maintaining the heating, cooling, lighting, electrical, gas, and telephone systems;
- providing security;
- maintaining elevators and escalators;
- disposing of trash;
- maintaining landscaped and parking areas;
- cleaning sidewalks and removing snow;
- painting and decorating common areas and tenant spaces;
- making repairs and minor modifications;
- providing any special services for tenants.

These services must be provided dependably on a daily basis. Maintaining a project's physical viability requires periodic inspections to detect the need for building renovation or replacement of materials. Furthermore, common areas must be maintained and periodic improvements made to ensure the project's continued use.

For urban waterfront projects that are primarily residential, these maintenance responsibilities are transferred from the development entity to the property owners. The Palmer Point project in Greenwich, Connecticut, for example, is maintained this way. Every condominium owner in the project is a member of the Palmer Point Condominium Association. The condominium agreement calls for all owners to pay for common charges which include central heating, air conditioning, snow removal, open space maintenance and repair, and so forth. The normal charge is about \$165 per month. The association elects a board of trustees and a chairman. The board handles all administrative matters and discusses major issues and decisions during monthly meetings.

Urban waterfront projects with off-shore components such as docking facilities, piers, and breakwater structures have special maintenance requirements. The upkeep and operation of those facilities is affected by wave refraction, wind, tidal action, flooding, situation, and freeze and thaw cycles. Since many of those environmental factors are strongly influenced by climatic variables maintenance costs can be very difficult to predict.

To avoid the financial risks involved with maintaining off-shore facilities, development entities often lease marinas and piers to independent operators. The operators are responsible for the management and maintenance of the facilities. At Palmer Point, for instance, the developer improved the overall condition of the 154-slip marina by providing boardwalks and minor utility lines. The facility was then leased to an independent operator and opened to the general public. Although condominium owners in the project are given priority when renting boat slips, maintenance of the marina is not the responsibility of the condominium association. The marina slips average 25 feet in length and the rental rate is \$40 per linear foot per year.

Security is an extremely sensitive issue in the management of urban waterfront projects. Many jurisdictions require developers to provide public access to the shoreline and promote the recreational potential of the water's edge. Faced with this requirement, the development entity must be able to balance the public's right of shoreline access and use, with the responsibility to provide security and protect property. In this respect, it is

important for the development entity to know the legal implications of permitting or prohibiting the use of all common areas in the project.

The second major postdevelopment activity is administering financial accounts and tenant relations. The financial viability of an urban waterfront project depends on the sound management of income and expenses, rent collection, tenant relationships, and marketing for replacement tenants. These responsibilities are especially significant in large retail and office complexes where lease terms, rents, and responsibilities vary significantly among tenants. Basic management activities include:

- paying taxes;
- billing and collecting rents and paying expenses;
- negotiating lease renewals and replacements, and leasing vacant space;
- periodically analyzing market conditions and tenant mix;
- contracting for special services;
- managing the in-house staff services;
- responding to tenant's special requests and needs;
- providing business and financial assistance to selected tenants under special circumstances.

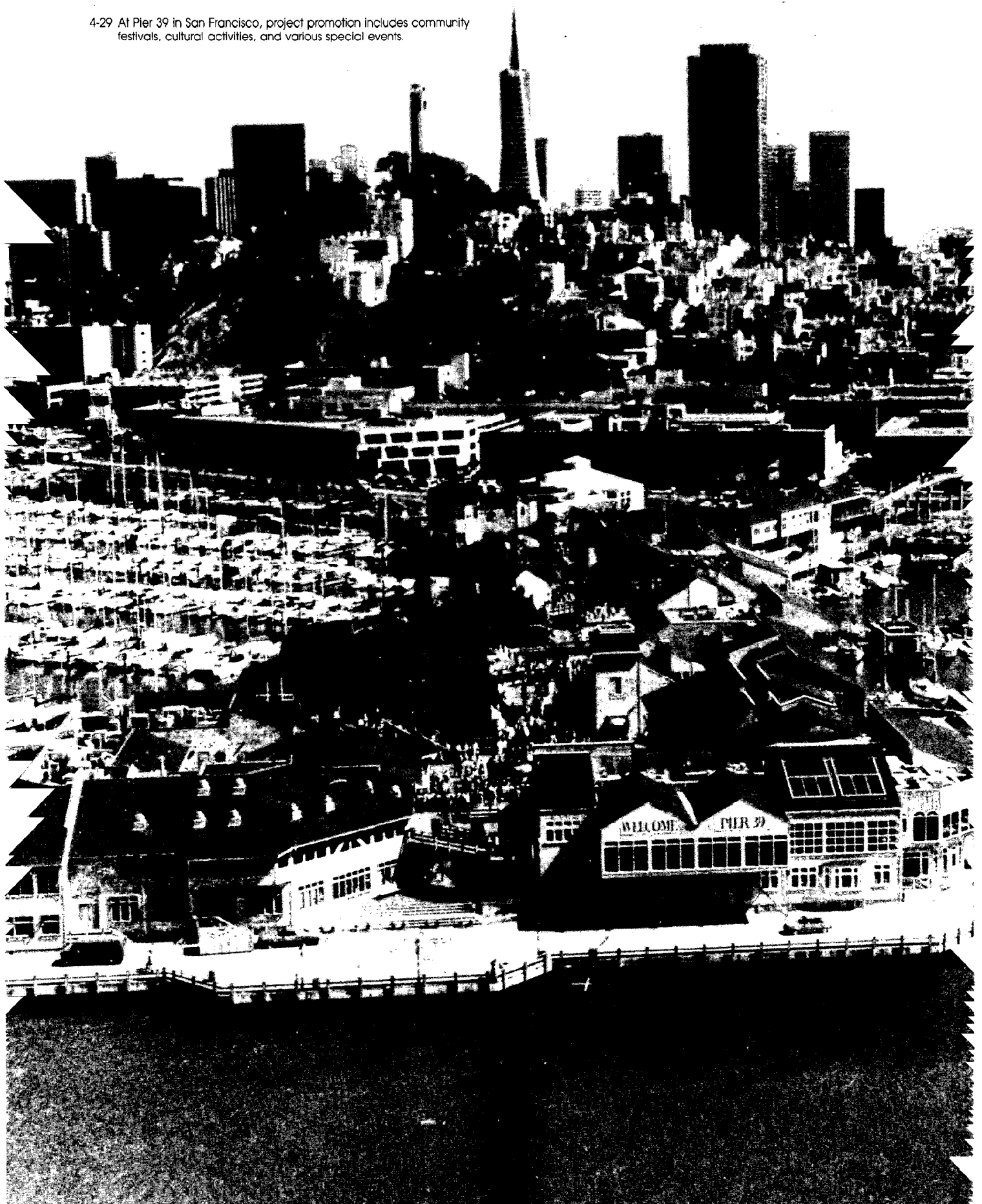
The third major postdevelopment activity is marketing the development project and maintaining good community relations. It is a continuation of the efforts made during predevelopment to gain public acceptance of the project proposal, expedite construction, and pre-lease space. During postdevelopment, promotional and public relations activities are expanded to include:

- promoting the waterfront site as an attractive shopping destination and business area;
- organizing and providing support for any merchant or tenant associations;
- promoting community events and water-related activities in the project area;
- maintaining contact with public agencies like the police, fire, and building inspection departments;
- promoting the project through community contacts in schools, civic organizations, and public meetings;
- maintaining contacts in the business community to support marketing and financial concerns.



4-28 The Palmer Point marina in Greenwich, Connecticut, is managed and maintained by an independent operator.

4-29 At Pier 39 in San Francisco, project promotion includes community festivals, cultural activities, and various special events.



Promoting a project is particularly important when it is located in a waterfront redevelopment area. Unless an aggressive promotion effort is made to alter the reputation of an urban waterfront as a derelict, uninviting, inaccessible place, the project will not capture its potential market. At Laclede's Landing in St. Louis, for example, the Redevelopment Corporation recognized the need for an association to promote and market the area as a retail center. To answer the need, the Redevelopment Corporation assessed each project a minimal percentage of construction costs to fund a sales and promotion office.

Depending on the scale of revitalization, project promotion may go far beyond traditional advertising and direct mail announcements and include community festivals, cultural activities, and various special events. The commitment to cultural programming at Harbourfront in Toronto was, and continues to be, an important element in the project's overall success. When the private development program started, the image of the site was mostly negative in the minds of Toronto residents, and the water's edge was not a strong enough amenity to overcome this perception. The public needed to be reintroduced to the central waterfront through a series of positive rewarding experiences. The regular activities and special events did this and at the same time established a lasting identity for Harbourfront as a interesting and enjoyable place to be.

Public/Private Project Management

Managing and maintaining large waterfront projects that combine uses within public and private areas requires a tremendous amount of forethought and cooperation by both public and private interests. Postdevelopment activities become much more complicated when there is a need to distinguish between the public and private elements of a project and allocate responsibilities and costs accordingly.

One important issue is variation in the quality of maintenance between public and private areas. In many instances public maintenance is less dependable and slower to respond to immediate needs. One reason is the public sector is less able to obtain adequate funding to provide maintenance.

Another issue concerns the difficulty of assigning costs for operations and maintenance because it is virtually impossible to separate public land and private use. Heating and cooling systems, for example, cannot be regulated to indicate public and private consumption within a project. Other operational services create similar problems.

A third area of conflict can occur when private developers are required to maintain public access to the shoreline at all hours regardless of a tenant's operating hours. This requirement can create security problems and increase operating costs.

Attempts have been made to resolve these issues by forming management organizations that are responsive to the needs and priorities of both public and private development interests. The common approach is to divide responsibilities according to ownership of specific parts of the project. At the Inner Harbor in Baltimore, for example, the city is responsible for maintaining all public parking, shoreline bulkheads, and plazas, and private interests are responsible for their own building complexes within the development area.

In San Diego, the Seaport Village Project is managed and maintained by the private developer but under the supervision of the Unified Port District. The District manages and maintains the park areas adjacent to Seaport Village. To control the uniformity of maintenance, the Unified Port District imposes maintenance standards on all waterfront lease holders.

Because of the experience gained in projects where responsibilities are split, jurisdictions are considering assigning these responsibilities to a single entity. This type of approach is attractive for several reasons:

- A single management entity is a more efficient way to use and to coordinate planning and administration.
- A single entity centralizes responsibility and minimizes the potential conflicts that arise when two or more organizations try to do the same job.
- The developer concerned with maintaining a high-quality project usually wishes to exercise continued control over the level of maintenance and repair in all parts of the project that adjoin the private portions.
- The public entity may be reluctant to commit itself to long-term operation and maintenance that is of a higher standard than it normally provides in other public areas. In addition, it may not wish to become entangled in the special management problems that often are present in complex waterfront projects.

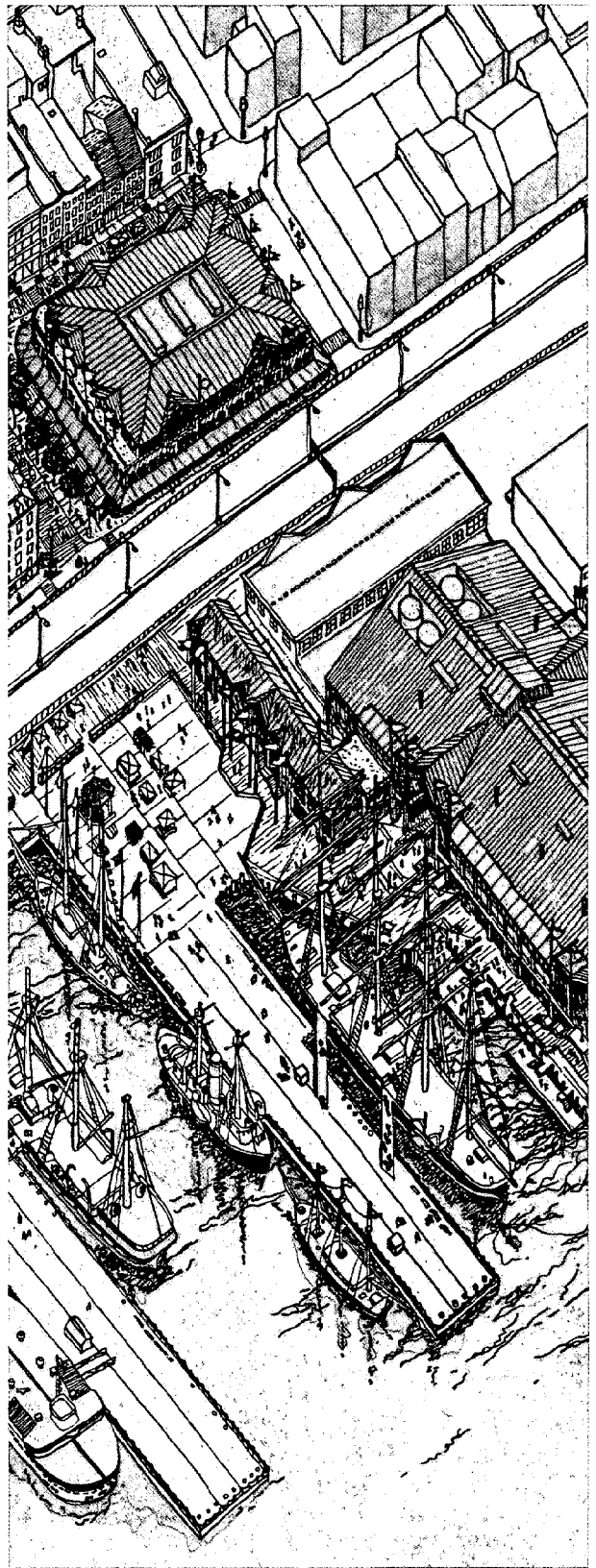
No matter what approach is selected, careful and detailed consideration must be given to managing and maintaining waterfront projects.

V. Selected Case Studies

Urban waterfront development is occurring in the port areas of large metropolitan cities, small resort towns, commercial fishing villages, and many medium-sized industrial cities. The following collection of case studies presents a representative cross-section of urban waterfront development in North America. The selected projects include:

- Harbourfront, Toronto, Ontario
- Union Wharf, Boston, Massachusetts
- Charlestown Navy Yard, Boston, Massachusetts
- Laclede's Landing, St. Louis, Missouri
- Inner Harbor, Baltimore, Maryland
- Johns Landing, Portland, Oregon
- The Embarcadero, San Diego, California
- False Creek, Vancouver, British Columbia
- Palmer Point, Greenwich, Connecticut
- Pickering Wharf, Salem, Massachusetts
- City Waterway, Tacoma, Washington
- Harbor Plaza, Stamford, Connecticut.

The first eight projects are located in major metropolitan areas and make up either all or a portion of a large-scale waterfront development program. The last four projects are much smaller in scale and located in medium-sized cities. The majority of the projects combine the adaptive use of existing structures with the construction of new buildings.



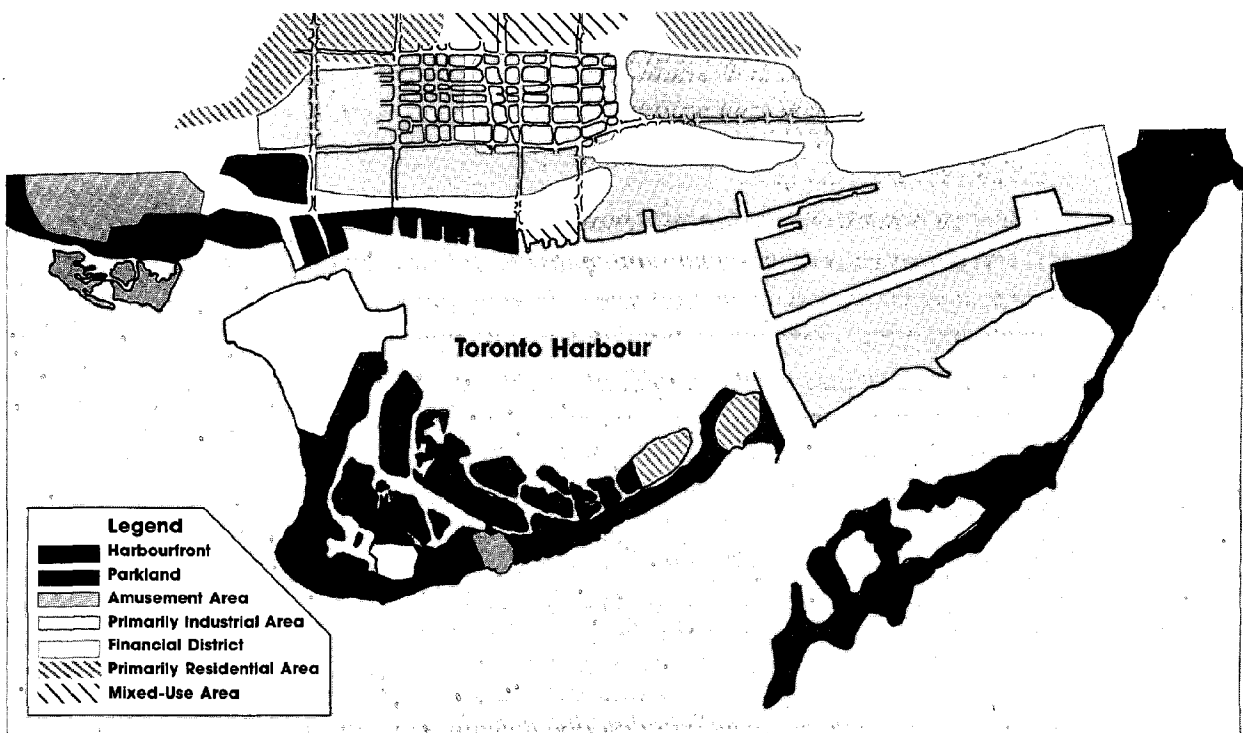
Harbourfront, Toronto, Ontario

Harbourfront is a large-scale, mixed-use redevelopment project designed to transform 92 acres of Toronto's underused, deteriorated central waterfront into a unique urban neighborhood, complete with lakefront parks, recreational facilities, low-rise commercial and residential buildings, shops, restaurants, and marinas. It is a remarkable project considering that at one time the reclamation of Toronto's central waterfront seemed highly improbable if not impossible. The city had lost touch with its shoreline and harbor; rail lines and highways had separated the grimy, underutilized industrial waterfront from Toronto's vibrant, attractive downtown.

Ten years ago, however, the Canadian government announced it would purchase virtually all of Toronto's central waterfront and present it to the city for redevelopment. Several years passed before all the planning, design, and financing issues could be resolved. Finally, in 1980 the Canadian government approved a \$27.53 million plan to develop Harbourfront over a seven-year period. The plan calls for the complete rejuvenation of the Harbourfront lands into a people-oriented, mixed-use urban area in accordance with the principles outlined in the 1978 "Harbourfront Development Framework." The venture combines public and private sector investment under the direction of the Harbourfront Corporation.

History

In 1793 Lieutenant-Governor John Graves Simcoe selected a site on the north shore of Toronto Bay as the location for a new town to be named York because he regarded the Bay (renamed the Toronto Harbor) as the best harbor on Lake Ontario, suitable for all military, naval, and commercial activities. The harbor is protected by the Toronto Islands—called by that name from the beginning even though they were connected with the mainland at the eastern end of the harbor. In 1830 a minor breach appeared in the spit of land linking the islands with the mainland, and in 1858 a great storm carved a channel 150 feet wide and three feet deep through the hard sand. The channel was deepened to form the Eastern Gap, now the main entrance for ships coming into Toronto Harbor. Prior to the establishment of the Eastern Gap, ships would enter the harbor from the West where the bay opened into Lake Ontario. With the Eastern Gap providing access to open waters the western end of the harbor was later constricted as the islands were expanded with landfill. This is the land where the island airport is presently located.



Source: Harbourfront Corporation, 1978

5-1 Harbourfront is located on Toronto's central waterfront.

During the city's early development the undulating shoreline ranged from 100 to 500 yards south of Front Street, approximately a quarter of a mile inland from its present location. Like many other lakefront cities, Toronto has a history of filling the shoreline to create lands for new uses or the expansion of existing uses. The original Port of Toronto was located in the central waterfront area of the harbor. The evolution of the Toronto waterfront is marked by succeeding "headlines" as landfill operations have extended the shoreline farther and farther into the harbor. These headlines include the Esplanade, Fleet Street, and Queen's Quay.

In addition to deepening the harbor and expanding the port area through its reclamation activities, the Toronto Harbor Commissioners (appointed in 1911 to coordinate administration of the port and harbor) built a protective breakwater 900 feet offshore, extending from the Humber River to the Western Channel. The project was interrupted by World War I, but work was resumed in 1919 and the breakwater was completed in the mid-1920s.

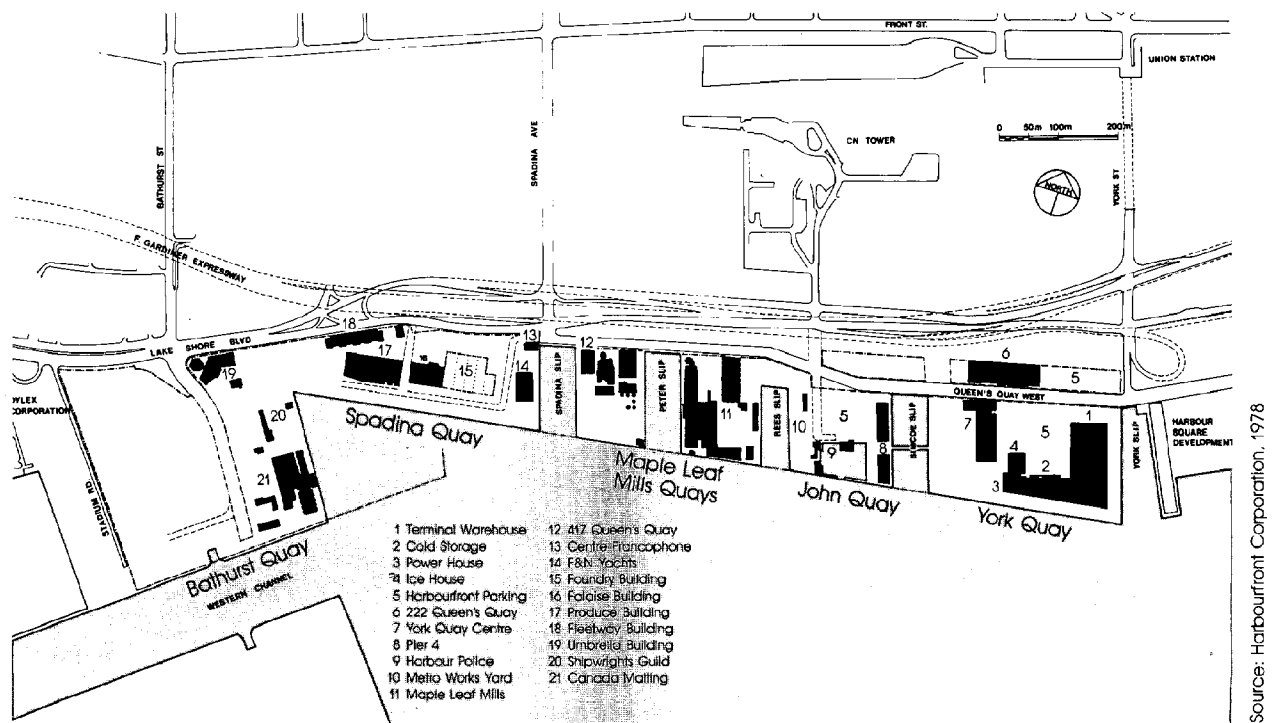
Toronto in general and its waterfront in particular have been greatly influenced by the growth of the rail system. In the latter part of the nineteenth century, land that had been intended for a public promenade along the lakeshore was used by the railways for loading and unloading freight. By 1908 there were from nine to 16 tracks the length of the waterfront at street level, separating the harbor from the business and industrial

centers of Toronto. It was not long before the 40 isolated wharfs between Bathurst and Parliament Streets began to deteriorate. One of the harbor commission's initial tasks was to improve conditions in this area.

Yet the railway still formed a barrier between the city and its harbor. In 1924 work was started on a new railway viaduct which allowed unimpeded road access to the waterfront through nine underpasses between Spadina Avenue and the Don River. However, in the mid-1960s the construction of the Gardiner Expressway (an elevated, limited access highway) imposed yet another barrier between the heart of the city and the shores of Lake Ontario.

The port of Toronto had a flourishing grain trade in the latter part of the nineteenth century, but with the development of rail services, this gradually diminished. In 1917 a shipbuilding facility was constructed on the waterfront for production of freighters for World War I and, later, World War II. The area from York Street along the water to Stadium Road (past Bathurst) was used as a port. But with the development and use of container vessels in the 1960s the port facilities in this area became inadequate and shipping moved to the new port at the eastern end of the harbor. The new port provided up-to-date facilities accommodating larger ships.

By the early 1970s, however, only two large industries—Maple Leaf Mills and Canada Malting—remained active on the central waterfront. Maple Leaf Mills, Ltd., was by far the largest operation. The complex covered 11 acres and consisted of two sets of grain storage silos, a cooking oil refinery, storage tanks, warehouses, feed mills, and executive offices. About 30 ships a year visited the Maple Leaf complex. In addition, grain was moved



5-2 The Harbourfront site prior to redevelopment.

in and out of the area by trains and trucks. Over the years the elevators were expanded and Maple Leaf Mills had storage capacity for four million bushels of cereal crops. The freighters also increased in size and many of them were too large for the Maple Leaf facilities. They had to be half unloaded, backed out of the slip, then backed in again to complete the unloading. The company started moving its main base of operations in the later '70s and demolition of the elevators began in 1982. Canada Malting, however, remains. Established in 1926, the operation consists of 14 buildings on four acres and produces malt (from barley) used in food processing, beer, and cattle feed. About 80 percent of the barley used by Canada Malting comes from Western Canada by lake freighter; the rest is produced in Ontario. It has a 10-year lease with Harbourfront until 1990.

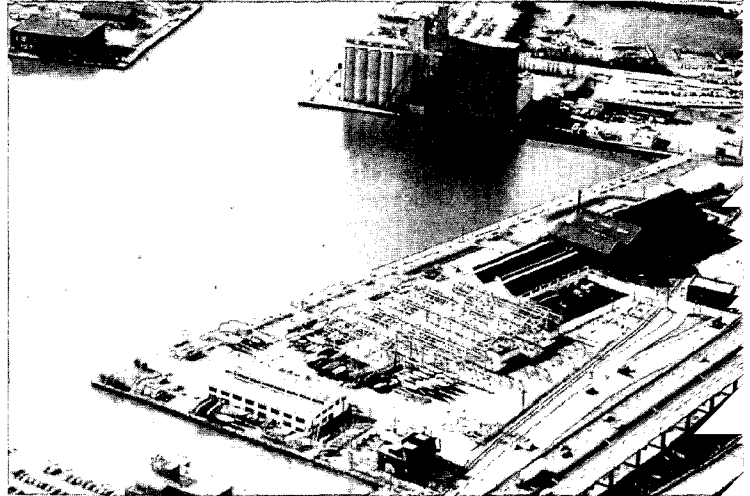
Despite the presence of these two large industries, the functionally obsolete old port area was rapidly becoming deserted and derelict. Over time, a few scattered parcels of waterfront property were picked up by private developers, speculating on the potential resurgence of the city's central waterfront.

Development Strategy

The Harbourfront development project was initiated by the Canadian government which, in 1972, expropriated 91 acres of Toronto's central waterfront (71 acres of land and 20 acres of water lots) bounded by York Quay and Stadium Road and south of the Gardiner Expressway. The federal government's plan was to create a unique urban park, blending traditional concepts of parkland and open space with a variety of cultural, recreational, and commercial activities. The project ran into difficulties and opposition in its early years because the metropolitan and city councils of Toronto had not been consulted.

A citizens' council was appointed in 1975 to help set up guidelines for the project. In reviewing the material from public meetings, professional planners, and the Intergovernmental Waterfront Park Committee, the citizens' council came up with two important recommendations. One was that the Harbourfront project should be controlled by a locally based board of directors, with representation from the city of Toronto and metropolitan Toronto, together with Toronto businessmen appointed by the federal government. The second was that the corporation would make the Harbourfront facilities available to community groups who would program cultural and recreational activities for the general public as well as their own communities. Both the Harbourfront Corporation, an Ontario-based company whose shares are owned by the federal government, and its local nine-man board of directors were set up in 1976.

Photo credit: Tom Sandler, Harbourfront Corporation



5-3 By the early 1970s, Toronto's old port area was functionally obsolete, despite the presence of Canada Malting.

Initially the citizens' council's idea was to create a traditional park on the site by clearing the property of structures and then implementing a landscape plan. There is no doubt that a single use urban park would have been a distinct improvement over the mix of derelict industry that existed. But it did not take into account the range of potential uses of the site. Furthermore, simply sodding the waterfront would have made it useful only six months of the year.

The Harbourfront board saw the opportunity to create something unique, innovative, exciting, and beautiful—a harbourfront that bustled with the vitality of Toronto. They envisioned a place where quiet contemplation could exist with attractions and amenities that would make the site Toronto's most dynamic new community, a community that would pulsate with life and activity year-round.

The Harbourfront board realized that a concept of this magnitude would have to have some firm principles to guide it. Work was begun on a detailed seven-year development plan for the future of Harbourfront. This plan, entitled "Harbourfront Development Framework," was completed and published in 1978.

Planning

The "Harbourfront Development Framework" is a guide to the future of the site. It is not a master plan in the traditional sense of being a rigid prescription. Rather, it is a set of goals to be achieved, a basic structure which organizes the site, a series of principles to guide future development, and a financial strategy.

The Development Framework was prepared to give clear direction to physical and financial plans. It serves as a mechanism through which the various levels of government with responsibilities in the area can ensure that their particular interests will be given full consideration. More importantly, it provides a context in which public and private groups can participate in the development of the site.

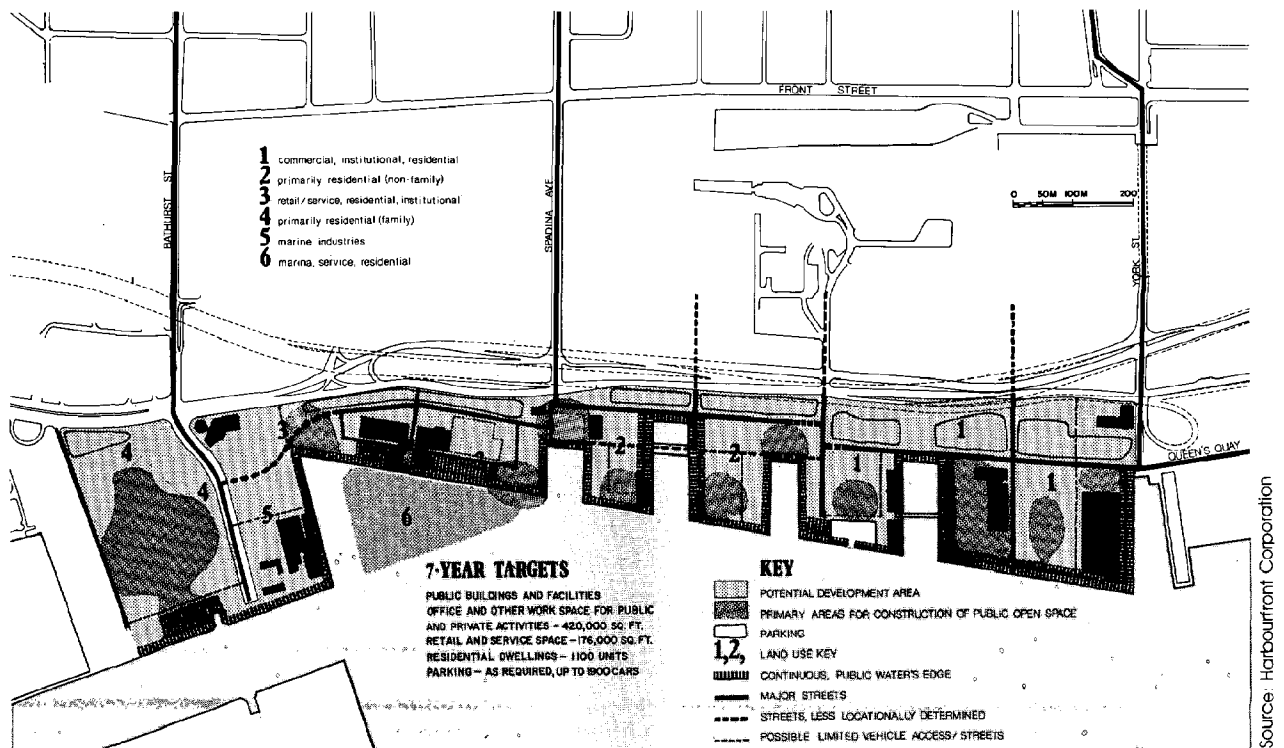
One of the keys to the seven-year development plan was to initially spend public money—about \$27.5 million—to attract an estimated \$200 million in private investment into the site. Approximately \$20 million would be invested in roads, sewers, services, and other infrastructure necessary to support private development. Much of the housing that is programmed to be built is to come from private firms who will lease the lands on a long-term basis.

Another key principle is to make Harbourfront self-sufficient within a seven-year period. The federal government currently subsidizes operations by about \$3 million a year, although more and more of the annual budget is being defrayed by revenues earned from commercial leases. Part of the \$27.5 million (\$7.4 million) was designated to cover operating deficits for the seven-year period. Over the seven years, the incremental development of the site will result in growing revenues, and by 1987 Harbourfront should be paying its own way.

Some of the other important principles contained in the "Harbourfront Development Framework" are as follows:

- Harbourfront should be an identifiable community active 24 hours a day year-round, with a vitality that can only be achieved with people living and working there.
- Access to the waterfront needs to be improved and that includes better parking, better road access, better integration with the public transportation system, and cooperation with the redevelopment of the railway lands to the north.
- There should be a strong mix of activities so that the site is a place for a cross-section of the community.
- Development has to respond sensibly to climatic factors and make use of indoor space, covered walkways, and buildings to shelter open space.
- Views from the city to the water should not be blocked and the intersection of the city streets and the lake should be preserved for special public use.
- Generally, ground level space will be devoted to public use.
- Buildings that can accommodate these principles should be restored, renovated, and preserved.

The idea guiding redevelopment was to make Harbourfront a public place. The lands are being made more accessible to the public, and the project is gaining a strong public identity. The Development Framework specifically addressed ways to achieve this goal. One of the unique concepts guiding the development of Harbourfront was the marriage between cultural



5-4 Land use plan.

programming and real estate development. With some modest landscaping and facility improvements Harbourfront has emerged as one of the top 10 recreational and cultural centers in Toronto. In 1981, for example, the combination of an attractive waterfront setting together with more than 2,500 programmed events attracted nearly 1.8 million visitors.

The physical improvements and cultural activities have served to significantly alter the image of Toronto's central waterfront. Harbourfront has become a popular destination for a broad range of residents, visitors, and tourists. More importantly, its popularity has helped create a market demand capable of supporting the intensity of private development planned for the site.

If the proposed private development had been initiated in 1972 prior to any cultural programming, its success would have been in serious doubt. The image of the site was mostly negative in the minds of Toronto residents, and the water's edge was not a strong enough amenity to attract people back to the central waterfront. The public needed to be reintroduced to the site through a series of positive rewarding experiences.

The Development Framework displayed a strong sensitivity to the locational and environmental factors defining the waterfront site. Both the assets and problems associated with developing Harbourfront were inventoried and incorporated into the planning and design process.

When the Harbourfront Corporation was formed, the condition of the waterfront site was carefully evaluated. The evaluation revealed both the positive and negative attributes of the property. The most important assets were single ownership of approximately 90 acres of prime development land; the property's southern exposure and 10,000 feet of shoreline; a large amount of existing rentable building space; water views; an existing marine industry; and proximity to Toronto's downtown financial district.

On the other hand, the site presented many problems to the Harbourfront Corporation. The major drawbacks were that the site was physically and visually cut off from the city by railroad yards and an elevated expressway; the site had inadequate streets, utilities, and amenities; existing industry was incompatible with the proposed waterfront uses; much of the site was exposed to severe winter winds; and public access to the shoreline was restricted in some areas.

All of these factors—both positive and negative—were taken into account as the land use and proposed structure of the development plan was prepared. The development plan consisted of three basic elements: features which are generally fixed in their location, the mixture of uses for the various areas which supplement

the primary public areas and buildings, and the targets for the volume of various kinds of uses to be developed over a seven-year period. In addition, a public space system was carefully thought out and diagrammed. The Development Framework showed 56 acres of the site dedicated to open space, 12 acres of streets, and 26 acres covered by buildings and other structures. The open space system was designed to provide variety. There is the wide paved promenade along the water's edge, boat docking areas, larger formal plazas and squares framed by buildings, small intimate weather protected parks, and large landscaped fields.

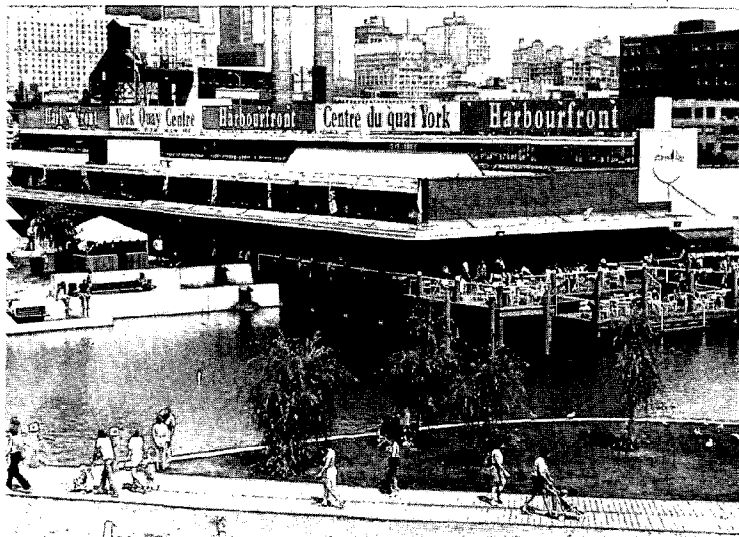
The Development Framework clearly stated that one of the primary considerations in development of Harbourfront was to ensure that the view from the city to the lake would not be obstructed. In this respect, city streets (existing and future) were designated as view corridors with all of them terminating in slips or in public open spaces. Furthermore, new buildings were sited to frame views through spaces to the lake.

The need to construct a basic system of new streets to make the Harbourfront lands more accessible and service new development was recognized from the beginning. One of the main objectives was to provide a continuous east-west street system through the property. This was not to be a major through-route for travelers, but rather a system to accommodate the movement of service vehicles and local traffic. North-south streets (Bathurst Street, Spadina Avenue, and York Street) are the connecting links to the city center to the north. New street alignments at Peter, John, and Simcoe Streets were planned for eventual connection across the railway lands.

The last item worth mentioning is that the Development Framework devoted a great deal of attention to climate. The summer climate at Harbourfront is pleasant, with fresh breezes from the lake. But conditions from November to May can be very bleak and severe, with the coldness made more extreme by icy winds.

Response to the climate was one of the primary concerns in planning the site. Landscaping the quays as large open areas obviously would not provide the kind of environment that people could enjoy all year. Instead, buildings are deployed to shelter people from the winds, which come mainly from the westerly quadrant. Features such as covered walkways along the ground floors of the buildings, which can be glass-enclosed in winter and opened in summer, encourage year-round use of the lands.

Photo credit: Tom Sandler, Harbourfront Corporation



5-5 Public access to and enjoyment of the water's edge was an important development objective for Harbourfront.

Site Development

Harbourfront consists of five subareas named after the quays that dominate each area. The subareas from east to west are York Quay, John Quay, Maple Leaf Mills Quay, Spadina Quay, and Bathurst Quay. Within the general development framework, specific plans have been prepared for each subarea.

Although a great deal of the planning and design work has been completed, the physical development has not been fully implemented. The following discussion describes both the existing conditions and the proposed total development for each subarea of Harbourfront.

York Quay

York Quay will be the most intensively developed part of the Harbourfront lands because of its proximity to the central business district. While some residential uses will be accommodated at York Quay, office and retail development will be highlighted. In addition, the existing public activity space and park area will be maintained and possibly expanded to other areas.

The Terminal Warehouse, just across Queen's Quay west from the foot of York Street, is the largest building on the site and marks Harbourfront's eastern boundary. Officially opened in 1927, it is one of the first poured-in-place, concrete structures in Canada. Because of its location on landfill, thousands of wooden piles were driven into solid rock on the harbor bottom to support the structure, and as a result it virtually "floats" in place. There were no standards for poured concrete buildings when the warehouse was erected, and the builders made sure of the structure's safety by using much more cement than they had to. This has made renovation

more difficult. The warehouse has eight floors, with a total of one million square feet of floor space, 25 percent of which was used for cold storage. The rest of the space was used for offices and showrooms.

The warehouse is being redeveloped as a mixed-use structure containing commercial and retail space, offices, and residential units. Olympia and York Developments Ltd. are the developers of the project. They anticipate investing at least \$50 million in the million-square-foot building to transform it into a major Toronto attraction, with lively restaurants, markets and waterside shops, and walkways and covered malls leading through the structure to the lake. The building will contain offices and parking. Three large atria will allow light and air to penetrate the building. The most spectacular indoor space will be the eight-story courtyard overlooking the water at the southeast corner of the building. Garden-type apartment condominiums will be built on the roof of the structure, providing Harbourfront with its first residential units. Of particular importance will be the construction of a multi-purpose 450-seat Harbourfront dance auditorium specially tailored to the needs of the many performing companies who now visit the site. The inclusion of the auditorium was the response of the developer to the emphasis placed on cultural programming and activity by Harbourfront Corporation, and reinforces the goals articulated in the Development Framework. The Cold Storage building next to the warehouse was demolished to provide a view of the harbor from the area to the north.

The renovation of the warehouses is one of the largest ever undertaken in Canada and represents the first major private investment on the Harbourfront site. Olympia and York have a 99-year agreement, providing Harbourfront Corporation with a fixed annual rent plus a percentage of revenues.

There is a tall red brick building west of the Terminal Warehouse called the Ice House. It was built in 1926 as an ice-making and storage facility. It is an unusual building—just one story despite its 90-foot height—and will be reused. In 1974 the area in front of the Ice House was landscaped with red interlocking bricks, trees, flower beds, and grassy banks. This area, called Urban Square, includes the Ice House and is slated for redevelopment, possibly including a new contemporary art gallery and small concert hall or theater.

West of the Urban Square was the Direct Winters Building, located at 235 Queen's Quay West. It was built in the late 1940s to accommodate the warehouse and offices of a trucking company. The building has been renovated and renamed York Quay Center. It now houses the Amsterdam Cafe, a theatre, the art gallery, craft studios, exhibition gallery, and information center and is Harbourfront's main programming area. An outdoor stage, called the "Ship Deck," is located on the east side of the York Quay Center building. The concrete slab that serves as the stage floor was formerly the floor

of the Pier 5 warehouse that occupied this portion of the site. South of the York Quay Center is a grassy area with picnic tables, benches, and cooking facilities. York Quay Center will remain a focus of public activity.

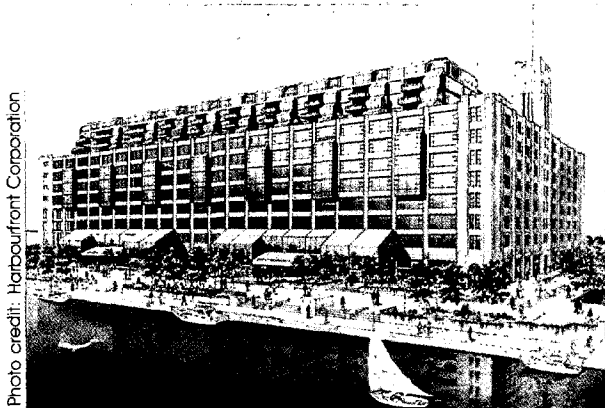
In addition to the Terminal Warehouse project now renamed Queen's Quay Terminal, the development plan calls for a mixture of new commercial and residential structures to be built. The concept is to create protected squares, waterfront meeting places, and access ways through the site to the lake.

Projections show that by 1985 York Quay will contain 300 to 800 residential units, 998,000 square feet of office space and approximately 165,000 square feet of other nonresidential uses. By 1990 the other nonresidential uses which include institutional, recreational, cultural, and other commercial uses (including retail) will be expanded to 980,000 square feet.

The waterfront promenade begins on York Quay at the eastern edge of Queen's Quay Terminal. This is a broad paved pathway which will run in and out of the quays along the water's edge the entire length of the site when it is complete. The western border of York Quay is Simcoe Slip where ships visiting Toronto are often moored.



5-6 The Terminal Warehouse located on York Quay is being redeveloped as a mixed-use structure containing commercial and retail space, offices, and residential units.



5-7 An artist's rendering of the completed warehouse project renamed Queen's Quay Terminal.

John Quay

John Quay is located just west of York Quay and outlines the western edge of Simcoe Slip. Although it is technically a quay, it is known as Pier 4. This designation goes back to the 1920s when the landfill area was created and the terms quay and pier were used interchangeably.

Pier 4 was used as a landing stage from its creation until the 1960s when the new port facilities were constructed at the eastern end of Toronto Harbour. In 1930 a shed was built on Pier 4 to store cargo. This shed is the Pier 4 warehouse which has been renovated as a marine center.

Public interest in the warehouse was raised in 1978 when the Marina 4 Company started its first venture, The Pier 4 Storehouse Restaurant. Soon all the available space on the pier was rented to companies with marine interests and a small retail complex was started. The complex was so successful that three sailing schools were moved to their own quay further west and a second waterfront restaurant added.

A 100-foot boat marina was developed by the Marina 4 Company in Simcoe Slip between York Quay and John Quay. The high-level fixed span pedestrian bridge between the two quays was constructed as part of the marina development, with the Dutch lift design allowing boats to come in and out of the north end of the marina.

Photo credit: Tom Sandler, Harbourfront Corporation



5-8 The Pier 4 marina and pedestrian bridge.

Another major occupant of the John Quay is the Toronto harbor police. The waterborne force has over 40 permanent officers, 20 motorboat crewmen, and a 14-vessel fleet. They maintain a 24-hour harbor watch from a 100-foot-high lookout tower located at the foot of Rees Street.

Further west, there are now five sailing schools located in Harbourfront's new Learn to Sail Centre, established in 1980. The Harbourside Sailing School was one of the first marine activities to start at Harbourfront in 1976. At that time, it was heavily subsidized by the Corporation. Now all the sailing schools are self-sufficient enough to pay rent to the Corporation. One of the more unusual on-the-water schools is Toronto's Brigantine, Inc., a nonprofit youth training organization. It offers an adventure sailing program to teenagers aboard two tall ships, "Playfair" and "Pathfinder."

It is anticipated that 250 to 350 new residential units will be built on John Quay by 1985, and another 375 units by 1990. At that time 106,000 square feet of office space will be developed on John Quay. The plan is presently to provide docking facilities and offices for the harbor police at the water and ground level. John Quay will be a transition between the office and retail focus at York Quay and the predominantly residential uses proposed for the Maple Leaf Quays. The Rees Street Slip separates John Quay from the Maple Leaf Mills Quays.

The Metropolitan Toronto Department of Works maintains a marine yard that takes up about two acres on three sides of the Rees Street Slip. The land was leased to Metropolitan Toronto by the Toronto Harbour Commission on January 1, 1955, for a period of 99 years. The yard consists of a small brick workshop and office building and a large green warehouse used for storage. The rest of the two-acre property is used for maintenance of the yard's work boats and other equipment.

This modest installation has played and continues to play a vital part in the life of the Toronto waterfront. There has been a marine yard at the foot of John Street since 1854. The location of the yard moved south over the years, following the progress of the various landfill programs until it reached its present location. The city of Toronto's freshwater supply pipeline from the island filtration plant comes ashore under this lot and is linked with the water system from the John Street pumping station. The yard continues to serve as the main supply depot for the water filtration plant on the islands. The marine crane, boats, and barges and the tug *Ned Hanlan II* work out of this yard.

Maple Leaf Mills Quays

This part of the Harbourfront site is occupied by Maple Leaf Mills, Ltd. Its two sets of grain elevators are the only licensed storage silos in Toronto. They are used to store soybeans, flax, and wheat. The east group of silos (Monarch Flour) is 250 feet by 100 feet and rises to a total height of 195 feet. The larger western group of silos is 430 feet by 70 feet and rises to 190 feet. These grain elevators were once vital to the flour milling industry in the Toronto area.

Although the elevators were listed by the Toronto Historical Board as a significant and valuable link with Canada's heritage they were no longer profitable for Maple Leaf Mills. The company's industrial operations were also deemed to be incompatible with the public enjoyment of the Harbourfront site. Indeed, there was no public access to that part of the site while the mills were in operation. Studies have been undertaken over the years to see if some other, more public use could be found for the grain elevators, but having failed to find one, the elevators were put on the demolition list. The company moved its main base of activity in 1979, ceasing operations altogether in September 1982. Demolition started in October of that year.

The Maple Leaf Mills lands are targeted for residential development. Apartment structures, on the scale of eight to 12 floors, will be built to form a series of public open spaces. The target date to start the rebuilding is the mid to late 1980s. The maximum permissible floor area on Maple Leaf Quay West is 403,660 square feet. It is likely that two buildings will be developed on the easterly side of the Quay—one close to the shoreline and the other to the east of 417 Queen's Quay West with the extension to Queen's Quay separating the two parcels. The heights of these buildings are not likely to exceed eight stories on the southern parcel and 10 to 12 stories on the northern parcel.

The Maple Leaf Mills cooking oil refinery which previously occupied Maple Leaf Quay West has been demolished. The newly landscaped site is used to provide temporary extended parking facilities.

Development plans show that 720 to 837 residential units will be constructed on this quay by 1985 along with 41,000 square feet of space for other nonresidential uses. This new development will complement the existing 53,000 square feet of office space contained in the 417 Queen's Quay West building.

The edges of the quays will be lined with cafes, restaurants, stores, shops, and other amenities. New canals could be built on the quays, and the protected areas formed by development will become major public spaces.

Spadina Quay

Spadina Quay was first used as a wharf when it was created by landfill operations in the early years of this century. The Falaise and Foundry Buildings were erected in 1917 for production of freighters for the war effort. Until the end of the war, Dominion Shipbuilding Ltd. produced a freighter a month. In 1950, when the building was turned over to the Canadian Army to store jeeps, trucks, and ammunition, it was christened the Falaise in honor of the famous World War II battle. Another building in this complex is now occupied by F & N Yachts. Spadina Quay provides a pump-out service, the only one on this side of the harbor, for visiting boaters between May and October.

The Automotive Trucking Association (ATA) building at the northeast corner of the Spadina Slip was constructed in 1939 as part of the shipbuilding facility. At the end of the war, it was taken over by the ATA for its headquarters. The ATA used the building until Harbourfront acquired it in 1973. The three-story brick structure now houses the Francophone Community Center of Metropolitan Toronto on the second and third floors, while the ground floor has been converted into a public auditorium and meeting room for use by community groups.

There are three other buildings on this quay: the Loblaw's Produce Warehouse, the Fleetway, and the Buggy Building. The produce warehouse, immediately west of the Falaise, was built by Loblaw's in the early 1920s and was used for many years to store fruit and vegetables from tropical countries. An unexpected characteristic of the building was discovered during the period when thousands of people toured the Harbourfront site to make suggestions for its use. A professional singer discovered the Loblaw's Warehouse had remarkably good acoustics. Since then, several groups have

wrestled with the idea of converting the building into an opera house or music hall, but so far the costs of renovation have proved to be just out of reach. The Fleetway Building was used by Loblaw's as a truck depot, while the Buggy Building (as the name implies) was where the company repaired its buggies. The Fleetway Building was demolished in 1980.

One of the first on-going attractions at Harbourfront was the Railway Museum established at Spadina Quay in 1974 by the Toronto and York Division of the Canadian Railway Historical Association (CRHA). The trains have been moved further west to make way for new development on Spadina Quay.

Spadina Quay is seen as an area containing residential and public uses. The proposed pier and marina development, the 1.5-acre park on Spadina Quay, and the renovated Produce Building provide a focus for a unique retailing concept which will have water and marine uses as a major focal point. These features will combine to create an atmosphere quite different from that found in any other location in the city. Between 550 and 800 residential units are planned to be developed by 1985 along with 50,000 square feet of other nonresidential uses. By 1990 the number of residential units will be increased to between 740 and 993 units and the amount of nonresidential uses will increase to 90,500 square feet. While lower in scale and intensity of use than the York Quay retail area, it is expected that Spadina Quay will ultimately provide in excess of 109,000 square feet of retail area, making it the only other extensive retail development area at Harbourfront.

The development of the pier, the breakwater, and the marina to the south on Spadina Quay will provide one of the most exciting areas at Harbourfront. The marina, which will provide mooring for approximately 150 boats, represents the largest single marine facility to be developed at Harbourfront. While different building configurations are still being explored, Harbourfront developers are prepared to give assurances that the height and bulk of the proposed development will not exceed the previously stated limits. Construction of the breakwater could begin in 1983, with an estimated construction time of 12 to 18 months. The area to the west of the Produce Building is not likely to be developed in the short term due to the presence of the railway lines. When developed, these sites will be primarily residential in use and will include the creation of public open space at the head of the proposed slip.

The new street through Spadina Quay is the functional and conceptual extension of Queen's Quay from Spadina Avenue through to Bathurst Street. In order to create the Spadina Avenue-Queen's Quay intersection it is necessary to reroute Queen's Quay south of 417 Queen's Quay West, through the Maple Leaf Quay West,



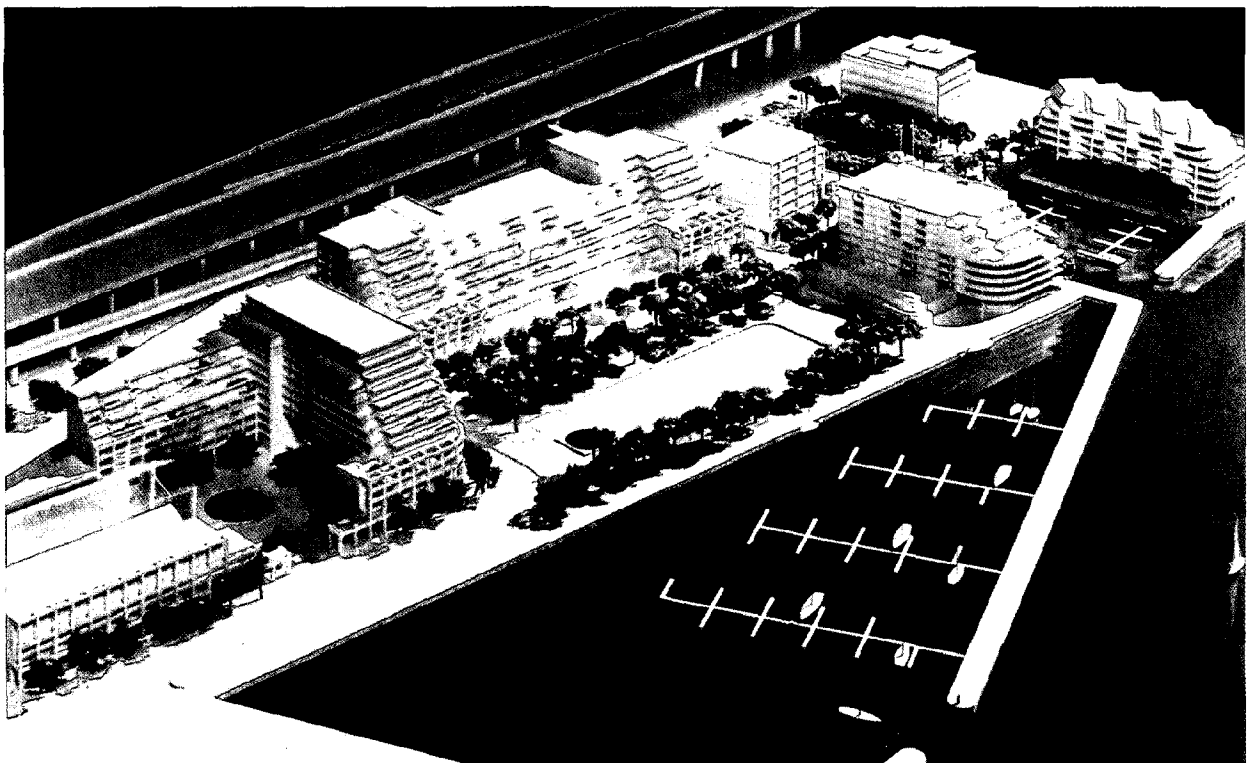
5-9 Spadina Quay will be redeveloped primarily for residential and public uses.

then across Spadina Avenue Slip and through to Bathurst Street. The slip has now been filled and the bed laid for the new Queen's Quay West across the slip. A small park is planned to the north of the new road, which forms the southern boundary.

The Queen's Quay extension comprises a 42-foot pavement, with a 65.6-foot right-of-way, together with a 16.4-foot sidewalk on each side. The 16.4-foot width is achieved by the requirement of a 4.6-foot building setback on parcels to either side. This is a more generous proportion of sidewalk to pavement than is typical in downtown Toronto and provides for trees, benches, and other street furniture without impeding free movement within the principal pedestrian zone. Trees will be planted within a five-foot boulevard zone, and a combined system of pedestrian and vehicular lighting will be incorporated with a compatible dimensional module. All lighting standards and other street furniture elements such as tree grates and guards, benches, and signage standards will be designed by Harbourfront. The extension of Queen's Quay will be developed as a street capable of accommodating public transit vehicles. Parking will be provided on both sides of the street.

Harbourfront is responsible for the design and construction of the 1.5-acre park at Spadina Quay. This park is conceived as being a passive recreation zone situated spatially within the sheltered enclosure created by the proposed buildings and overlooking the water's edge promenade and the marina complex. Its active street edges will be screened by public promenades and sidewalks lined with trees; its center will be large, green, and quiet. The center may also include smaller hard surface areas and special features such as a fountain or gazebo. A design of the park has been completed, with construction likely in 1982. It is anticipated that this park will be dedicated to the city of Toronto as a public park. Design approval of the park is required prior to dedication.

Harbourfront is responsible for the construction of the water edge promenade at Spadina Quay. Conceptually, this space is seen as a continuation of the water edge pedestrian route which eventually will extend, uninterrupted, the entire length of the Harbourfront lands. It is seen as a more formal urban space, with a decoratively paved hard walking surface, lit at the water side. The land side will provide a series of amenities, sitting alcoves, benches, and pergolas. Its general character as well as its furnishing will be consistent with the overall water edge concept as developed presently at York and John Quays. It is



5-10 A model of the development planned for Spadina Quay.

possible that the water edge promenade will be dedicated to the city of Toronto, in which case design approval is required.

The open space west of 417 Queen's Quay will be developed as a public park. Its east and north boundaries, as well as its west boundary (on the west side of the Spadina Avenue extension right-of-way) will be heavily planted with trees to enclose and orient this space to the water and the water's edge promenade. Special features may include an ornamental fountain, further heightening the sense of arrival at the waterfront. The park will be primarily hard-surfaced, incorporating such amenities as transit shelters, seating areas, kiosks, and public telephones in its overall design.

Bathurst Quay

Bathurst Quay occupies the western section of the Harbourfront site and is better known locally as the Old Ball Park. This is because the Toronto Maple Leafs built their stadium here in 1926. The Maple Leafs' ball club collapsed in 1969 and the stadium was torn down. The site covers 15 acres extending as far west as Stadium Road. Bathurst Quay, like the rest of the Harbourfront site, was created by landfill operations undertaken in the 1920s.

One of the earliest occupants on the landfill site was Canada Malting, which established itself here in 1926 and has been in operation ever since. When the Harbourfront site was expropriated by the federal government, Canada Malting was allowed to lease back the area it occupies for a term of 10 years. Canada Malting represents the second largest land use on the Harbourfront site, occupying just over four acres. The main building has been listed by the Toronto Historical Board because of its historical significance.

Also listed by the Toronto Historical Board is an odd-shaped building on the quay. It was built in 1927 as the head office for the Crosse and Blackwell Company, the famous English pickle and jam manufacturers. Designed by Alfred Chapman, who also designed the Harbour Commission Building, this unusual structure is one of the last remaining examples of art deco architecture in the Toronto area. In 1949 the building was acquired by the Loblaw's Company and used as their head office until 1975 when it was expropriated by the government as part of the Harbourfront project.

After the demise of the Maple Leafs, the Ball Park site was used as a storage depot until 1974 when it was landscaped as part of the Harbourfront project. Salt had been stored on part of the site, and grass and trees could not be planted until several feet of topsoil were excavated and replaced.

Photo credit: Tom Sandler, Harbourfront Corporation



5-11 Harbourfront's broad range of uses and facilities generate year-round activity.

Just south of this location are the adventure and creative playgrounds, which are open throughout the summer. These playgrounds have been in operation at the Harbourfront for many years. The adventure playground concept is modelled on the resourcefulness of children in bombed-out city blocks in Europe after World War II. This is the first such project in North America and it has drawn interested observers from many Canadian and United States municipalities. Harbourfront's adventure playground is a fenced area of 1.5 acres. It is meant to give children aged eight to 14 a chance to experiment with their environment by using materials not found in the conventional playground. The children build their own huts, slides, forts, and other structures with real tools, scrap lumber, old tires, and pieces of metal provided for them at the playground. The playground is a constantly changing world of the children's own making. It is off limits to adults but supervised by Adventure Playground Inc. The creative playground, an area of three-quarters of an acre, is meant for children aged 3 to 8. Children are provided with scale-to-size moveable components such as ladders, old tires, saw horses, blocks of wood, boards, panels, and boxes. The children use those materials to develop their creative abilities. Harbourfront supervisors are always on the site when it is open.

South of the playgrounds is the ferry dock for the *Maple City*, one of the busiest ferries in the harbor. The *Maple City* makes 64 round trips every day across the Western Gap to the island airport from 7 a.m. to 11 p.m. It takes just two minutes to make the 400-foot trip across the Western Gap. In an average year, she carries over 130,000 passengers and 4,000 vehicles.

The airport itself was built in 1938 and remains one of the 15 busiest in Canada, with over 172,000 landings and take-offs—about 500 a day. It is a "good weather airport" in that it has no instrument landing system. There are three runways, one 4,000 feet and two 3,000 feet long. Most of the airport traffic consists of business flights, pilot training, and sightseeing. A customs office is present and can accommodate both small planes and boats. The operation of the airport has been the responsibility of Toronto Harbour Commissioners since 1962.

Bathurst Quay must accommodate access and parking requirements which could be generated as a result of the development of the proposed STOL service at Toronto Island Airport. The site plan seeks to minimize the potentially adverse environmental impact of STOL-related facilities by integrating them with other, more intensive, nonresidential uses on the eastern and southern precincts of Bathurst Quay.

Bathurst Quay will contain the greatest concentration of family housing. The Harbourfront Official Plan establishes the fundamental principle for the distribution of nonresidential and residential density on Bathurst Quay. This principle, which envisions higher density and nonresidential uses east of Bathurst with primarily residential density west of Bathurst Street, has been reflected in the site planning for Bathurst Quay. Land leases will cover a period of 60 years. The leasehold amount will be calculated on the basis of the number and type of units for each phase of development. Five acres of parkland for active recreational activities, directly south of the Queen's Quay extension, constitutes a single unit. Consistent with Harbourfront objectives, this major park will be defined by public streets, framed by residential development, and enhanced by significant views of the harbor and the Western Gap. Currently, the existing park at Bathurst Quay includes the adventure and creative playgrounds, the new "Trim Trail" exercise grouping, and a sports field. These facilities will remain until such time as the park is more fully developed.

By 1985, between 500 and 530 residential units will be developed to go along with the 75,000 square feet of existing office space. Most of the planned development will occur after 1985. By 1990, between 996 and 1,036 residential units will exist on the site. An additional 260,000 square feet of new residential space is also scheduled for development by 1990.

The Canada Maiting plant could be retained as a compatible industry. The area to the north of this plant is seen as a complex of marine industries, boating associations, and transportation-related uses.

Experience Gained

Although the actual physical development at Harbourfront is only partially completed, the planning, design, and development accomplished thus far certainly merits close attention. Much can be learned from the evolution of this project. It is a waterfront development that, based on a few sound precepts, has matured into a financial and aesthetic success—a true asset in a city with an abundance of good qualities.

Harbourfront began with several advantages. The obvious one is the involvement of the federal government. By expropriating the 91 acres of waterfront and turning it over to Harbourfront Corporation, the federal government avoided many of the conflicts inherent in assembling property when many landowners and jurisdictions are involved. The financial support provided by the federal government has been tremendous, but it is more of an investment, in that by 1987 the project should be self-supporting and continuing to generate tax revenue for the city.

Another key to Harbourfront's success was the formation of the citizens' council to establish redevelopment guidelines. The guidelines were presented to the Harbourfront board of directors at the time they were granted control of the waterfront property. By involving concerned individuals and organizations at this early stage of the planning process, controversial issues were clearly identified and, for the most part, resolved prior to starting the project. Thus, the chance of objections or complaints surfacing later and delaying the project has been significantly reduced. Further, the work of the citizens' council served to create a constituency for the government action. Furthermore, the establishment of the locally based company, the Harbourfront Corporation, with its representation of all levels of government, was critical to the success of the redevelopment program.

The commitment to cultural programming at Harbourfront was, and continues to be, an important element in the project's overall success. If the private development program had been started in 1972 its market acceptance would have been in serious doubt. At that time the image of the site was mostly negative in the minds of Toronto residents, and the water's edge was not a strong enough amenity to overcome this perception. The public needed to be reintroduced to the central waterfront through a series of positive rewarding experiences. The regular activities and special events did this and at the same time established a lasting identity for Harbourfront as a interesting and enjoyable place to be. Another valuable lesson can be learned from the Development Framework that was prepared to guide the Harbourfront Corporation in rebuilding the site. The important attribute of the Framework is its flexibility. The guidelines articulate the basic principles underlying the development program—mixed-use, public access, cultural programming, financial independence, and so forth—without specifying the exact spatial configuration or development details. Approval of this document allowed general planning and predevelopment work to

move forward while specific development alternatives were being considered. The development proposals for individual parcels within Harbourfront were and undoubtedly will continue to be tailored to respond to changing needs and circumstances. This approach avoids the trap of proposing a detailed scheme at the beginning of a long-range project only to find that as the years pass the original scheme is no longer relevant to the contemporary situation.

The "Harbourfront Development Framework" is also commendable for its recognition of the impact climatic variables have on waterfront development. The framework acknowledges the restrictions Toronto's seasonal extremes will place upon waterfront development and suggests design ideas to mitigate climatic impacts. In addition, the Development Framework calls for a broad range of uses and facilities that would generate year-round activity.

Although the project is in its infancy, the lack of easy vehicular access and circulation has been a major concern of the Harbourfront Corporation. Improvements are scheduled to be made and hopefully the work will be approved and completed shortly. If the present situation is allowed to continue, it will not be long before it becomes a severe handicap.

Finally, Toronto is a growing, thriving, metropolitan area with a healthy, active downtown business district. In this light, Harbourfront was not viewed as a catalyst to revive a declining city or as one element of a larger redevelopment program. It simply was and remains an effort to make better use of an underutilized section of urban waterfront in a city that welcomes sensible imaginative development.

5-12

Project Data—Harbourfront

Land Use Information:

Site Area: 92 acres

Land Use Plan:

	Acres	Percent
Mixed-Use	25	27.2
Circulation	7	7.6
Open Space and Parks	40	43.5
Water Lots	20	21.7
Total	92	100.0

Mixed-Use Development:

Office: 1.2 million sq. ft.

Special Commercial Uses (such as hotels, trade marts): 1.0 million sq. ft.

Retail: 500,000 sq. ft.

Recreational and Cultural Uses: 250,000 sq. ft.

Housing: 3,500 units

Marina Slips (Public):

Transient: 50

Permanent: 200

Parking Spaces:

Residential: Approximately 1 space per dwelling unit

Commercial: 1 space per 1,000 sq. ft. of gross leasable area

Hotels: 2 (500 to 1,000 rooms)

Restaurants: Anticipate 15 to 20 (up to 100,000 sq. ft.)

Economic Information:

Site Acquisition: \$60 million (1972, by federal government)

Site Development Costs: \$340 million

Public:

Roads, Utilities, Drainage	9.8 million
Waters' Edge Promenade	8.0 million
Public Parks	10.1 million
Marina Breakwater, Pier	8.2 million
Cultural Facilities	4.0 million
Total	40.1 million

Private:

To Date	\$160 million
Projected	\$140 million
Total	\$300 million

Planning and Development Coordinator:

Harbourfront Corporation
417 Queen's Quay West
Suite 500
Toronto, Ontario, Canada M5V 1A2
(416) 364-7127

The plan was approved by the city in 1964. Its basic concept of mixed, "people-oriented" use of the area seemed highly feasible because of the area's location, facilities, and historical significance. As part of the primary business district, the area was centrally located and within walking distance of rail terminals and the retail core of downtown Boston. The Central Artery provided direct automobile access to the project area. Several forms of public transit served the area and Boston's cultural, entertainment, and educational facilities were only a short ride away. The view of Boston Harbor from the waterfront was spectacular and the shoreline represented the historical foundation supporting Boston's growth and development.

Not all of the characteristics of the area were encouraging. Like many other large cities, Boston's more recent growth was mostly suburban. Many residents of the city moved to the suburbs, leaving behind declining inner city neighborhoods and a growing crime and security problem. This exodus of city dwellers eroded the tax base and forced the city to cut back services. Consequently, the downtown area became less desirable for residential use. Furthermore, the urban waterfront was not attractive or open for public use. The project area was not a cleared open section of the city ripe for redevelopment; in fact, it exceeded the density standards for the rest of the city. The initial Boston redevelopment study showed overcrowding of structures, insufficient public utilities, obsolete buildings, incompatible land uses, and vacant properties. Despite these problems many of the structures had historical importance, and there was public resistance to their demolition.

The area was generally dominated by landowners holding small parcels of property. Many of them operated marginal businesses and owed their survival to the low property taxes and depressed rents found in the area. In addition, some of the business operators who had either gone out of business or relocated continued to hold on to their property because of the poor resale market. Interestingly enough, during most of the 1960s, parking lots were considered the best use of the area—at least in economic terms.

Despite these many problems, the early 1960s proved to be an auspicious time for Boston's waterfront. The new mayor was searching for a way to establish credibility and leave his mark on the city. Given a dwindling city tax base, the Hundred-Acre Project offered an excellent opportunity to reverse the trend and revive the central business district. Also, federal funding was available to help stimulate development.

Redevelopment Strategy

The city leadership hoped that an ambitious urban redevelopment program would encourage private investment back into the city. The strategy was to use both public and private funds to finance redevelopment. In 1961, \$150,000 was raised from private sources to form the waterfront redevelopment division of the Chamber of Commerce. The strategy of using both private and public investment was based on the belief that the expertise of the private sector was absolutely necessary to ensure the long-term success of the redevelopment project. Private developers were capable of evaluating the feasibility of ideas and programs in terms of market demand, financial risk, and management requirements. Private investment demonstrated a long range commitment of resources that would not be subject to changing political forces. On the other hand, public involvement and guidance were necessary to overcome the multitude of complex jurisdictional and social barriers to redevelopment.

This strategy was successful to the point that the city of Boston had to absorb very little of the total redevelopment costs. The city government was able to enlist private investment in the area with the city contribution coming in the form of improved services to the area instead of direct cash expenditures.

Despite the aggressive leadership of city officials, waterfront redevelopment proceeded slowly. First, there was the complex task of relocating fishing vessels and accompanying facilities to a pier in South Boston. Then there was the even more complex task of utility construction. For years the combined sewer and storm drains for the entire downtown area had emptied into the harbor in the area designated for renewal. The renewal plan called for installation of a new utility system whereby storm and sewer drains would be separated, with sewage pumped to a treatment center



5-15 Investing public and private funds in the central waterfront led to the redevelopment of Long Wharf.

at the other end of the harbor. All of the utility work had to be done in an area that was land filled and where the water table rose and fell each day with the ebb and flow of the tide. In addition, Atlantic Avenue, the roadway which ran along the water's edge, needed to be relocated and a new roadway built while at the same time accommodating traffic which ran through the area.

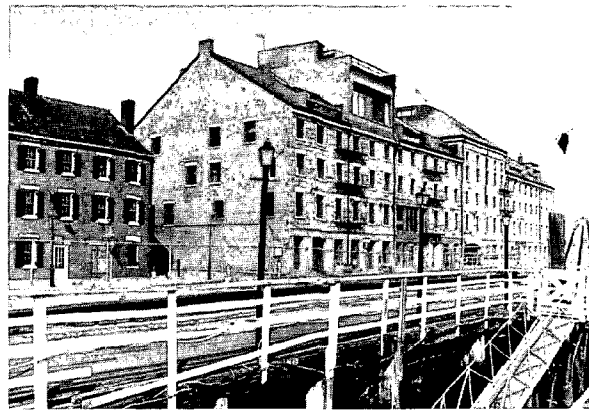
The logistics of heavy construction were but one aspect of the difficulties encountered by the city and BRA as renewal progressed on the waterfront. The waterfront plan won approval at a time when few people lived on the waterfront. Once residents began moving into the area they felt they should have a voice in how the project was implemented. The result was a monumental court suit which the residents brought against the BRA in 1972 (*Boston Waterfront Residents' Association, Inc. vs. George Romney et al.*, Civil Action Number 72-1157-LC).

The federal judge who heard the case declined to rule in favor of the waterfront residents or the BRA. Instead, he ordered that a committee of residents and other interested parties carry out a restudy of the waterfront plan and make recommendations on how the plan might be modified. This was done, and in 1974 the BRA agreed to virtually every modification recommended by the restudy committee. The density of the project was scaled down and all planned high-rise structures eliminated. Atlantic Avenue would not only be realigned but it would be narrowed, allowing for a waterfront park of six acres instead of three.

The celebrated renovation and reuse of Faneuil Hall Marketplace was the centerpiece of the Hundred-Acre Project. Federal funds financed the majority of the renovation of the three granite buildings and surrounding grounds. The rehabilitated buildings were all opened by 1978. The U.S. Department of Housing and Urban Development provided federal funding, and city funds came primarily from bond issues. However, the success of this project depended overwhelmingly on private investors committing funds to development in this area. The Boston Redevelopment Authority estimates the total private investment to be three-and-one-half times the public investment and over 20 times the city's expenditure.²

Five years after opening, the Faneuil Hall Marketplace is an overwhelming success. Offering a variety of shops and restaurants within the pleasant surroundings of a historic meeting place, the Marketplace attracts 15 million visitors a year. Approximately 60,000 people a day visit the market's 170 retail shops and 40 pushcarts, spending \$75 million to \$80 million a year.

To attract private investment of this magnitude, the city of Boston had to be in a position to offer development incentives to the private sector. The city officials did this by granting concessions to developers that would help to reduce the risk of investment. For instance, the



5-16 Many of the large granite and brick buildings located along the central waterfront have been adapted for new uses.

ownership agreement for the Faneuil Hall Marketplace was written so that the developer has a 99-year lease on the buildings and land, and the land is covered by a special tax arrangement. The owner pays no taxes for an initial period of time and then pays on a basis of a predetermined percentage of the gross revenue produced by the businesses in the market. Developers in the urban redevelopment project area were guaranteed by the city and state that the BRA would maintain control of the waterfront sites for 40 years from the start of the redevelopment program in 1964.

The long-term implication of tax abatements deserves mention. Obviously, the smaller the percentage of the overall tax burden being paid by business, the more residential properties will have to pay for essential services. This makes the city less attractive for residential development. While making the central urban area attractive to developers who will construct buildings and invest in land brings needed city jobs and revenue from commerce, the city has forfeited its right to tax appropriately. Although the city received little revenue from the blighted and deserted area before redevelopment, in trying to encourage private investment, the city extended major long-term tax breaks, assuring a lower income to the city far into the future.

Shoreline regulation was another government power that was altered in order to attract private development. Originally almost all of the waterfront land in the redevelopment area belonged to the state. The state gave up its rights to the BRA, which has design and use controls on parcels it resells. Now most of the waterfront is under the control of private interests. Some state land was sold and, elsewhere, licenses for private use of both the land and the tidelands were issued by the state. These licenses were guaranteed to be irrevocable, as required by the developers. The city of Boston also gave up much of its prerogative in tax collection as landowners and as regulators of the shoreline to gain private economic development and revitalize its waterfront.

² Farrell, *Development and Regulation*, page 10.

Developing the Wharf

Union Wharf is located within the Hundred-Acre Project area. The project consists of a 19th century granite warehouse that has been converted to residential and office condominiums. There are also several newly constructed townhouses and amenities in the form of a marina and landscaped plazas.

Union Wharf is located on a 2.6-acre site on Boston's central waterfront. The project not only combines adaptive use and new construction, but also combines residential and office condominiums within the same buildings. A historic granite warehouse built in the mid 1840s has been converted to 64 residential and office condominium units, 23 new townhouses have been constructed, and an old tin shed structure has been converted to two office units. Altogether, 43 residential and 46 office condominiums are provided. Units in the granite warehouse range in size from 933 to 4,000 square feet, while the new townhouse units are all nearly 2,000 square feet. The new townhouse units are the first single-family units to be built in downtown Boston in nearly 50 years. Amenities provided include an outdoor swimming pool, landscaping, plaza areas, a roof deck on the granite building, and a marina with approximately 400 feet of dock space.

The site was purchased by the developer in April 1978 and construction was started shortly thereafter. All units were sold by mid 1979 and the project was completed late in 1979. Approvals were required by the Boston Redevelopment Authority, the State Historic Commission, and the Massachusetts Turnpike Authority. The Callahan Tunnel runs beneath the site and, therefore, development within the tunnel easement had to comply with the Turnpike Authority.

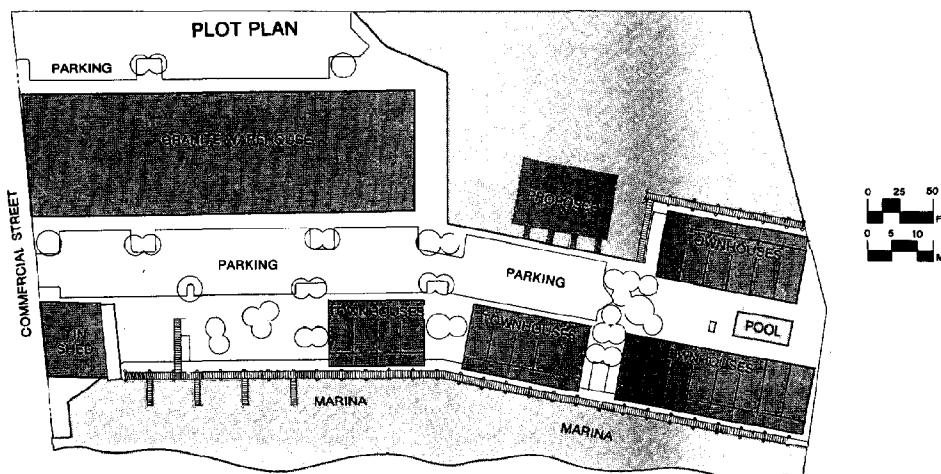
All units were sold as raw space, with no finishing provided. The developer's decision to sell the units unfinished, together with the mixture of residential and

office uses and the combination of renovation and new construction, resulted in some difficulty in obtaining a financing commitment. The financing commitment included conditions for presales as well as certain equity requirements. The developer was required to presell 30 percent of the total number of units to prove both pricing and marketability. In addition, a number of units were sold at a substantial discount to provide additional equity.

Union Wharf is the last of the four historic wharfs on Boston's waterfront to be recycled. It is bordered by Lincoln Wharf to the north, site of a defunct Massachusetts Bay Transit Authority (MBTA) power station, and Sargent's Wharf to the south, presently used as a public parking lot. The site is conveniently located. It is approximately a 10-minute drive from Logan Airport, two minutes from the Southeast Expressway, and within a five-minute walk of an MBTA stop. Faneuil Hall Marketplace, the downtown financial district, Lewis Wharf, Commercial Wharf, Long Wharf, Government Center, and the North End are all within convenient walking distance. The project's location at the water's edge provides superb views of both the Boston Harbor and the city skyline. Three other large warehouses within three blocks of the site have been converted to residential, office, and retail uses.

The irregularly shaped wharf extends 590 feet into the harbor and has water frontage of approximately 1,200 feet. At the time the site was purchased it contained two buildings. The historic granite warehouse occupied the northwestern portion of the wharf and a two-story tin shed of approximately 5,000 square feet was located at the entrance to the wharf. The remainder of the site was being used as a unpaved parking lot and as a commercial marina landing.

This marine warehouse was built in 1846-1847. Its overall dimension of 92 feet by 290 feet was divided into seven bays, each approximately 40 feet wide. The eastern portion of the building (three bays) was three stories with a basement and the western portion (four bays) was five stories with a basement. A fire in the eastern portion of the building in the early 1940s had



5-17 Union Wharf site plan.

damaged the fourth floor, which was removed shortly after. The remainder of the building showed no evidence of fire or serious structural problems. However, there was some interior water damage and roof and floor deterioration. There were also some cracks resulting from settlement following construction of the Callahan Tunnel under the wharf.

The granite building is an outstanding example of the 1810-1860 Boston Granite style and was one of only four remaining examples of its warehouse uses. The buildings' peaked pediment lintel stones and gable-end pediment also illustrate the continuing popularity of the Greek Revival style during this period. The detail of the building is the same on all elevations. On the ground floor, large windows and doors are framed by rock-faced granite post and lintel architraves, with the areas between openings infilled with courses of granite blocks two feet high. The upper floors are ornamented with windows having post and lintel frames of smoothly finished granite. Smoothly finished granite also is used decoratively in the groins in all four corners and for the cornice.

The building's interior was rough, warehouse-type space. Throughout the interior, brick party walls and wooden joists, measuring approximately four by 12 inches, were exposed. The flooring was heavy wooden planks, with the exception of the dirt basement floor. Small interior staircases connected the various floors along with floor openings for conveyor belts. Each bay contained three large windows on both the north and south sides in addition to large double doors. Corner bays contained four to seven additional windows.

Development Strategy and Design Features

The basic development objective was to provide residential and office condominium units for a luxury market. The strong demand for space in a historic wharf setting on the waterfront, coupled with a dwindling supply of such space (as mentioned earlier, the three remaining historic wharfs in Boston had already been successfully recycled), made it feasible to charge the highest possible prices within certain limits. Dealing with the top end of the market also meant that because buyers were paying premium rates they would have definite ideas as to the end product. Therefore, the sale of finished units would have made it necessary for the developer to offer a wide variety of finishes and to be prepared to make considerable changes to satisfy buyers. In order to avoid this problem it was decided to offer all of the units as raw space for complete inner finishing and customizing by buyers. This was done for both the renovated granite building and the new townhouses. Public restrooms were not provided for commercial areas. Rather, it was the responsibility of each owner to construct such facilities. Architectural design and consulting services were made available to those buyers who did not wish to choose their own consultants and contractor.



5-18 A 19th century granite warehouse was converted to residential and office condominiums, and new townhouses were constructed on the wharf.

Raw space delivered to buyers in the granite building consisted of sandblasted exposed beam ceilings and brick walls, a concrete floor, and roughed-in plumbing and electricity. Each unit also was provided with a flue and hearth to permit the owner to have a brick fireplace, Franklin stove, or a modern freestanding fireplace unit. Floors were strengthened by pouring about three inches of reinforced concrete over the existing wood floors. This also helped to soundproof the building. Further soundproofing was provided by eliminating all vertical penetrations between units except for utilities. Electric heat pumps were installed by the developer to provide a modern and efficient heating and cooling system. Individual electric meters and hot water heaters were provided for each unit.

The granite and brick exterior of the building was chemically cleaned, bringing it back from a very dark grey to its original light grey and red brick. A sixth floor was constructed on the building's western portion as a dormer opening onto private roof decks. Graceful, curving iron balconies measuring six feet by 12 feet were added for each unit above the first floor and mahogany French doors were installed for access to the balconies using existing openings. The balconies, together with white vinyl-clad windows, helped to accent the massiveness of the granite, an important consideration in the exterior renovation.

The new townhouses, which are located in the southeastern portion of the site, are three stories with red brick exteriors. Each unit has two decks, one on the first floor and one on the third. Rough space interiors included two fireplace flues, beamed ceilings, heating and air conditioning, and roughed-in plumbing and electricity. Stairs and subflooring were also installed. Utilities and windows were located to provide maximum flexibility for buyers when finishing the units. All of the townhouses were constructed using flotation foundations.



5-19 The new townhouses were constructed using flotation foundations and the units marketed as unfinished space.

Since the project includes both residential and office condominiums, the developer was selling to two distinct markets. The residential market was upper-income professionals, primarily couples without children in the 35 to 55 age bracket. About 50 percent of the buyers were individuals renting or owning in Boston, primarily in the waterfront area. Most buyers were seeking more space and/or an ownership position. Also, the concept of designing one's own home greatly enhanced sales. The remaining half of the buyers were from the suburbs or from outside of Massachusetts. Typically, these were empty-nesters no longer needing a large single-family detached home.

The office condominiums found their largest market in attorneys' offices, followed closely by investment and management consultants. All of the office buyers were attracted by the benefits of owning as opposed to renting, especially with the increasingly tight downtown rental market. Also, the sale of rough space appealed to office users, since it allowed them to design the most efficient office space possible for their own particular needs.

Through a discount presale program, 50 percent of the units were under agreement prior to construction. A sales office and a finished residential model were established at an adjacent property. Advertising for both the residential and office condominiums was handled through direct mailings and weekly ads in two local papers and various trade publications. A full-time broker was employed by the developer along with two other sales/administrative people. Outside broker participation also was encouraged.

Experience Gained

The redevelopment of Union Wharf is just one of the dividends produced by Boston's comprehensive approach to waterfront development. The elements of the Hundred-Acre Plan (Faneuil Hall/Quincy Market, Waterfront Park, Mercantile Wharf, New England Aquarium,

etc.) complement each other both in terms of economic viability and urban design. Just as Union Wharf benefited greatly and learned from the redevelopment efforts that preceded it, future projects can benefit from the experiences offered by Union Wharf.

One important lesson is that the recycling of a historic wharf for residential and office uses can be successful. Potential conflicts over parking availability and public access have not materialized. This is due in part to good design but also can be attributed to the altered expectations of occupants.

The concept of marketing unfinished space proved to be very successful. The sale of all units as raw space reduced the time cost of the project by allowing units to be conveyed at the earliest possible time and by eliminating the necessity of waiting to do detail work and having to make last-minute finishing changes for buyers. The sale of raw space resulted in the lowest net project cost and presented the opportunity, through marketing, to maximize the profitability to the developer. This resulted in a project that was able to return approximately 20 percent of gross sales as a profit.

The sale of raw space was particularly successful in dealing with a luxury market. Upper-income buyers generally want to add their own design touches and can afford to do so. It was imperative, however, that extreme care was exercised regarding major structural or systems changes contemplated by buyers. The developer had to clearly identify to buyers those changes which are not permitted and carefully review the changes proposed for each unit.

Another important lesson to be learned from Union Wharf is that the mixture of residential and office uses in the same buildings has worked very well. The higher prices paid by commercial buyers made it possible to provide parking and other facilities for residents without significantly increasing residential sales prices. Reserving certain portions of the buildings for only residential use or for limited office use also helped to assure compatibility between the two uses. In addition, the individual metering of units not only has encouraged energy responsibility by purchasers, but also has assured that the five-day-per-week office users will not be burdened with the costs of the seven-day-per-week energy use of residents.

Union Wharf demonstrated that, in a waterfront environment experiencing wind-driven rains, it is essential that designs and materials be carefully reviewed for waterproofing in exposed areas. Because of environmental factors, it was sometimes necessary for actual construction to deviate from construction drawings.

The marketing program was also fundamental to the project's success. The use of finished models is a critical facet of the marketing program when selling raw space. A finished model allows prospective purchasers to visualize possibilities for the raw space and, therefore, serves as an important sales tool.

Project Data—Union Wharf

Land Use Information:

Site Area: 2.61 acres¹

Total Units: 892

Gross Density: 34.10 units per acre

Parking: 112 spaces

Land Use Plan:

	Acres	Percent
Buildings	1.15	44.06
Parking/Circulation96	36.78
Landscaping/Pool50	19.16
Total	2.61	100.00

Unit Information:

Units	Size	Sales Price ³	Bedrooms ⁴	Bathrooms ⁴
New Townhouses (23)	1,962 sq. ft.	\$132,000– 170,000	3	1
Granite Building				
First Floor/Basement	933–4,000 sq. ft.	\$ 33,000– 155,000	N.A. ⁵	N.A. ⁵
Second and Third Floors	1,264–2,000 sq. ft.	\$ 55,000– 150,000	2	2
Fourth, Fifth, and Sixth Floors	1,275–4,000 sq. ft.	\$ 65,000– 252,000	2	2
Tin Shed	2,000 sq. ft.	\$110,000	N.A. ⁵	N.A. ⁵

Economic Information:

Site Cost: \$1,350,000 (1978)

Site Improvement Cost: \$500,000⁶

Construction Cost:

Granite Building: \$23 per sq. ft.⁷

New Townhouses: 33 per sq. ft.⁷

Total Cost: \$6,900,000

Notes:

¹ This does not include water rights in the marina area covering 1.65 acres of water surface.

² Includes 43 residential units and 46 office units.

³ All sales prices are for raw space.

⁴ Typical unit information. Residential units only.

⁵ These areas contain only commercial space.

⁶ Cost for pool, utilities, and landscaping.

⁷ Hard costs only. Site improvement costs are also not reflected in these figures. Total hard construction costs were \$3.85 million. Soft costs were \$1.2 million.

Developer:

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Union Wharf Development Associates
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(617) 227-3710

Architecture:

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Engineering:

David M. Berg, Inc.
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Needham, Massachusetts
(617) 444-5156

Management:

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Boston, Massachusetts 02110
(617) 426-3260

Financing:

Schroder Bank and Trust
One State Street
New York, New York 10015
(212) 269-6500

CBT Realty Corporation
One Constitution Plaza
Hartford, Connecticut 06115
(203) 244-5069

Charlestown Navy Yard, Boston, Massachusetts

Based on the remarkable success of Boston's downtown waterfront redevelopment, the Charlestown Naval Shipyard presented another excellent opportunity for the city to reclaim a portion of its waterfront. The shipyard is located on the eastern waterfront of the Charlestown section of Boston, north of the downtown and bounded by the Charles River, the Inner Harbor, the Mystic River, and the Tobin Bridge. At this site, approximately 105 acres of surplus land, buildings, piers, dry docks, and water with historical, architectural, and locational value are being redeveloped by the Boston Redevelopment Authority (BRA). The BRA has established specific planning and design guidelines to direct the implementation of a mixed-use development program that calls for residential, commercial, institutional, recreational, and light manufacturing uses.

History

A National Historic Landmark, listed in the National Register of Historic Places, the Naval Shipyard at Charlestown is significant because its role in the building and maintenance of many important ships of the fleet and its contributions to industrial technology.

It was chosen in 1800 as the logical location for the establishment of a needed government dockyard because of its active shipyards. Since that time the Yard has played a significant role in the production of warship and nonwarship vessels. The first iron torpedo boat, the *Intrepid*, was launched from Charlestown in 1874, and in the 20th century it was the site for submarine construction as well as conversion of ships for guided missile and anti-submarine duty. World War II witnessed the peak of the yard's productivity.

The Charlestown Shipyard has been the site of several unique facilities since its inception. The first "shiphouses" which allowed ships to be built undercover, thereby protecting them from the elements and speeding production, were tested here. The idea proved so successful that it was copied in other shipyards in this country and abroad. These shiphouses were located near the existing shipways and were removed in 1901. In 1815, a naval training school for officers was established at the Yard, and it became a parent institution for Annapolis. In the next decade, Dry Dock 1 was begun



5-21 The Charlestown Navy Yard was closed by the U.S. Department of Defense in 1974.

(1827) and is one of the two oldest dry docks in the country. Ironically, the U.S.S. *Constitution* was both its first and last occupant. In 1836, the 1,350-foot-long Ropewalk building was constructed. This granite structure provided all of the rope requirements of the Navy for the last 135 years—production ceasing only in the past decade. In 1926, A.M. Leahy and C.G. Lutts invented what is known as the “Die-lock chain.” This became the Navy’s standard chain and was manufactured in the Forge and Chain Shop (building 105).

The shipyard’s significance lies in its architectural significance as well. Its structures illustrate many building types and several phases of 19th and 20th century architectural styles. Early 19th century residential examples exist as well as later industrial buildings and World War II temporary shed structures. The construction dates fall roughly into five periods, which generally coincide with major wars of the two centuries. As well as illustrating popular building styles, the shipyard structures exhibit the increasing size and capacity of industrial structures permitted by changes in technology.

Project Development

The U.S. Department of Defense closed the Navy Yard in 1974, and the General Services Administration was delegated the responsibility for disposing of the surplus property.¹

In 1974, a 30-acre segment of the Navy Yard—its southernmost section—was included as one of the seven sites in the 1974 Boston National Historic Park bill. Operated by the National Park Service in cooperation with the U.S. Navy, the park includes the U.S.S. *Constitution*, the destroyer *Cassin Young*, the U.S.S. *Constitution* Museum, Dry Dock 1, and a 19th century commandant’s house. More than 650,000 visitors visit the Historic Park at the Navy Yard each year, making it one of the most popular attractions in Boston.

The Boston Landmarks Commission initiated the effort to list the entire Navy Yard on the National Register of Historic Places. In the process of gaining this designation, the portion of the site containing the most architecturally

significant buildings was identified and development controls established for the property. This 30-acre tract contained 25 buildings.

In 1976 the BRA incorporated the Navy Yard into the Charlestown Urban Renewal Plan, thus assuming responsibility for development of the area. The BRA, acting as the city’s planning agency, initiated the transfer of the following three development parcels from the Department of Interior:

- Historic District — Transferred at no cost in return for agreements by the BRA with the Department of Interior that all of the 25 buildings in the area, with the exception of some World War II additions, would be restored and the area maintained as a historic district.
- Recreational Parcel — Transferred at no cost in return for commitments from BRA that it would be used for public recreation.
- New Development Parcel — Negotiated sale with General Services Administration for private development.

The BRA is responsible for the design, execution of improvements, and all public development activities. It oversees the phasing of private development and serves as the conduit between developers and the federal, state, and city agencies which have an interest in the Navy Yard.

The historical and architectural significance of the Navy Yard complicated the normally intricate process of waterfront development to a point that a carefully thought out development strategy and action plan was necessary. Therefore, for planning and implementation purposes, the Navy Yard development program addressed three distinct areas: Historic Monument Transfer Area, Shipyard Park, and New Development Area.

Historic Monument Transfer Area

Design guidelines for the preservation of the exterior elements of the buildings in the Historic Monument Transfer Area are spelled out in an agreement between the BRA and the National Advisory Council on Historic Preservation, and were part of the conditions of transfer of the buildings from the federal government to the BRA. The guidelines have received national recognition and will assure that the architectural character of the Historic Monument Transfer Area is maintained. Designs for streets and pedestrian areas reflect the 19th century history of the Navy Yard and will create an attractive and historically appropriate environment.

The Historic Monument Transfer Area includes buildings dating from the 1820s through the turn of the century.

¹ The Federal Property and Administrative Services Act of 1949, as amended, is the legal authority by which the U.S. government disposes of most unneeded federal real property. The agency holding excess property notifies the General Services Administration (GSA) of its intent to relinquish rights to the property. GSA then screens the property with other federal agencies to determine further federal use. In the absence of such requirements, GSA determines the property to be surplus to the needs of the entire federal government. GSA then makes it available to state and local governmental units and eligible nonprofit institutions to be used for various public purposes. Public purpose disposals are made for parks and recreation, historic monuments, public health or education, wildlife conservation, or public airports. Such public benefit disposals are made at no cost to the recipient, but the deeds of conveyance contain appropriate use restrictions. If a local public agency wishes to acquire surplus property without use restrictions, it can negotiate with GSA to purchase the property at fair market value.

Among them are solid granite workshops and warehouses, built in the 1830s and 1840s, a period of intensive Navy Yard expansion. Later 19th century brick and granite structures reflect advancing building technology in their larger size and robust architectural treatment. A number of small brick buildings show the influence of various Victorian styles, while large, turn-of-the-century facilities were designed in the popular commercial styles of the day, and World War II structures are strongly industrial in appearance.

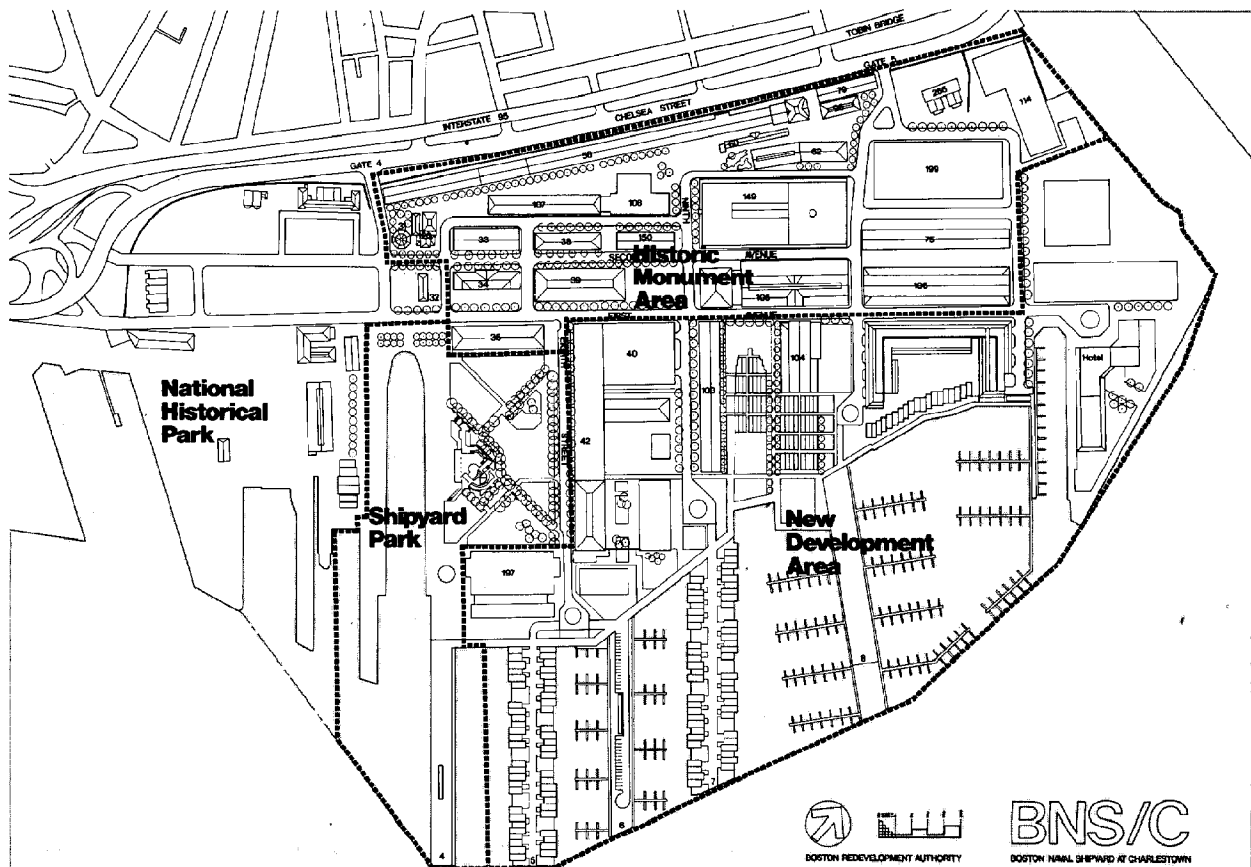
The buildings in this area will be offered for private development on an individual basis, under long-term lease agreements with the BRA. They range in size from the small, hexagonal Muster House (6,000 square feet, built 1852), to the 93,000-square-foot Administration Building (Building 39, built 1863), to the brick and concrete Building 149 (built 1919) with 725,000 square feet of space. It is estimated that developers will spend approximately \$70 million to restore these buildings. The BRA plan calls for a variety of uses in this area, including commercial, residential, institutional, and possibly some light industry.

Shipyards Park

The 16-acre shipyard park of the Navy Yard includes three types of spaces: a 6.5-acre landscaped area, Dry Dock 2, and Pier 4. The landscaped section incorporates gently rolling meadows, tree-lined paths, shrubs and flower beds, a children's playground, a large granite fountain, and a pavilion which is actually a part of the building that formerly stood on the entire 6.5-acre site. Plantings are typical of those found in a seaside environment, and the design of the fountain is reminiscent of the form of a dry dock. The park's orientation emphasizes vistas of Boston's skyline.

Facing the landscaped section is Dry Dock 2, dating from the late 1890s. Dry Dock 2 is permanently flooded and will have a pedestrian promenade around its perimeter. Pier 4, the Town Landing, is the location for a public dock including 50 slips for short-term boat mooring and facilities for tour boats, commuter boats, and water taxis.

In return for commitments that it would be used for public recreation, the land for the park was given at no cost to the BRA by the Department of Interior's Bureau of Outdoor Recreation. Funding for phase one of the park



5-22 Charlestown Navy Yard site plan.

was provided from a \$1.7 million grant from the Economic Development Administration (Dept. of Commerce) and a \$900,000 grant from the Bureau of Outdoor Recreation.

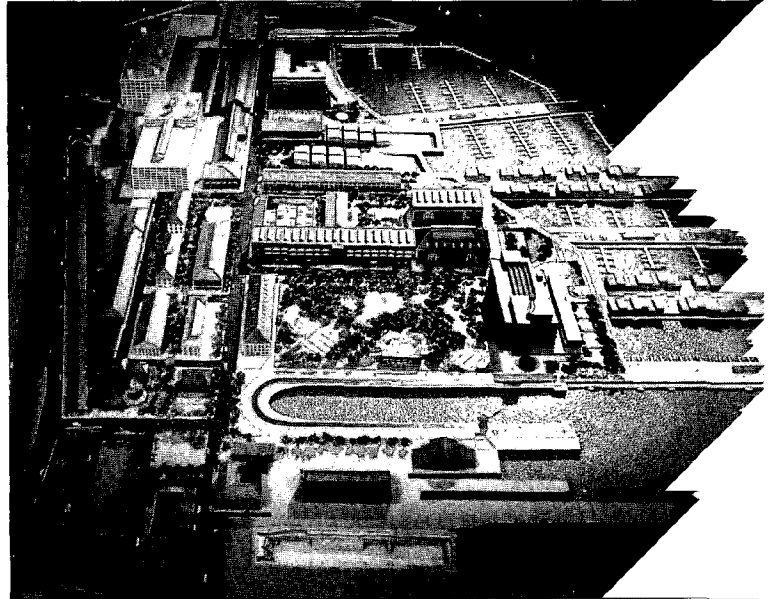
Phase two, which involved the renovation of Pier 4, seawall improvements, and the marina, was funded from a second phase grant of \$500,000 from the Bureau of Outdoor Recreation and from \$500,000 that was part of an Urban Development Action Grant (Department of Housing and Urban Development). The total cost of developing Shipyard Park will be approximately \$4 million. Funding for the balance of the work to complete the park is not in place at this time.

New Development Area

Encompassing some 57 acres of land, piers, and water, the New Development Area is being developed by the firm of Immobiliare New England, with a total investment estimated at \$120 million. Immobiliare New England is a Boston venture of two major international development and construction firms: Societa Generale Immobiliare, Rome, Italy, one of the largest and oldest real estate organizations in the world, and the ICOS group, which operates throughout the world in the highly specialized field of foundation construction. Immobiliare is producing some 1,200 housing units, both rental and condominium, with about half being developed through the recycling of factory and warehouse structures within the area. Also planned are 20,000 square feet of commercial space, parking for about 1,200 cars, and a 500-room hotel. Ten percent of the housing is being reserved for elderly citizens. The complex is known as Shipyard Quarters at Charlestown.

The first building to be recycled was Building 42, a former machine shop and foundry. This brick and granite structure, with its distinctive arched entrances and

Photo credit: Steve Rosenthal



5-24 Model of the Charlestown Navy Yard redevelopment project.

angled skylights, contains 368 market rental apartments, with the adjacent Building 40 providing 362 parking spaces. Construction will start this fall on Building 197, a World War II-era laboratory building. This building is being converted to about 150 condominium units and parking. Additional housing is planned for Building 103 (100 units) and Building 104 (70 units) in the future. New construction will produce 250 townhouses on Piers 5 and 7, townhouses on Shipways 1 and 2, and a mid-rise complex at the water's edge between Piers 8 and 10. Immobiliare will also develop marina facilities with 500 slips and will provide a public promenade along the water's edge throughout the New Development Area. The firm has been designated the developer for the section from Building 197 to Dry Dock 5, and has an option on Pier 11, the proposed hotel site.

Because of its historic and architectural significance, the entire Navy Yard is listed on the National Register of Historic Places. As a result of this listing, the rehabilitation and recycling of buildings within the Yard is eligible for the tax advantages offered to developers by the Economic Recovery Tax Act of 1981.

Innovative combinations of funding and land disposition have enabled the Navy Yard project to move forward expeditiously. As previously mentioned, some 46 acres of the Yard were transferred to the BRA at no cost by the federal government in return for agreements regarding future use of the property. The Bureau of Outdoor Recreation (BOR) gave the 16-acre Shipyard Park site to the BRA on the condition that it be used



5-23 View of the Shipyard Park with Boston's skyline in the background.



5-25 The primary design objective was to conserve as many of the existing structures as possible while adapting the buildings to new, viable uses.

exclusively for public recreational purposes. And the General Services Administration, through the Department of Interior, transferred the 30-acre Historic Monument Transfer Area to the BRA in return for an agreement that the buildings and grounds there will be preserved and the area developed and maintained following the guidelines established by the BRA. The design guidelines for reuse of the buildings and ground plane treatment as well as the chronological history and measured ink drawings of each structure's elevation had to be completed by the BRA before the actual property title transactions could take place.

The remaining acreage within the New Development Area was purchased for \$1.7 million from the General Services Administration. Immobiliare is advancing BRA the money needed to acquire this portion of the land.

Project funding for all portions of the Navy Yard includes the following:

- \$4.8 million, Economic Development Administration (Department of Commerce), of which \$1.7 million was used for phase one of Shipyard Park. The remainder is for site improvements including new utilities, sidewalks, roads, street furniture, selective demolition, restoration, and design and engineering.
- \$2.2 million, city council bond authorization, as city's matching share of EDA grants.
- \$2.5 million, Urban Development Action Grant (Department of Housing and Urban Development), used to develop a new main access road in the old gate 4 area, demolition, a match for the phase two for BOR grant and phase two at Shipyard Park, and reconstruction of 8th and 9th Streets utilities, streets, and ground plane treatment.
- \$900,000 Bureau of Outdoor Recreation (Department of Interior) for phase one, Shipyard Park.
- \$500,000 Bureau of Outdoor Recreation (Department of Interior) for phase two, Shipyard Park.

Experience Gained

Several aspects of the Charlestown Navy Yard project merit special attention. Although much of the total development plan has yet to be implemented, more than enough has been accomplished to learn from in terms of property administration, planning, and design. Some elements of the project are particularly noteworthy because of their relevance to opportunities in other urban waterfronts.

The reuse of surplus federal property in this project demonstrates the tremendous rewards that are possible when there is cooperation between federal agencies and city governments. By disposing of the lands, the General Services Administration has enabled the city to increase its tax base and infuse new vitality into the former military facility. The federal government was able to obtain funds from the sale and subtract future maintenance from the federal budget.

The disposal of surplus waterfront property could be improved, however, if the General Services Administration would recognize the costs of managing property prior to development. The BRA was responsible for protection and maintenance of the Navy Yard during predevelopment and there was not an adequate amount of urban renewal funds to support this massive responsibility. As a result, it was very difficult for the BRA to protect the property from deterioration and blight. This circumstance could have been helped if the General Services Administration would have taken these costs of property maintenance and management into account when determining the fair market value of the surplus property.

The key to satisfying the conflicting demands voiced by the federal agencies involved in the project (Park Service, Department of Defense, Department of Commerce, and General Services Administration) was the Redevelopment Authority's innovative approach to planning and implementation. By dividing the Navy Yard into three distinct components and responding to the special characteristics of each area, many potential development conflicts were more easily resolved.

A project of this complexity and magnitude would not have been possible without the involvement of an organization like the BRA. An organization experienced in waterfront development was needed to oversee the phasing of private development and serve as an intermediary between developers and the federal, state, and city agencies and the local community which have an interest in the Navy Yard. The BRA answered this need. In addition, a city agency considering the acquisition and development of surplus federal property should prepare a cash flow statement documenting budgets for such expenditures as insurance, security, police, snow removal, electrical distribution, and security fencing. The Charlestown Navy Yard project clearly demonstrates that these predevelopment costs can add significantly to the cost of a project.

The basic urban planning and design concepts guiding the redevelopment of the Navy Yard are an appropriate response to a challenging redevelopment opportunity. The primary design objective was to maximize the conservation of the existing resource while adapting the buildings and site to new and economically viable purposes. The intent was neither to recreate the impression of an earlier time nor destroy all evidence of the area's industrial past.

Throughout the planning for the Navy Yard project, the BRA worked closely with a representative group of Charlestown residents known as the Charlestown Advisory Committee. This effort was very important: by communicating with area residents, community interests and values were incorporated into the planning process. The BRA guaranteed the residents that the project would not be a private enclave but instead a community resource. The local community's major interests are job opportunities, business for local trades people, housing for the elderly, and public recreational facilities.

Finally, the staging of the development was given careful consideration. It was important to show some evidence of redevelopment while providing public amenities to attract people to the site. This objective was accomplished by initially building the Shipyard Park. The park improved the image of the Navy Yard and reinforced the credibility of the total development plan. Other evidence of redevelopment was the ongoing demolition and restoration contracts in the historic district; new utilities, sidewalks, streets and landscaping throughout the site; and public offerings of buildings for redevelopment. The major residential component (Shipyard Quarters) was developed following completion of the park.

5-26

Project Data—Charlestown Navy Yard

Land Use Information:

Site Area: 106 acres

Land Use Plan:

	<u>Acres</u>	<u>Percent</u>
Residential	23	21.6
Commercial	5	5
Office	9	8
Industrial	6	6
Institutional	3	3
Open Space and Parks	30	28
Circulation	5	5
Marinas	25 ¹	23.4
Total	106	100.0

Dwelling Units: 2,000

Marina Slips:

	<u>Transient</u>	<u>Permanent</u>
Public	50	0
Private	0	550

Parking Spaces:

Residential: 1 space per dwelling unit

Commercial: 1 space per 1,000 square feet of gross leasable area

Hotel: 1 (500 rooms)

Restaurants: 7 (800–3000 sq. ft.)

Economic Information:

Site Acquisition: 58 acres for 2.6 million; 48 acres transferred at no cost

Site Improvement Costs:

Public:

Roads	\$2,835,512
Utilities & Drainage	2,062,564
Bulkheads	326,482
Dredge & Fill	—
Total	\$5,224,558

Private: Not Available³

Landscaping Costs:² \$4,379,380

Construction: Approximately \$15/sq. ft.

Notes:

¹ Includes piers, slips, and water areas.

² Includes only public investment; private landscaping costs not available.

³ Private site improvement costs are not available, but are anticipated to match the public investment when the project is completed.

Planning and Development Coordinator:

Boston Redevelopment Authority
1 City Hall Square
Boston, Massachusetts 02201
(617) 722-4300

Laclede's Landing, St. Louis, Missouri

Laclede's Landing is a nine-square-block historic urban redevelopment area located in St. Louis on the Mississippi riverfront. Once a light manufacturing and warehousing area, the Landing's uses for over 150 years had declined. Now, after many years of disuse, Laclede's Landing is emerging as a significant mixed-use district with office, retail, entertainment, and residential uses.

For many years Laclede's Landing has been recognized as an important area in the city of St. Louis. Its location, heritage, urban form, and architecture offered the opportunity to create a truly unique and exciting environment. The challenge was to formulate a development method or framework that would stimulate reinvestment into the area for different uses. This challenge has been successfully met and the revitalization of Laclede's Landing provides an example for other North American cities to follow.

History

In 1763 a trading post was established by Pierre Laclede and Auguste Chouteau on the banks of the Mississippi River at what is now St. Louis. Today Laclede's Landing, as the site was named, is the only remaining portion of the street pattern laid out in the original survey for the French village which grew up around the trading post. The grid system shown in the 1780 survey by Chouteau was similar to the town plan of New Orleans; that is, it contains regular rectangular blocks woven together by relatively narrow, 32-foot streets, with the only large open space located at the center. The focus towards the river was obvious in that this town plot extended for 19 blocks along the water's edge but only three blocks inland.

By the time of the Louisiana Purchase, the St. Louis waterfront was dotted with adaptive French colonial buildings of vertical timbers constructed without foundations, buildings of frame construction on heavy foundations, and the more elaborate buildings of native limestone masonry. During these early days of settlement, property owners surrounded their property with eight-foot walls to defend themselves as well as restrain their livestock.



5-27 Laclede's Landing, located between the two bridges, is a prominent feature of the St. Louis waterfront.

The signing of the Louisiana Purchase in 1803 brought the cultural influence of Anglo-Americans to the area. Streets were renamed, and brick replaced earlier building materials. Although growth in the frontier town proceeded slowly, the self-contained homesteads of the Landing area gradually were replaced by hotel and commercial operations. By 1819 the Missouri Hotel was thriving at the corner of First and Morgan, and many other hotels and inns were opened in adjacent blocks.

Steamboats, introduced in St. Louis in 1817, provided regular service linking the Mississippi Valley to the Ohio River system. New wharves and warehouse facilities sprang up along the river both above and below the original French village. It was not too long before steamboats brought the first major influx of European immigrants and the frontier trading post was transformed into a cosmopolitan commercial center of national significance.

In 1849 a fire destroyed much of the riverfront. However, prefabricated iron fronts for buildings, iron structural members, shutters and ornamental details (all manufactured in St. Louis) made recovery possible, virtually overnight. The architectural iron industry was an important factor in the growing commercial prestige of St. Louis; new iron foundries opened as some of the old French families turned their investments from the fur trade to iron mining acquisitions.

In the late 1800s, the developing railroad delivered a serious blow to the economic viability of Laclede's Landing, while in general spelling prosperity for St. Louis. The Landing was compact and perfectly situated for the days of the steamboat but could not meet the spatial requirements of railway facilities. Furthermore, the completion of the Eads Bridge in 1874, the first bridge spanning the Mississippi at St. Louis, stimulated expansion of newer industrial and warehouse facilities near the old Union Station at 12th Street.

Thus, the city lost much of its attachment to the riverfront. The decline was gradual but significant, and in the 1890s Pierre Chouteau first suggested that the riverfront should be reused as a memorial or recreational use. He recommended reconstructing the original French village.

Other proposals followed Chouteau's. Until the 1930s, however, most of the ideas and plans were nothing more than elaborate dreams with little relevance to the characteristics of the water's edge. The designer for the Louisiana Exposition, E.L. Masqueray, suggested fountains and monuments. In the 1930s Louis LeBeaume proposed a Jefferson Memorial be erected on the waterfront. This came about in 1935 when the city decided to go ahead with plans for the Jefferson National Expansion Memorial which became Eero Saarinen's famous arch 30 years later.

Just as the arrival of the railroads significantly altered the city's economic and physical relationship with the river, the introduction of motor vehicles also had a major impact. Streets already too narrow and congested with streetcars and wagons were reconstructed to accommodate more traffic. Broadway, which parallels the river for 20 miles, began to develop as the city's main thoroughfare. "A Plan for the Central River Front; St. Louis" was prepared in 1928 and reflects the impact of motor vehicles on the city's physical form. The document describes the need to demolish the riverfront plaza and build a parking garage in its place. While recommending driveways, street improvements, and parking facilities, the 1928 plan made passing reference to the "ragged condition" of the structures from Third Street to the river.

By the mid sixties it was painfully obvious that Laclede's Landing was being abandoned for more efficient and accessible facilities in other metropolitan locations. Concerned about this, the city plan commission evaluated conditions in the Landing and found that it would qualify for designation under Chapter 353 of the Missouri Urban Redevelopment Law. This law has two important features: it allows a developer relief from property taxes (on a scheduled basis over a 25-year period) for investing in a high risk, designated redevelopment area, and, secondly, it provides for the use of limited eminent domain by a redevelopment corporation approved by the board of aldermen of the city. Laclede's Landing was recommended for designation under this law by the plan commission and approved by the board of aldermen in 1966.

The law encourages the authorized planning agency of St. Louis to review a variety of plans before selecting a specific development proposal. In this respect, two different development concepts for Laclede's Landing were submitted in 1968. One concept emphasized a mixture of new construction combined with the rehabilitation of some buildings, and the other proposal called for the complete demolition of all the buildings and the construction of a totally new environment. After a year and a half, the board of aldermen decided against the recommendation of the plan commission and selected the concept utilizing this mixture of new construction and rehabilitation. The delays in the selection process were very costly however, particularly given the economic conditions prevailing at that time. As a result, the project did not materialize and the city of St. Louis terminated the redevelopment contract with the developers in 1972.

Development Process

By 1974, the Landing was 75 percent vacant, populated by only a few small companies. With the memory of the recent failure to implement a redevelopment plan fresh in people's minds, the challenge was to formulate a development method or framework that would successfully stimulate reinvestment into the Landing.

In late November 1974, a group of businessmen, property owners in the Landing, and government officials met to discuss how the Landing could be redeveloped. After a few meetings it was decided that a corporation ownership was preferable to single ownership. A corporation would be formed under Chapter 353 of the Urban Redevelopment Law of the state of Missouri and obtain the right to administer the law from the city of St. Louis by submitting a redevelopment plan for the area. The stock of the redevelopment corporation would be half owned by property owners and half owned by members of the business, financial, and institutional community.

After agreeing that this "umbrella corporation" concept was a realistic alternative to the traditional single ownership concept, the group met with more property owners and civic interest organizations, selected an

architect and an attorney, and formed the Laclede's Landing Redevelopment Corporation. A development plan was prepared and submitted to the Community Development Agency in July 1975.

A public hearing was held and then in September of that same year the plan was approved by the agency and passed along to the board of aldermen. In late November, the board approved the plan and a month later the mayor of St. Louis signed the development contract with the Laclede's Landing Redevelopment Corporation, thereby designating it as the official developer of the area.

The development plan was and continues to be the guiding force on which all the reinvestment in Laclede's Landing has been based. In addition to emphasizing the ability of the corporation to grant property tax relief to individual property owners, and clearly stating the intention to mix rehabilitation with new construction, the development plan has other important elements. It established categories for the existing buildings in the Landing, indicating whether each building would remain, possibly be removed, or definitely be removed. The plan evaluated each block of the area and specified the intensity and type of uses allowable on a block-by-block basis. It spelled out the commitment by the city of St. Louis to spend approximately \$1 million for such improvements as new lighting, a new street, landscaping, curbing, and so forth. Furthermore, the development plan outlined a strategy for pedestrian and vehicular movement within the Landing, to be implemented on a phased basis over a period of five years. The plan stated that vehicular parking for the Landing would be located on the perimeter of the area with new construction required to contain some parking space for its proposed uses. And finally, the development plan outlined how the Redevelopment Corporation would receive its income.

Soon after the Redevelopment Corporation was designated as the official developer of Laclede's Landing, the corporation created two other vitally important documents that are still instrumental in its development activities. The first document is the Parcel Development Agreement—an agreement between the property owner and the Laclede's Landing Redevelopment Corporation setting the terms and conditions under which the property owner can proceed with plans to develop Landing property. It allows the Redevelopment Corporation to provide planning and analysis for any given parcel. The property owners must submit development plans, architectural specifications, and a financial strategy for their parcel to the Redevelopment Corporation for review and approval. Once the plans are approved, a contract is signed permitting the property owners to receive a tax abatement for 25 years. Thus, the agreement provides the stability permanent lenders and investors are looking for while maintaining the flexibility necessary to accommodate changes dictated by various development factors.

The second important document is the "Urban Design Guidelines." Prepared by Hellmuth, Obata & Kassabaum, Inc., the document expands upon and refines



5-28 At the time redevelopment was initiated, much of the Landing was vacant and deteriorated.

the Laclede's Landing Development Plan. The "Urban Design Guidelines" were formulated to: (1) assist the Laclede's Landing Redevelopment Corporation in determining policy for a wide range of environmental design issues, (2) provide developers and architects with preliminary design criteria to avoid duplication and lower front-end costs, and (3) assist the Redevelopment Corporation and agencies of the city of St. Louis in the development of standards for the design and maintenance of capital improvements.

The "Urban Design Guidelines" successfully address exterior and interior design issues which affect the Landing. With respect to exterior issues the document proposes ways to establish an overall Landing identity. Treatment of the edges is given emphasis, specifically relating to entrances, vehicular and pedestrian access, signage, landscaping, and land use relationships. Regarding interior issues the document outlines recommendations for maintaining consistency of design without imposing rigid controls. Design of all development components is considered, including building scale and use, views, traffic circulation, open space, parking lots, signage, and building facades.

Goals are identified on a block-by-block basis so that specific objectives related to land use and infill development can be implemented. Particular emphasis is placed on streetscape elements with design guidelines for street paving, curbs, crosswalks, sidewalks, lighting, landscaping, and furniture.

The "Urban Design Guidelines" provide a comprehensive package for preservation development, including planning and design criteria and recommendations for phased development and implementation. The document also calls for an environmentally sensitive blend of new infill development with the historic character of the Landing. New construction projects will be important for the Landing's long-term viability, and the document is flexible enough to provide for new development compatible with the Landing's historic character.

The Guidelines document provides a flexible framework which encourages diversity. Individual developers are able to make changes to buildings to fit their various tenants' needs but changes or additions incompatible with the Landing's overall character are prevented. This flexible framework avoids rigid controls which can stifle creativity and individuality. In practical terms the document offers design standards for an area where as many as 15 different architectural firms are involved in a diversified range of projects. Stability, which is essential to the long-term success of the redevelopment of Laclede's Landing, is thus guaranteed.

Proposed Development

Armed with all of the appropriate management instruments—development plan, design guidelines, parcel development agreement, absorption studies, and project model—the Laclede's Landing Redevelopment Corporation is now in the sixth year of the development program. The development plan calls for the rehabilita-



5-29 To ensure that new infill development would be compatible with the historic character of the Landing, guidelines were implemented.

tion of 45 buildings containing one million square feet and another one million square feet of new construction. It is a mixed-use project composed of office, residential, entertainment, retail, and hotel uses. The rehabilitated space is allocated as follows: office (700,000 sq.ft.), retail (100,000 sq.ft.), and entertainment (100,000 sq.ft.). The newly constructed space will contain hotel (900,000 sq.ft.) and residential (100,000 sq.ft.) uses.

In August 1976, Laclede's Landing was placed on the National Register of Historic Places, making federal grants available to the developers. In addition, under the Economic Recovery Tax Act of 1981, the developers can obtain accelerated depreciation for projects that include the rehabilitation of significant historic buildings.

By the end of 1978, three years after the approval of the development plan, public and private investment was beginning to show in the form of a cast iron lighting system, cobblestone street renovation, new curbing, landscaping (public), and brick paved sidewalks (private). Approximately \$16 million of private money was invested in major rehabilitation projects throughout the Landing by the end of 1978, and over \$25 million by the end of 1979.

At this time, over \$38 million has been committed by investors to acquire and rehabilitate 30 buildings. This means that of the one million square feet to be rehabilitated, over 600,000 square feet has been financed and 500,000 square feet has been leased, including over 400,000 square feet of office space. Furthermore, other uses such as residential, retail, and institutional are now being introduced into the Landing. The public areas have been completely rebuilt and

landscaped. These improvements include a lighting system, brick sidewalks, new signage, waste containers, intersections, rebuilt alleys, benches, and plant materials.

The first building to undergo major restoration was the Raeder Building which was constructed in 1874 for the Christian Peper Tobacco Company. Design by (and renamed for) Frederick William Raeder, the six-story structure contains the finest surviving cast iron facade in the city. Completion of the Raeder Place project was of key importance in that it demonstrated the economic and community benefits of restoration and rehabilitation in an inner-city context. The project was a commercial success as well as an aesthetic one. The first phase of occupancy took place in mid-1977 and the structure's 65,000 square feet of office space and 20,000 square feet of commercial space are now 100 percent occupied.

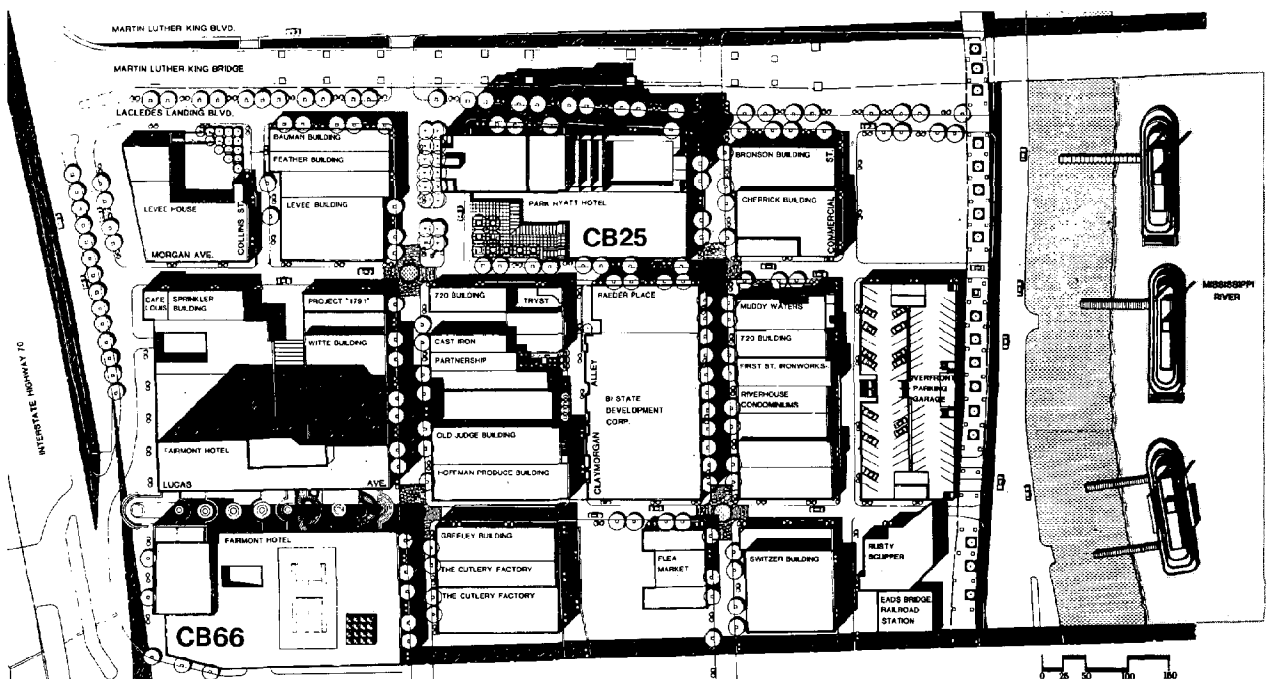
Although the \$3.3 million renovation was certainly successful, it was not an easy task. The most challenging part of the project was the restoration of the building's cast iron facade which was completed after three years of research. At the beginning of the project, much of the rich ornamental detail of the cast iron had either fallen off the building and was missing or was badly deteriorated. In many cases there was not an existing ornament on which to base replacements, and original drawings of the facade had to be used for this purpose. Full-size pattern drawings were made, sculpted in wood, made into molds, and then final castings were made. After extensive research, the developers decided not to use cast iron as a replacement material. Instead they chose high-density closed-cell polyurethane because of

weight considerations, cost, and ability to modify the castings in the field. This solution worked to the satisfaction of everyone involved in the project.

The Witte Hardware Building was totally renovated at a cost of approximately \$3 million. The structure was built in 1905 and used solely as a warehouse until abandoned in 1978. The six-story building's outstanding feature is its structural system—a network of 16-inch square posts. The posts have massive cast iron caps that hold in place 12-foot by 20-foot beams. To the project architects, the matrix of beams and posts permitted creation of three-on-a-side modules for offices. The building's center was replaced by a skylighted atrium. The center cut is terraced outward at one end of the building with planters giving the appearance of a hillside. The atrium houses two elevators, one having a glass wall, and a major restaurant occupies part of the ground floor.

Before rehabilitation, the Witte Building contained 85,000 square feet of unused warehouse space. Now it contains 62,000 square feet of space—40,000 for offices, 11,000 for a restaurant, and 11,000 for shops.

Among the larger owner/developers in the Landing is the Bistate Development Agency, which operates the city's transit system. In 1977 the company purchased another Christian Peper Tobacco Company building adjacent to Raeder Place for its corporate offices. Several innovative features have been incorporated into the Bistate Building to counteract the difficulties involved in transforming a 19th century warehouse into 20th century offices. One of the important factors in office design is acoustic control, and the building materials used in older structures are generally hard surfaces that tend to scatter sound. To alleviate this problem and retain the original building material, the project architect



5-30 Laclede's Landing redevelopment plan.

for the Bistate Building decided to sandblast and clean the wooden floor joists and place acoustical material within the joist spaces up against the decking. The joists are very handsome but what is more visually interesting is the rhythm of the joists and the fact that they occur continuously in sequence. The result is a pleasing aesthetic design that is responsive to the programmatic demands of the building.

Besides a commitment to historic preservation, the need for additional office space, or the recognition of long-term profit potential, another common cause drawing investors to the Landing is the loyalty of many residents to the city's long-neglected riverfront. The Hoffman Partnership, a locally owned and managed firm, is a good example. The firm became involved in the Landing fairly early in its redevelopment and continues to make contributions to its ongoing success. In the spring of 1977 the firm purchased what is known as the Old Judge Coffee Building on North Second Street. After extensive building renovation, the firm moved into its new offices in September 1978, occupying 10,000 square feet of the 50,000-square-foot structure. The firm also owns the adjacent corner building and is acting as the architect for another addition to the Landing—the area's first housing in over 140 years. Developed by the Lipton-Deutsch Partnership, two structures at the corner of North First and Lucas Streets will become luxury condominiums known as River House.

The Cast Iron Partnership buildings located along Second Street have been completely renovated. A bank occupies 4,000 square feet of ground floor space along with a 7,000-square-foot restaurant. The project contains 12,000 square feet of office space and was developed at a cost of approximately \$1.2 million.

At the corner of Second and Morgan Streets, a building with a particularly interesting cast iron facade has been renovated and redesigned to provide 10,000 square feet of space for office and restaurant uses. The redevelopment cost was about \$300,000. A couple blocks away from this project on North Third Street the Old Levee House has been put through a similar redevelopment process. Built in 1906 at a cost of \$34,000, the Levee House contains 35,000 square feet of leasable space providing for a restaurant and offices. The total project renovation cost was close to \$2 million. Associated with this project was the development of a small park adjacent to the building. The park provides a pleasant outdoor area for office workers and shoppers in the Landing.

The Belle Angeline Riverboat Restaurant, moored along the Levee in front of Laclede's Landing, has been successfully operating for over three years. Actually a replica of a turn-of-the-century riverboat built on a barge, the restaurant offers a unique riverside dining experience.

Negotiations have been underway for several months between two major hotel operators and the Laclede's Landing Redevelopment Corporation regarding the development of two major facilities in the Landing. The location of the two hotels is targeted for parcel CB25 and parcel CB66. As shown in Figure 5-30, these two



5-31 Facade restoration was one of the most challenging aspects of redeveloping the oldest buildings in the Landing.

parcels are on the edge of the Landing. The hotels will be the only new structures that do not conform to the existing building scale of the area. It is felt, however, that by building these somewhat massive structures along the borders of the Landing they will not detract from the historic character of the area, block visual access to the river, or generally be inappropriate for the Landing. At this time all of the predevelopment agreements are in place but the projects are being delayed by the lack of long-term financing arrangements. The two hotel developments will involve investment of over \$130 million.

In addition to these key projects, several other notable developments have taken place in Laclede's Landing. The Muddy Waters Building, located at the corner of First and Morgan, was completely renovated and is now used for restaurant and office purposes. Likewise, the Old Fischer-Berry Machine Building was rehabilitated and now has a restaurant in the basement, an ice cream parlour and a general store on the ground floor, and office space taking up the top floor.

Apart from the aesthetic and historical considerations, rehabilitation costs 50 to 80 percent of what razing, clearing, and erecting a new building would cost. For tenants this translates into annual rentals of about \$1 less per square foot than new space elsewhere in the St. Louis area.

In order to alleviate parking problems (no on-street parking is permitted in the Landing), a seven-level, 240-car facility was constructed in 1979 and is located between Wharf Street and First Street. Additional parking is located on a surface lot occupying one full block, and three other large parking lots with 3,000 spaces are on the perimeter of the Landing.

In Laclede's Landing, the pedestrian is given first priority. Alleys have been converted to street uses; auto and truck congestion is eliminated, the First-Second Street block having become a pedestrian-oriented "super block."



5-32 The Redevelopment Corporation focused initially on basic site improvements to encourage office development, restaurants, and entertainment establishments.

Entries to the Landing have been upgraded. The Wharf Street railroad trestle is to be made more attractive and there will be a new entry street on the Landings' northern edge. The new sidewalks are red brick, laid in basket weave pattern, and they enhance the 19th century atmosphere, as do the electrified gas lamps. Asphalt has been stripped from the streets to reveal the original heavy granite cobblestones.

The attention to detail in the Laclede's Landing Development Plan is nowhere more evident than in provisions for landscaping. Street tree types are littleleaf linden, London planetree, and red maple. Flowering trees include carmine, redbud, and Japanese crabapple. In all, the city has planted 200 trees in the Landing.

Evergreen groundcover includes ivy, euonymus, and pachysandra. For seasonal punctuation there are tulips, daffodils, and pansies in the spring, petunias and marigolds in summer, and chrysanthemums in the fall. This strong emphasis on landscaping—particularly the diversity of plant materials—is critically important because of the existing building density and predominance of hard surfaces. The bountiful use of vegetation helps to soften the edges and provide spatial definition. Thus, a chain of spaces varying in dimension and use combine to create a visually interesting and pleasing project environment. Furthermore, the seasonal variation provided by the vegetation reinforces the dynamic qualities of the project's urban context; that is, every visit to Laclede's Landing will be marked by a slightly different sensory experience.

With the office-based foundation in place and supplemented by various entertainment establishments and with plans moving forward for residential and hotel development, the next challenge is to bring a full range of retail tenants into Laclede's Landing. The challenge lies in the fact that in its present form the Landing does not provide the most conducive environment for successful retail development. As most any retail developer knows, shops work best when they are on the pathway,

as in a shopping mall. Thus, at the Landing the task will be to create a kind of Main Street for retail storefronts.

Toward that end the Laclede's Landing Redevelopment Corporation amended the Parcel Development Agreement in 1980 to include a minimal assessment of construction costs to fund a sales and promotion office which deals exclusively with retail tenant mix, location, and the goal of attracting and maintaining top-quality merchants. The Redevelopment Corporation recognized the need for an association to promote and market retail space not only to attract tenants, but also to maintain the viability of businesses once they are established in the Landing. The board of directors of this nonprofit office is comprised of six people, two directors of Class A membership (priority owners), two directors of Class B membership (commercial tenants), and two directors of Class C membership (Laclede's Landing Redevelopment Corporation representatives), each having a term of two years. Annual assessments regulated by the Parcel Development Agreement are based on \$.50 per square foot for restaurants and entertainment tenants, and \$.25 per square foot for retail tenants. The retail development concept is to add incrementally to Laclede's Landing a growing number of retail establishments, including the restaurants to serve the full complement of daytime office workers that now exceeds 1,000. In time this number will reach over 2,000 as well as attract shoppers from throughout the metropolitan area.

Experience Gained

A project of the scale and complexity of Laclede's Landing offers several important and valuable lessons for others contemplating waterfront development projects. One of the most important aspects contributing to the success of the project was, and continues to be, the multi-ownership and participatory element of the Redevelopment Corporation. Many of the usual obstacles to the redevelopment process were either avoided or removed by simply having an institutional and organizational framework that could identify and deal with urban redevelopment issues.

Another key to the project's success was the development strategy of incremental improvements that: (1) corresponds to the Redevelopment Corporation's and property owners' ability to implement and manage it; and (2) allows each effort to stimulate the next effort in the development process. Incremental improvements were also carefully staged so that the public sector improvements immediately preceded private sector development. This careful staging of activities assured the attainment of development goals in an area previously marked by failures.

The entire redevelopment program was built upon a strong foundation composed of: (1) a comprehensive development plan responsive to change, (2) a redevelopment corporation making a sincere effort to interrelate with all facets of the community, and (3) the legal instruments necessary to implement and maintain the plans and concepts of the projects. These three

elements in concert provided the basic framework for orchestrating a redevelopment effort of the magnitude of Laclede's Landing, and each element would not have been as useful without the other two.

It should be noted that many of the public streetscape improvements were financed by the adjacent property owners. For instance, sidewalks, planters, sandwich boards, awnings, and other streetside improvements have been provided to supplement the benches and waste receptacles installed by the city. The city's investment thus far amounts to less than \$1 million as compared to \$30 million of private development investment.

One of the issues that was critically important from the outset of the project was parking. A special effort was made to always provide enough parking for every stage of development within the Landing. To meet this objective the Redevelopment Corporation not only worked closely with developers within the Landing but also secured adequate parking adjacent to the Landing through lease arrangements that guaranteed parking for the life of the project.

Within the context of a mixed-use development such as Laclede's Landing that is implemented over a long time period, the timing and intensity of each use becomes extremely important. In other words, a conscious decision must be made regarding the sequence of development projects in terms of use and activity. In this case, the Redevelopment Corporation focused initially on basic site improvements to encourage office development, restaurants, and entertainment establishments. This was followed by residential development,

hotel development, and retail development in an obviously overlapping way. The 750,000 square feet of office space provided stability and credibility to the Landing. Meanwhile, the entertainment establishments attracted people to the area and created a positive identity for the Landing. Nevertheless, the hotel, retail, and residential uses—particularly the retail—are more difficult to integrate within the building envelope of massive warehouse structures. Thus, special care has been taken to identify potential retail space and make it as attractive and potentially viable as possible. Providing block-to-block access through buildings, opening windows to the ground, opening basements to the first floor and allowing street exposure, converting alleys into retail storefronts, and developing internal arcades were a few of the physical design strategies to create a strong retail setting. The hotel and residential development has been confined almost exclusively to new construction projects.

Another important consideration was climate and the seasonal variations found in St. Louis. For example, during winter it can be extremely cold one week and very balmy the next. Summers are very hot and humid. In developing Laclede's Landing, designs were reviewed with an eye towards neutralizing the extreme weather conditions.

5-33

Project Data—Laclede's Landing

Land Use Information:

Gross Buildable Area: 2 million sq. ft.

Land Use Plan:

	Sq. Ft.		Percent	
	Rehabilitation	New	Rehabilitation	New
Residential	50,000	100,000	2.5	5
Commercial	250,000	—	12.5	—
Office	700,000	—	35.0	—
Hotels	—	900,000	—	45
Total	1,000,000	1,000,000	50%	50%

Dwelling Units:

52 (1200 sq. ft.—4,000 sq. ft.)

Parking Spaces:

Residential: 62

Commercial: 4,000

Hotels:

2 (875 rooms)

Restaurants:

16 (2,000 sq. ft.—12,000 sq. ft.)

Economic Information:

Site Development Costs:

	To Date	Projected	Total
Public	\$ 900,000	\$ 700,000	\$ 1,600,000
Private	45,000,000	155,000,000	200,000,000
Total	\$45,900,000	\$155,700,000	\$201,600,000

Development Coordinator:

Laclede's Landing Redevelopment Corporation
707 North Second Street
St. Louis, Missouri 63102
(314) 241-5860

Coordinating Planners and Architects:

Hellmuth, Obata, & Kassabaum, Inc.
100 North Broadway
St. Louis, Missouri 63102
(314) 421-2000

Inner Harbor, Baltimore, Maryland¹

Begun in the early 1960s, the redevelopment of 250 acres of waterfront in downtown Baltimore from out-moded industrial use to a popular multiuse center represents a wealth of experience in urban waterfront development. While Baltimore was blessed with a very attractive physical setting because of its Inner Harbor area, the success of its transformation is directly linked to an effective civic commitment to create a strong but flexible plan and tangible development programs, implemented by a specialized management team. No precise land use scheme was imposed from the start. Instead, the Inner Harbor evolved in increments that responded to specific development opportunities as they appeared and were found responsive to the overall city goals for the area.

¹ Much of this text is taken from "A MXD Takes Off: Baltimore's Inner Harbor," published in *Urban Land* (March 1982) and compiled by Joseph D. Steller, Jr.

Baltimore's Inner Harbor is a combination of independently conceived attractions bonded by the waterfront and common pedestrian circulation. First, open spaces were created as deteriorated waterfront structures were removed. In the earlier 1970s office building development cautiously ventured into the Inner Harbor, and in 1976 the Maryland Science Center opened. Soon afterwards came its keys to national recognition—a convention center, the Rouse Company's Harborplace, an aquarium, and a Hyatt hotel. By 1981, the Inner Harbor area was firmly established as a strong waterfront market for all types of urban development.

History

The Inner Harbor is where Baltimore started in 1729. Since that time the port, like the city, has grown outward from its original all-purpose piers in the Inner Harbor to include 42 miles of industrial shoreline with specialized facilities. As expansion took place, the original piers and warehouses which had been privately developed by merchants slowly became obsolete.

In 1904 a great fire levelled Baltimore's downtown financial district and the wholesaling and dock areas. It was immediately rebuilt but with only modest changes—a few streets were widened and docks rearranged. After World War I the Inner Harbor gradually became dormant because of its failure to change. Yet the Inner Harbor remained a priceless asset, providing a pathway



5-34 Aerial view of Baltimore's redeveloped Inner Harbor.

Photo credit: M.E. Warren

from the sea leading right up to the doorstep of downtown.

In 1959 this asset was considered ready for development when the city and the business community began their initial downtown redevelopment effort with Charles Center, a 33-acre, \$200 million mixed-use project in the center of the business district. By 1964, Charles Center was far from finished but enough momentum had been created to convince the public and private partners that they were ready to expand their redevelopment efforts to include the declined 250-acre Inner Harbor area adjacent to Charles Center and surrounding the old harbor basin.

At that time the Inner Harbor was noted for little more than rundown wharves, wholesale produce markets, warehouses, railroad yards, and foul water. The view was compounded by a negative image of downtown Baltimore in general. Nevertheless, the Inner Harbor still had a number of things going for it. The open water was very close to downtown, within two blocks of the city center, and right next to Charles Center. Physical barriers to pedestrian access to the water existed in the form of roadways, but this could easily be reduced and there was little competing demand for the already underused land. What the city had to do was recognize that its major amenity and potential was right there in the Inner Harbor. The site's proximity and tight shape, comprised of shoreline on three sides, made the Inner Harbor area ideally suited to establishing a strong fresh identity and sense of activity.

City Redevelopment Plan

In 1964, a 30-year program was unveiled for redevelopment of this huge area. Stretching to the south and east of Charles Center, the city envisioned new residential, social, and cultural facilities as well as major hotel and office buildings. The master plan was tied into a general redevelopment scheme that encompassed four basic goals:

- A reconstruction of the Municipal Center. The plan called for new and rehabilitated government buildings to line a stately mall 150 feet wide linking City Hall with the Inner Harbor. This investment of public funds was expected to stimulate private investment in the other uses called for by the plan.
- Offices to be built as an extension of Charles Center southward to the Inner Harbor.
- Residential development with a broad spectrum of costs in high-rise and low-rise buildings, bracketing the harbor to the east and west.
- A regional "playground" comprised of recreation, cultural, and entertainment facilities centering on the piers and around the shoreline of the basin itself.

Even before redevelopment was started, however, the Municipal Center was shelved. In the 1964 election, Baltimore voters turned down \$4.5 million in loans for the new government buildings. As it turned out, the Inner Harbor did not need priming as the other components of the city's original redevelopment plan gradually took



5-35 The Inner Harbor in 1968 was dominated by rundown wharves, markets, warehouses, and roadways.

shape. Ten years later the municipal mall was abandoned and, instead, the restoring and recycling of the handsome old buildings of the financial district became viable, led by the award-winning restoration of City Hall itself.

Charles Center-Inner Harbor Management Corporation

Responsibility for the Inner Harbor project was assigned in 1965 to a private, nonprofit corporation with a proven record in managing Charles Center, the Charles Center-Inner Harbor Management, Inc.. It is a working public-private partnership connecting city government, the city's business leadership, and a third partner, the developer, the last of whom usually changes from project to project. Beginning in 1959, the partnership has evolved through three phases.

Phase one was to collaborate on a master plan that would express the joint objectives of the city of Baltimore and the business community. In order for this to be possible—to reach a consensus on objectives—the business community had organized itself around four principles:

- There should be only one business group representing all others in dealing with the problem of community development in the downtown area.
- Before asking for commitment by the public to a master plan, the business community should develop a detailed plan for a project, giving the public and private sectors a strategy for action, something they could begin to make happen right away.

- The first project should be big enough to make a difference in the city's economy but small enough to be achievable in a reasonable period of time.
- This project should be couched in a master planning context: it should be part of a large scheme whose effect has been thought out and whose results can be cumulative.

Charles Center was this first project. It covered 14 city blocks, or 33 acres, in the center of downtown. The timetable was 10 years, the total of public and private investment valued close to \$200 million.

Baltimore businessmen had raised the money to pay for the Charles Center-Inner Harbor area plan. With the plan accepted, the public/private partnership moved into phase two. This involved the creation of the "delivery system"—a nonprofit, private development corporation sponsored by the city. At first, it consisted of a small team of executives who carried out the Charles Center project. Later, they formally chartered Charles Center-Inner Harbor Management, Inc., a nonprofit, no-stock corporation which entered into a contract with the city to manage the Inner Harbor plan.

The corporation is an entity which maintains the flexibility of a private business, while the city—which provides the corporation's operating funds—retains complete control over policy, and therefore maintains its responsibility for the use of public powers. In other words, the corporation, as an arm of the city, makes it possible for the city to act like a business when that is the only way to get the job done. The corporation has four primary functions:

- To coordinate all things that the various city agencies must do vis-a-vis the Inner Harbor area. This takes the burden off the shoulders of developers and involves seeing that the public sector delivers its hardware and turns its plans into binding commitments in accordance with the development timetable.
- To supervise the design of public improvements; to act as the client, or owner, on the city's part, so developers can identify and deal with another single, owner-type entity in coordinating the design and construction of the environment, or adjacent projects.
- To recruit developers who can and will produce the projects called for by the plan and to negotiate agreements with them which spell out the obligations of both the developer and the city.
- To act as a catalyst for making things happen. For instance, if the developer has an idea that is contrary to the city's plan and the corporation agrees that he is right, it can represent him in dealing with the city. The city can take the corporation's advice since it is nonprofit and, therefore, objective. Hence the term "delivery system."

This system has been effective for 20 years with very little change. Even the corporation's budget has been stable, at \$850,000 more or less for 1978–1982. The corporation has worked for six different mayors of both political parties without suffering any taint of political favoritism or any slackening of priorities at city hall.

By the end of the 1970s, Charles Center-Inner Harbor Management, Inc. had entered phase three of the public/private partnership: the "deal-making" phase. In the early years it was assumed that after the public and private sectors had established mutually acceptable planning objectives, they would then retreat to opposite sides of the table for arms-length negotiations during the project execution phase. As it turned out, this was no longer possible. In many cases, the third partner—the developer—was no longer able to finance major new construction in downtown areas, and in particular waterfronts, by relying solely on the mechanisms of the private sector. Instead, the city found advantages in becoming joint venture partners with developers, using new techniques to create something that works for both sectors. In the case of the Inner Harbor, these public inducements include: land leases which help save projects substantial up-front cash requirements; subordinated ground rents which help make proposals more attractive to mortgage holding institutions; public improvements off-site and on-site; and flexible financing for closing the "gap" between the developer's equity and mortgage and the actual total project costs. Unlike other cities, Baltimore does not use tax concessions, except for off-street parking facilities.

With the city acting like a private business, the private partner has to be prepared to protect the public interest by opening its books, sharing any windfall profits with the public sector, and generally working to achieve the standards and objectives of the community.

The Influence of the Office Market

A main impetus behind the private sector's decision to invest in the Inner Harbor area was the potential for office development. From the momentum created in Charles Center, the office building phase of the city development program has had a very positive effect on weekday activity in the Inner Harbor area. Between 1973 and 1980, five office buildings totalling 1,650,000 square feet of space plus a new federal courthouse and office building were developed. Without this office growth, there would not have been sufficient critical mass to encourage the overall rejuvenation of the harbor area.

The linkage of Baltimore's primary office market to the Inner Harbor really came as a second step in the Charles Center and Inner Harbor development. With the natural draw to the water, second-level walkways traversing all major automobile arteries became an important link in creating an efficient flow between the

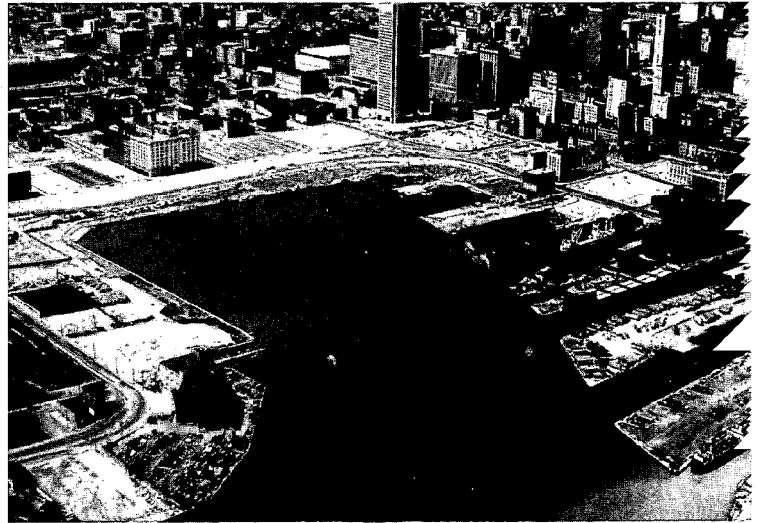
Harbor area and the growing business district. Height restrictions on buildings close to the Harbor have enabled a far greater number of people to share the Harbor environment than would have been possible otherwise. In a nutshell, the linkage to the shoreline has been monitored very carefully and produced in the Inner Harbor area a catalyst for surrounding development.

Baltimore's dramatic developments have the kind of successes that create the perception of a high quality lifestyle, which employers recognize as an important element in their locational decision. A fine example is the case of RTKL, the architectural firm, who chose to move its entire operation to a new building in the Inner Harbor in 1982. A decision by W.C. Pinkard & Co. might provide a further perspective on one company's dollar valuation of the Inner Harbor location. The company selected the World Trade Center, located on the water's edge, over another new project within four blocks, based entirely on its ability to attract and maintain employees and business in that location. The economic differential was close to \$1 million over the initial lease term.

Redevelopment of Harbor Begins

With the approval of a 30-year redevelopment plan, the expansion of the Charles Center Management Corporation to include responsibility for the Inner Harbor, and anticipated market pressures related to office growth, the actual redevelopment efforts began. In creating the new environment for a projected \$230 million of private and institutional investment, \$55 million of public funds were spent to acquire, clear, and prepare the land for new development. The first stage of the redevelopment program was defined to contain approximately 95 acres of land along the immediate three sides of the harbor basin. The public funds included federal grants amounting to \$35 million and \$17 million in city bond issues approved by the city voters in 1966 and 1982.

A first critical step in the redevelopment plan was to recapture the water as a public amenity by returning all the property around the shoreline to public ownership, creating a permanent circle of parkland. Starting in 1968, the water's edge was reconstituted with a heavy-duty bulkhead, or public wharf, and a wide promenade was built around the harbor basin, connecting a series of public recreation areas to include playing fields, stands for 4,000 spectators, picnic shelter, play sculpture, and open parks or commons. Minimal landscaping was done, providing flexible space for a variety of outdoor festivals and recreational uses. Four existing structures in the immediate Inner Harbor area were preserved: a newspaper building, a spice plant, a church, and an older brick loft building. The U.S. frigate *Constellation*, the oldest fighting warship of the United States Navy, became the visual focal point of the Inner Harbor



5-36 View of the Inner Harbor as it existed in 1973. Ample space was available for outdoor festivals and recreational uses.

project in 1972. It is a large sculptural element symbolizing the history of the city and the romance of the port and commerce on the high seas, currently undergoing extensive renovation.

With public investment pushing \$50 million on the shoreline alone, the city was not willing to sit back and wait for the people to come. Therefore, an aggressive program of activities and free entertainment was launched in 1970 with Mayor Donald Schaefer, in his first term of office, putting his full support into the effort. It began with a smorgasbord of do-it-yourself leisure pursuits—flea markets, fireboat displays, antique fire engine displays, etc.—called "Sunny Sundays," which were followed by free concerts, boat races, and parades. The Baltimore City Fair, which drew 1.5 million people to the Inner Harbor over a single weekend after Labor Day, was attracted to the water's edge in 1973. Finally, the program hit full stride by 1980; International festivals were put on by a different ethnic neighborhood each weekend for 13 weeks between April and September. New activities continue to be added, and an outdoor tent for the performing arts was erected in 1981.

While the Inner Harbor was originally intended to be a playground for Baltimoreans, it was also hoped that people from the suburbs would come and spend their time and money in the city. This aspiration was given a tremendous boost in 1976: when the Tall Ships left their rendezvous in New York, eight of them came to the Inner Harbor for an open house lasting 10 days. Hundreds of thousands of people came from the suburbs to this event. With this, a threshold of recognition was reached. The regional playground was realizing the hopes of the city and the Inner Harbor plan. The attitude of Baltimoreans themselves was seen changing from one of negative impressions about the downtown environment to one of greater pride.

By 1982, more than 25 attractions had been added in the semicircle of parkland and in the water alongside. The floating attractions included: a marina and piers for visiting charter and pleasure craft; tour boats for short tours of the port or longer voyages down the Chesapeake Bay; a small boat rental dock with a water taxi; and a growing outdoor maritime museum which now includes a skipjack, submarine, lightship, gondola, and a 200-foot 1925 steamer, the *Nobska*, which has been refitted as a floating restaurant. Rising above the water on the south side of the Inner Harbor is Federal Hill, one of the city's historic landmarks, which is being maintained as a public park and scenic overlook.

Residential development, while slow to proceed, by 1982 included 250 luxury townhouses, 487 subsidized apartment units for the elderly, and a 220-bed nursing home. The city had also sold more than 100 older homes for one dollar under an urban homesteading program in the area to owners who agreed to live in and restore them in accordance with overall project standards. In conjunction with residential and office construction, 3,335 permanent parking spaces out of 9,670 planned were provided as of 1982 in the Inner Harbor area.

Of greatest overall significance were four major projects completed between 1977 and 1981 that helped elevate the Inner Harbor from a regional playground to a national tourist destination. First came the \$40 million

Convention Center in 1979, with 110,000 square feet of exhibit area and an almost equal amount of meeting and lobby space.

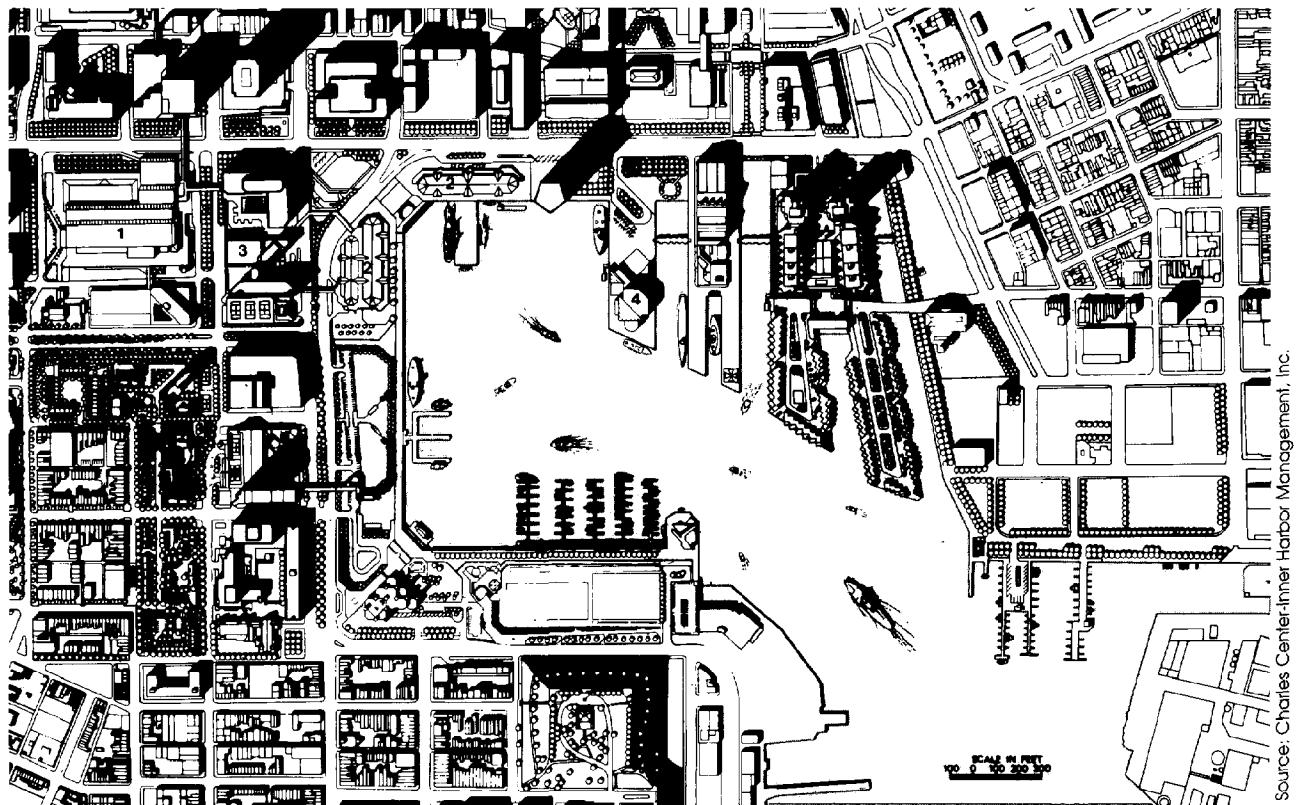
Next, chronologically, came Harborplace, a pair of two-story market pavilions completed in 1980, the keystone of the circle of attractions around the shoreline. Harborplace has transformed the Inner Harbor into a place that hums with people day and night for 12 months of the year instead of the previous six-month season. (See sidebar on page 152.)

The next component was the Aquarium, a totally city-funded project of \$21 million, opened in the summer of 1981, which has been designated by Congress as the National Aquarium in Baltimore. The city projected 400,000 to 600,000 visitors a year, but attendance hit one million before the end of the first seven months.

The final component was the Hyatt Regency Baltimore Hotel, which opened in October 1981 and cost \$40 million, including land and garage.

Convention Center

Encouraged by its increasingly recognized development renaissance and by strong arguments about the potential for substantial convention business, Baltimore decided to commission a broad-based feasibility study of building a convention center in the Inner Harbor area. The resultant reports, made in early 1975, convinced the city that a convention center would be a very worthwhile investment and a major addition to the downtown program.



5-37 Illustrative site plan of the Inner Harbor: 1. Baltimore Convention Center, 2. Harborplace, 3. Hyatt Hotel, and 4. Aquarium.

The study's projections made it evident that, because of the tax structure affected by such a facility, the great majority of tax benefits to be derived would accrue to the state rather than the city. Accordingly, the city, with the endorsement of the governor, asked the 1976 state legislature to approve a state contribution of \$35 million to the estimated \$45 to \$50 million total cost of the center. In order to obtain these funds, Baltimore's mayor agreed to reimburse the state for the construction bonds, should the city fail to achieve its goals.

The "tightness" of the convention package is a great selling tool in that the hotels, restaurants, shopping, and other attractions are within easy walking distance. During 1981-1982, national meetings and local community activities (i.e. dances, banquets, fund raisers, and trade shows) used the center approximately 72 percent of the time, but the center drew enough out-of-town business to become a prime reason for the construction of the new Hyatt Regency Hotel and the renovation of the Hilton Hotel. It is proving to be a major reason that other hotels are in various stages of planning and development. As of 1982, Baltimore was still suffering from a shortage of hotel rooms in order to be competitive with more established convention cities elsewhere.

Hyatt Regency Hotel

In the Baltimore Hyatt deal, the city and the Hyatt owners sat down knowing what each needed and what each wanted. The negotiators only paid passing attention to contracts and proceeded to work out the problems as they arose. Each party knew that the Baltimore market was unproven, and hence Hyatt must build an extraordinary hotel, which was both beautiful and luxurious and yet very efficient. Hyatt decided to start with 500 rooms; anything less would not achieve the corporation's goals or the requirements of the convention hall.

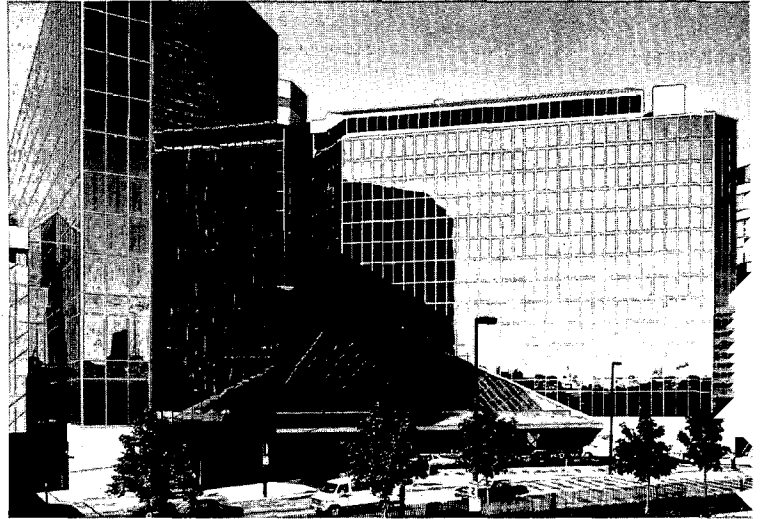
If the complicated financial structure for the Hyatt was examined, one would recognize that there must have been real faith in each of the parties in the success of the venture. Both the city and Hyatt made substantial loans subordinate to the first mortgage. Both parties will be paid in full and much more, but both will have to wait. Hyatt expected to close the deal with an investment of \$1 million but actually has in it about \$4 million. The city's investment is much more. The total expenditures, other than the land and improvements by the city, amounted to \$40 million:

- \$20 million (10 percent), a first mortgage furnished by Equitable plus about one percent kicker;
- \$12 million, a second mortgage by the city (mostly through UDAG with interest at seven percent);
- \$4 million, a garage by the city (payable out of garage income);
- \$1 million, up-front invested by Hyatt;
- \$3 million, additional loan by Hyatt at prime plus one percent.



5-38 The Baltimore Convention Center was a major addition to the Inner Harbor area.

Photo credit: M.E. Warren



5-39 Development of the Hyatt Regency Hotel was made possible by an innovative public and private investment strategy.

Hyatt manages the property under an agreement in which it receives four percent of the gross revenue plus an incentive fee in the amount by which 20 percent of the gross operating profit exceeds that amount. The gross operating profit is the profit before mortgage requirements, land rent, insurance, taxes, and depreciation over and above the amounts set aside for repairs, maintenance, etc. The incentive fee is subordinate during the first 10 years to the first mortgage requirements and thereafter to the second mortgage as well.

The land has been leased to Hyatt for \$200,000 a year during the first 34 years and thereafter, for 20 years at \$400,000 a year. The profit, after payment of all the loans and advances are divided, is one-third to the hotel and two-thirds to the city. There are no tax refunds or rebates.

The hotel opened in October 1981 and all of the partners in the deal are very enthusiastic about its future. The Baltimore Hyatt has started under excellent circumstances and conditions. Both the city and Hyatt believe that the hotel is consistent with the beauty of its surroundings and that it will be a credit to each partner.

Experience Gained

Several important lessons can be learned from the experiences of the Inner Harbor Development Program. The projects, which have gained national attention, are the results of a combined public and private sector effort that began 20 years ago. Over the years certain key aspects of the Inner Harbor contributed to its success.

A master plan which was strongly supported in its concept and programming but flexible in its implementation was crucial. It provided the basis for civic leadership in getting things done yet was open to refinement to accommodate development opportunities as they arose.

As a result, Baltimore's Inner Harbor has turned out to be an excellent example of continuing an urban development pattern of different projects interrelating through use and common space. Separate pieces have been allowed to fit together in increments that in their independent distinction and vitality contribute greatly to the overall diverse character of the area.

Public-private cooperation was a key to success. The early support of private business and determined municipal commitment to encouraging development was fundamental to the redevelopment of the Inner Harbor. An active nonprofit development corporation created specifically for this purpose, this partnership has been able to orchestrate city policy and programs to complement special business needs.

The city of Baltimore backed up its commitment with direct investment to make things happen. This included land assemblage and clearing, underwriting walkways and a variety of amenities, providing parking, writing down land costs, and ultimately participating in actual development finance. The city also gave constant attention to programming activity. For a people-oriented area like the Inner Harbor, this meant regularly scheduling crowd generating events such as fairs, water activities, etc. In the early days these types of temporary events were essential to introducing people to the "new" Inner Harbor. These functions helped change the negative self-image of Baltimore's own citizens towards their downtown, which made it possible to change the attitude of suburbanites and outside visitors as well.

Continuing to add a variety of attractions over time has been important in sustaining visibility. By 1982, the Inner Harbor was almost two-thirds completed and had achieved a critical mass of activity that made further development only a matter of time. Plans for future investment include five more hotels, more theme attractions, a 1.2-million-square-foot MXD project, half a dozen more office buildings, and the potential for 2,000 residential units.

Harborplace

Harborplace is a collection of restaurants and small merchants, two-thirds of them food-oriented, brought together to create a marketplace with its spirit of festival and theater. The \$20 million project comprises two buildings totalling 249,000 square feet of space, of which 142,000 square feet is gross leasable area.

In its first year, Harborplace has had average per square foot sales volumes greater than the mature Faneuil Hall Marketplace project in downtown Boston, the Rouse Company's previous top-producing project. Harborplace had 18 million visitors in its first year of operation which ended in July 1981, and sales were well in excess of twice what a typical regional mall produces.

The piece of land on which Harborplace sits was not always the desirable property that it has become. When the Rouse Company made a proposal to the city in 1977 regarding the 3.2-acre Harborplace site, the property had remained fallow for over 10 years, awaiting developer interest. While there was growing summertime activity at the harbor, during the winter very little was going on.

After the Rouse Company's proposal, a final invitation by the city attracted no other competing proposals. Based on a year of experience in developing and operating the highly successful Faneuil Hall Marketplace, Rouse was willing to embark on what at the time seemed a tentative venture in Baltimore. The Maryland-based development company had the benefit of special knowledge of the city.

Rouse was attracted to the Inner Harbor because of four main factors: the amenities of water and open space, easy access to downtown and the metropolitan region, the availability of parking, and the political and financial support of the city in its backing of the Inner Harbor area. In fact, on this last point the city was so tied to the site that Rouse was unable to wrest ownership from Charles Center-Inner Harbor Management in the negotiations and had to be satisfied with a long-term land lease on the property. For rent, the city receives \$100,000 unsubordinated ground rent with escalations over time plus a kicker on the land rent of 25 percent of the net cash flow of the project after a 10 percent return to the developer on his cash investment.

The Inner Harbor Renewal Plan included a commercial/retail site as early as 1969, but the Rouse proposal required the actual location to be modified. The city agreed to the change, and in February 1978 the Baltimore city council gave final approval to the Harborplace concept.

Opposition to the proposal, generated partly out of fear that Harborplace might become a regional shopping center and draw away business from nearby local establishments, culminated in a successful petition for a city referendum. Except for Faneuil Hall Marketplace, people had no model against which to judge

Harborplace. The developer produced plans and models, and through a strong communications campaign run by a coalition of citizens, the Harborplace development was approved in November 1978 by a margin of three to two. A positive consequence of the referendum process was to give Harborplace a very high recognition factor; the public now had a strong image and clearly felt an attachment to the project.

Ground breaking commenced in early 1979. Physical preparations by tenants began a year later. This rapid and tight schedule led to Harborplace opening on time on July 2, 1980. An early summer debut was ideal to attracting crowds and establishing the project's credibility.

Design

The development process for Harborplace was marked by bonds of strong common interest between the city's goals and those of the Rouse Company. Public concerns with respect to design were presented through the active involvement of the Charles Center-Inner Harbor Management, Baltimore's Department of Housing and Urban Development, and a Mayor's Design Advisory Group, which was put together specifically for citizen involvement in the design process. The architects worked under the direction of the Rouse design



5-41 The festival marketplace complements the public amenities offered by the Inner Harbor.

department to capture the flavor of the wharf buildings which preceded the pavilions at Harborplace, to create glass facades which allow the lights and activity of the pavilion to sparkle at night, to open up the buildings to the water by day by providing roll-up exterior doors, and to provide the public with a view of the harbor from outdoor but covered porches and terraces. A two-story height limitation imposed by the city puts the roof of the building beneath the bowsprit of the frigate, *Constellation*, berthed in front of Harborplace. This was achieved despite the need to raise the first floor 10 feet above the water level (in order to meet flood insurance requirements) and to locate mechanical equipment in a mezzanine hidden in the roof.

A sound relationship between the project and its environment was one of the key goals of the planning and design effort. The location of the project was designed to be sensitive to the plan for the harbor and to people's strong and legitimate desire to have visual and physical access to the water. The project is on the waterfront but is close to the downtown office district, which allows it to integrate best with the city. The market also has a strong connection to the new hotel and convention center through a pedestrian bridge across a major traffic artery. Harborplace was separated by a 200-foot plaza/amphitheatre into two buildings to reduce its mass and to preserve a view to the center of the waterfront and the ship, *Constellation*.

In form and scale, Harborplace echos the wharf buildings that once occupied the site. Replicas of flags representative of shipping lines fly from the new roofs. The buildings have no front or back, given that the project needs to open up to both the harbor on one side and downtown on the other. "Porticos" spread along each building allow people to see through the structure as well as invite entry.

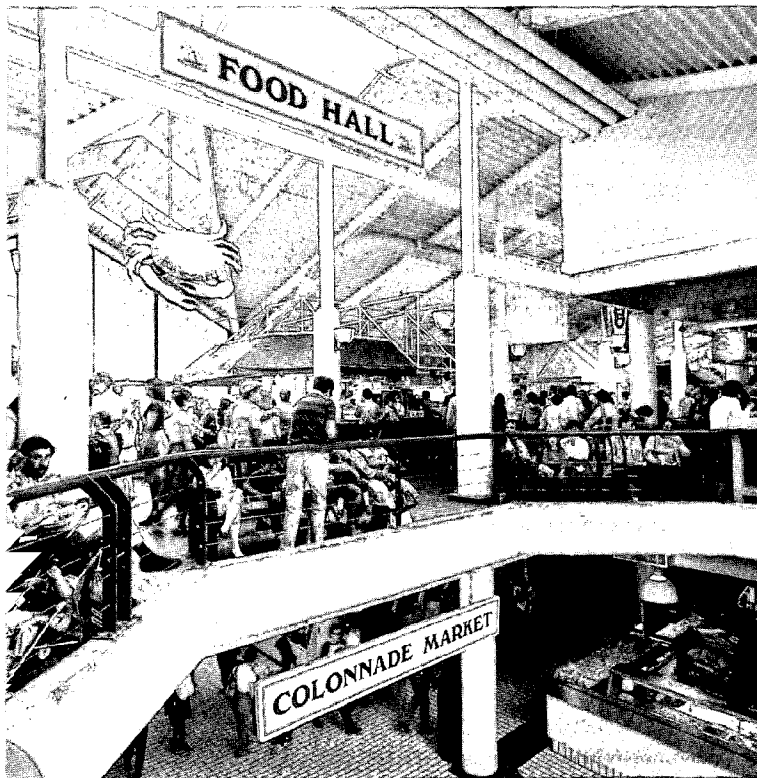


5-40 Harborplace was designed to provide the public visual and physical access to the water's edge.

Harborplace was built with an exposed concrete frame and lightweight steel frame roof. Mechanical systems are exposed as well. The outside walls are predominantly glass while ceramic tile walls and quarry tile floors cover the interior open space. The building interiors were split to permit air conditioning in central areas and exterior sections that can open to the outside air. Elevators and escalators supplement numerous stairs serving the buildings.

Specialty Retailing

Harborplace is, of course, a shopping experience, even if it is first an experience of the sights and sounds of the marketplace, of ships in the harbor besides which it sits, of the colorful pavilion-like quality of the buildings themselves, and of the street performers and musicians who add to the fair-like atmosphere. Furthermore, Harborplace is an experience of the traditions of the city of which it is a part. For example, there is a long history of successful city markets in Baltimore where fruits, produce, meat, fish, and poultry are still sold. The Colonnade Market is in the image of this tradition.



5-42 The Light Street Pavilion features the Colonnade Market, developed in the tradition of Baltimore's older city markets.

Another tie to the people of Baltimore is the selection of ethnic food which comes from the Italian, Greek, Jewish, and other cultures that form the rich mosaic of this port city.

A variety of businesses were encouraged to help create the desired chaotic atmosphere of a marketplace. Individual proprietorship is an important factor in achieving this. Except for large restaurants, each business seldom occupies more than 500 square feet.

A distinctive character was devised for each of the two buildings. The smaller pavilion is reached through a narrow central corridor that brings people close to each other and the merchandise. This building houses established specialty shops and some more formal restaurants. The large pavilion is more open, featuring food service of all types. In order to ensure the sale of less profitable produce, fish, and meats, a low-rent aisle especially for their display runs down the center and ties in with fast-food operations on the sides. One section of this building is comprised of stalls and pushcarts whose merchants sign week-to-week or month-to-month leases. This allows a constant renewal and change of hand-crafted or other specialty merchandise and requires no capital investment in a store's fixtures on the part of the merchants. All of this adds a liveliness and a constantly changing array of merchandise for visitors to the market.

The city's desire to encourage local city merchants coincided with Rouse's own interests in having the strongest possible representation of local small tenants. Merchant selection processes were rigorous. Over 2,000 potential operators were interviewed before Rouse decided on the 140 who were to occupy Harborplace. Ninety-one percent are local to the community, many opening their first business.

Rouse also made a special effort to attract minority enterprises to the project, in close cooperation both with the black community of Baltimore and with local banks who waived certain underwriting requirements to provide financing for these merchants. On opening day, 22 of the 140 tenants were minorities, a number considerably beyond the goal that Rouse had discussed with the community. Similarly, goals were exceeded with respect to the number of minorities who now work in the project, the number who were employed in the construction of the project, as well as the number of minority subcontractors who participated in the construction of the project.

Benefits

Harborplace itself was built solely by private investment, although it clearly benefits from the surrounding public amenities and adjacent parking. The Harborplace project, like the Hyatt, pays full taxes. Prior to the start of construction it was estimated that the project would deliver \$2.3 million in property, sales, and income taxes to the city and state in its first year. The actual

receipts in that first year totalled \$3 million in addition to parking revenues. Because of the enormous success of Harborplace, the 1,000 jobs anticipated have turned into 2,500 jobs, one-third of which are held by previously unemployed Baltimore residents.

For the first year of operation, covering July 1980 to July 1981, the city of Baltimore received \$595,500 in real estate taxes and \$93,800 in land rent from Harborplace. In addition, the city is due 25 percent of any cash after debt service and preferred rent to the developer, a piggyback on income taxes from tenants and employees, plus a portion of state sales tax for schools.

Some of the business community which feared that Harborplace would draw off customers instead has seen an increase attributable to the generally heightened interest in visiting downtown Baltimore. Harborplace has added another attraction to the Inner Harbor as a tourist destination. An estimated 33 percent of the visitors to Harborplace reside outside the greater Baltimore area.

People have kept coming back to Harborplace, in numbers quite above the developer's estimates. The peak summer season is being well supplemented by year-long crowds, whether they are drawn by the convention center, aquarium, or the specialty shops. Consumers spend less per capita than at a typical regional mall, but their expenditures at Harborplace have still exceeded Rouse's projections for specialty centers. The aggressive pursuit of high quality tenants to

start with has proven its worth in very high sales and reasonable tenant turnover. Looking at the project's success, the developer suspects that Harborplace could carry more retail space than its one-third ratio due to the high critical mass of activity already present in the Inner Harbor area.

The essence of the Harborplace concept is providing entertainment. The project is an asset to the Inner Harbor environment because it is a sensitive response to the individual site. Most importantly, the developer and city started out in fundamental agreement over what was needed. This is not to say, however, that the design of the project was preconceived, which would have been a handicap. Because of an early understanding of the importance of views and scale, the architects' first designs were subjected to only minor revision in the public review stage. The architects were offered considerable leeway because there was little existing urban context to determine building style in the immediate area. The popularity of Harborplace confirms the success of the designers' attempts to create an exciting, people-oriented attraction.

5-43

Project Data—Harborplace

Land Use Information:

Site Area: 3.2 acres

Gross Building Area: 247,000 sq. ft.

Gross Leasable Area: 142,000 sq. ft.

Economic Information:

Land Rent: \$100,000 per year

Total Project Cost: \$20,000,000

Rents: \$15 to 40 per sq. ft. (range)

Common Area Charges,

Other Areas: \$15 per sq. ft.

Tenant Information:

Number of Merchants

12 restaurants and cafes

20 market and other foods

37 small eating places

36 specialty shops

35 pushcarts and kiosks

2 flowers and produce

Percent of Gross Leasable Area

40.7 percent

13.7 percent

10.6 percent

25.0 percent

5.3 percent

4.2 percent

Developer/Management:

Harborplace Limited Partnership,

A Rouse Company Subsidiary

10275 Little Patuxent Parkway

Columbia, Maryland 21044

(301) 992-6000

Architecture:

Benjamin Thompson & Associates, Inc.

1 Story Street

Cambridge, Massachusetts 02138

(617) 876-4300

Johns Landing, Portland, Oregon

Johns Landing is a large-scale, mixed-use development project that has transformed 75 acres of declining industrial land along the west bank of the Willamette River into a new urban village. Unlike most other urban waterfront projects of similar scale, it was developed exclusively with private funding. The project has replaced incompatible and restrictive uses, thus making the nearly one-mile riverfront area accessible, attractive, and above all, more responsive to the needs of Portland residents.

History

The city of Portland straddles both sides of the Willamette River. The city's downtown was established on the river's west side. As Portland expanded in the late 1800s, the riverfront south of downtown became an industrial area occupied by lumber mills, railways, and manufacturing plants. By 1928, furniture manufacturing was the dominant use. Portland's "Furniture Row" along Macadam Avenue was for a number of decades one of the country's principal furniture manufacturing centers.

Redevelopment efforts first began in the mid 1960s after a fire destroyed the Jones Lumber Company, located on a large riverfront site in the industrial area south of downtown Portland. The owners initially planned to build an industrial park on the site of the burned-out lumber company since the property was surrounded by factories and warehouses and served by a railroad spur. One of the owners, however, saw a different potential for the waterfront site. Because of the improvement in water quality of the Willamette River and changes in industrial operations in the area, the possibility existed for



5-44 The Johns Landing site is located along the Willamette River, south of downtown Portland.

redeveloping the site for other uses. The owner consulted other people to determine the validity of the idea, and they concluded that redevelopment would be feasible if the site could be enlarged.

The significance of the water quality improvements cannot be overemphasized. In Oregon, the commitment to improve water quality was demonstrated as early as 1938, although it was not until the beginning of the 1960s that the state's Department of Environmental Quality was created and important legislation was enacted. Guidelines were adopted for establishing water quality standards, and policy regarding statewide controls was clarified. A system of permits and financial incentives, such as the tax credits and assistance grants to cities and counties, was authorized.

Site Assembly and Financing

Given the potential opportunities for redevelopment, the lumber company owners concentrated on trying to expand the site. Immediately to the north of the Jones Lumber Company was the B.P. John furniture factory, which had recently been sold to Consolidated Foods. To the north of the furniture factory was a door factory that was about to relocate to the southeastern region of the country. The owners contacted Consolidated Foods and the company indicated that it would be willing to sell the property if part of it could be leased back to them for a few years. A deal was also initiated to acquire the door factory property.

In June 1971, Macadam Investors Oregon, Ltd., was founded with John D. Gray as general partner to redevelop the riverfront. There were 10 limited partners, seven of them direct heirs of B.P. John and owners of the vacant Jones Lumber Company land. These seven limited partners provided 21 acres of land on a favorable ground lease plus 70 percent of the equity. Their contribution, plus that of Gray and the three other limited partners, totaled \$2 million. This equity was combined with some debt financing to buy approximately 55 more acres of land and to pay redevelopment and operating costs.

With 76 acres assembled and predevelopment financing secured, Macadam Investors Oregon, Ltd., was prepared to continue with planning and development activities. The developers decided to reduce the site to 70 acres by dedicating a public easement along the riverfront for walking and bicycle paths. Clearing the property for development required the relocation of only four families.

The developers offered the riverfront property dedicated for public use to the city. However, the city government declined to accept the offer. The county and state governments also refused to accept ownership and responsibility for the property. Consequently, the developers of Johns Landing continue to pay taxes and maintenance costs for this property.

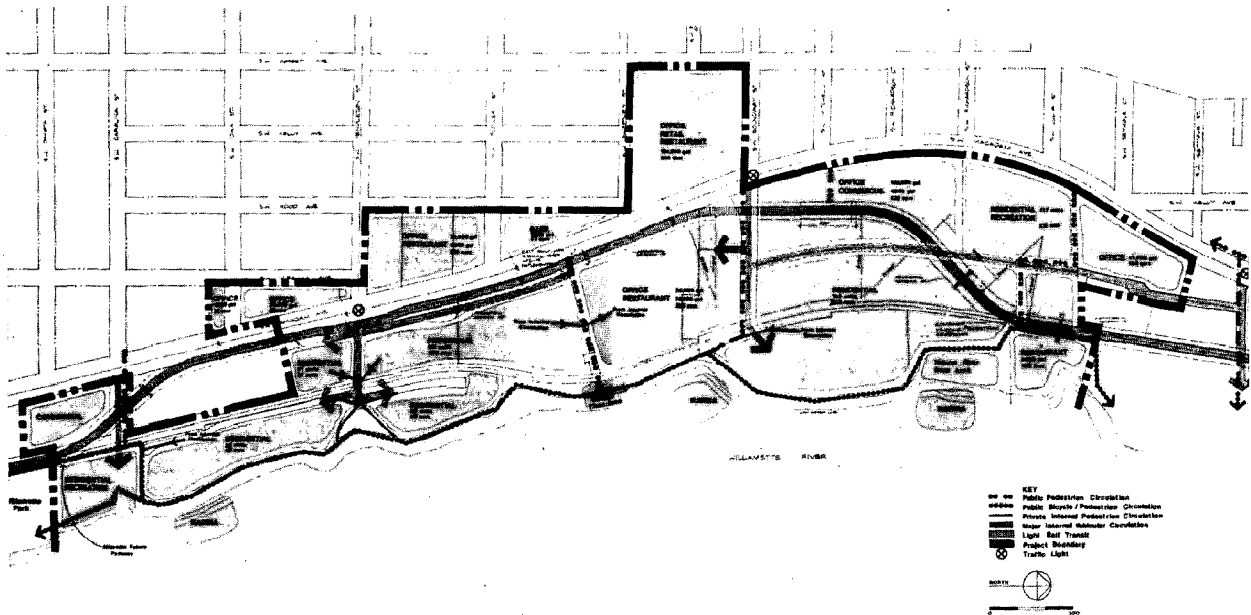
Project Plans and Approvals

The planning for Johns Landing began in the early 1970s. Joseph Griggs, a member of the original planning team, became managing architect and planner for the project in 1973, and since 1975, Griggs, Lee, Ruff, Ankrom/Architects, P.C., have been managing architects for the plan and design architects for a majority of the buildings.

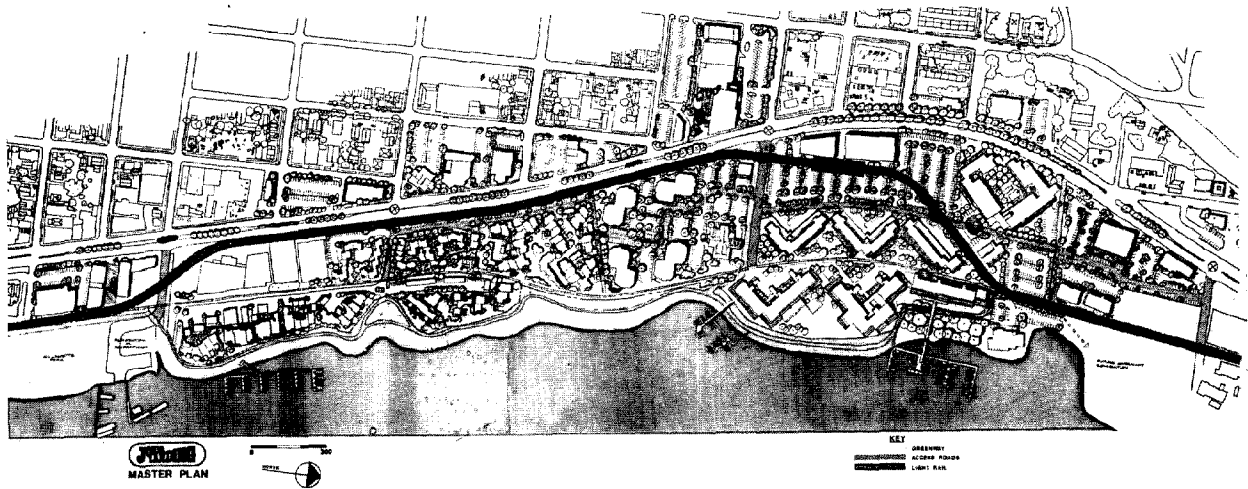
The planning concept was to develop Johns Landing as an urban village combining residential, commercial, recreational, and office uses. The office and retail development was designated primarily for the Macadam Avenue corridor. The residential development was concentrated closer to the river with the shoreline reserved for recreational uses.

The actual master plan was changed many times during the development process, although the initial development concept of Johns Landing as a multiple-use urban village remained intact. Each change to the plan was made in order to improve the project's overall function. Many revisions were made as increments of property were added to the site for development. Furthermore, the master plan was revised several times to conform to the specific requirements of the 39 different governmental review agencies. The final master plan calls for about 500 dwelling units, including both apartments and condominiums; several waterfront restaurants; a variety of office projects, including new speculative buildings, small corporate buildings and industrial building renovations for office use, totaling about 600,000 square feet; a public waterfront pathway system; a specialty shopping complex; two marinas; and an athletic club. The original development timetable was 10 years.

Once the master plan was reviewed and approved by the numerous governmental agencies, work could begin on stabilizing the mile of shoreline. Since the Willamette River varies some 20 feet during the year, this effort was expensive and time consuming, but a key step in proceeding with development. It took about 18 months for the developers to obtain permission to rebuild the riverbank in such a way that it would be stable and usable but would not reduce the amount of buildable land.



5-45 The schematic plan shows the project's land use and circulation pattern.



5-46 The Johns Landing master plan illustrates building configurations and landscape elements.

Project Components

The retail component of the Johns Landing development program is concentrated in the Water Tower building located on a 3.6-acre site on the west side of S.W. Macadam Avenue. Formerly the Biltwell Furniture Factory, the 1903 building was adapted to function as a specialty shopping complex with over 40 retail shops, six restaurants, and over 25 individual office tenants. Renovation of the 111,000-square-foot (gross leasable area), three-story building was completed in 1975. Gigantic overhead beams and hardwood floors were sandblasted and a courtyard was created of old Belgian cobblestones taken from street excavations. A modern 200-car, two-level parking structure was constructed, expanding the size of the complex to 198,000 square feet. A surface parking lot adjacent to the building provides an additional 106 parking spaces. Portland's Building Department sent inspectors to tour the building with the architects to help them determine how they could deal with existing code rulings affecting the project's design. The total project cost was \$3.5 million, and space in the complex has been leased for \$7 to \$10 per square foot.

The residential component of Johns Landing is located between S.W. Macadam Avenue and the Willamette River and consists of three major projects—Riverpoint, Bankside, and Riveridge—developed in multiple phases.

The Riverpoint project consists of 23 luxury condominiums ranging in size from 2,500 to 4,500 square feet. The project is located on five acres of the Johns Landing site and was designed to maximize the number of units on the limited river frontage, capitalize on spectacular views of the river and downtown Portland, and create a sequence of separations and privacy between the residential units and the public pathway along the river's edge. On the west side of the units a mixture of auto courtyards, garages, and entry courts provides a gradual transition between public and private areas. Parking is provided for 40 vehicles. The Riverpoint project was completed in 1979 at a total cost of \$3.65 million. The units range in price from \$400,000 to \$725,000.

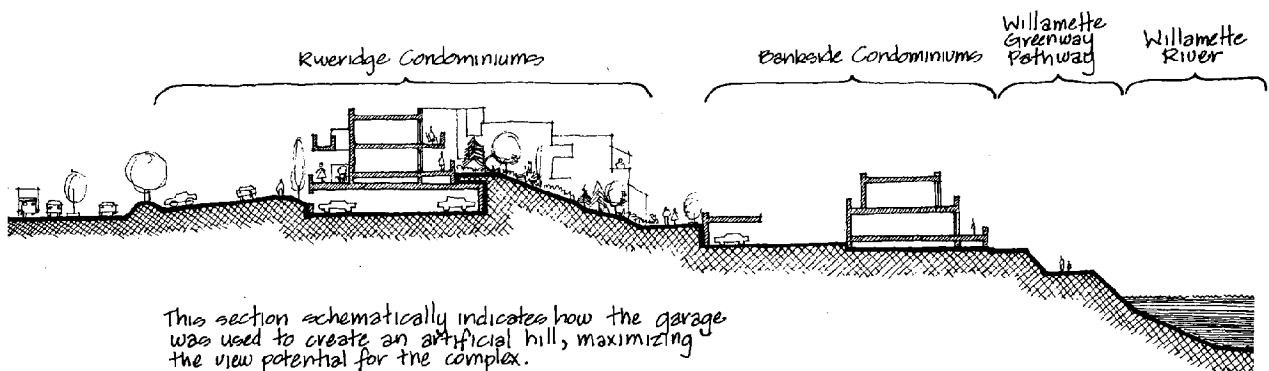


5-48 The Riverpoint condominiums at Johns Landing.

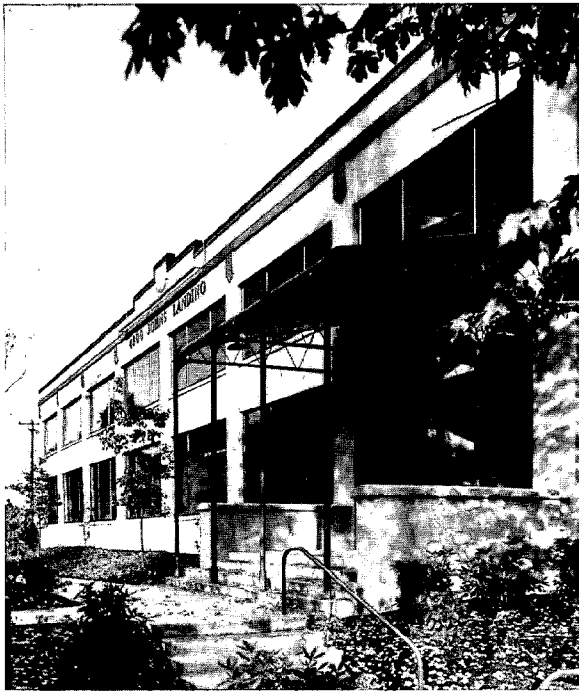
The Bankside project consists of 24 condominiums averaging 1,800 square feet per unit. This \$2.5 million project is located immediately north of the riverfront project. Units range in price from \$65,000 to \$118,000.

Riveridge is a 34-unit condominium project located west of the Bankside project. Units range in size from 750 to 1,350 square feet and in price from \$65,000 to \$118,000. The first two phases of the project were constructed on top of a 61-car parking garage. This design was used to create an artificial hill to maximize the views from the complex. The project was completed in 1980 at a total cost of \$2.15 million. Additional residential development is planned for the future. The type and mix of units will be dictated by market factors and economic conditions.

The office component of Johns Landing is a mixture of new buildings including a small campus-type office group, and several large-scale industrial building conversions such as the 4800 Building and Landing Offices. Existing and projected office buildings in the project will eventually provide approximately 600,000 square feet of space.



5-47 Johns Landing was carefully designed to provide views of the river.



5-49 The 4800 Johns Landing office building was formerly a large industrial facility.

Since its construction around the turn of the century, the 4800 Johns Landing Building has accommodated a variety of manufacturing uses including most recently the Windsor Door Factory. The master plan called for the adaptation of this 44,000-square-foot building to office space. By adding an intermediate floor in the high-ceilinged space between the ground and second floors the building's total square footage was expanded to 56,000 square feet. A new central core was constructed with stairs and service facilities, and a new passenger elevator was installed in the rebuilt freight elevator shaft. The overall building size of 100 feet by 150 feet and the 11-foot by 18-foot bay sizes made the spaces easily divisible for small- and medium-sized office use.

The existing structure was a concrete exterior shell with heavy timber/mill construction internally. It has been structurally reinforced to conform to current seismic code requirements. Extraneous elements were removed from the exterior of the building to reveal a visually striking frame.

The construction cost, not including property or the existing building, was \$17.00 per square foot and tenant improvements were \$5.50 per square foot. Parking facilities for 180 cars were constructed adjacent to the building. The project was completed in 1976 at a total cost of \$875,000.

The Landing Offices, known historically as B.P. John Furniture Corporation, contained the offices, showroom, and part of the production facilities of the furniture manufacturer. A five-story building, originally constructed in 1914, it housed one of the largest furniture corporations

in the United States and was the centerpiece of the industrial portion of Portland's waterfront. Surrounding it were auxiliary manufacturing buildings. One of the most challenging aspects of the project was redefining the building as one entity. Architectural continuity was provided by replicating the corbelled masonry at the bases and cornices, covering them with stucco, and painting them. Interior modifications demanded careful planning within a tight column grid to maximize rentable areas.

The Landing Offices project was developed by Harbor Square Associates. Completed in January 1980, the project cost \$1.5 million or \$30.00 per square foot (building shell and site improvements). Tenant improvements cost \$10.00 per square foot.

The recreational component of Johns Landing consists of two marinas, the public pathways, and an athletic club. The pathways for pedestrians and cyclists interweave seven acres of public riverfront space connecting the south end of Johns Landing property with Willamette Park and the north end with the city's projected open space link to the downtown waterfront. The two marinas offer both transient and permanent moorage facilities.

Experience Gained

Johns Landing offers several valuable lessons regarding urban waterfront development. The project clearly shows the difficulties associated with shoreline development, yet demonstrates that waterfront development is not dependent upon special government funding or intervention. Johns Landing is one of the largest waterfront redevelopment projects planned and developed totally by the private sector.

The complex and fragmented governmental review process had a significant impact on the development of Johns Landing. Obtaining the necessary approvals and permits required much more time than anticipated by the developers of the project. Consequently, the devel-



5-50 The Landing Offices are contained in a building that was constructed in 1914 to manufacture furniture.

opment time frame was expanded to a point where the developer was forced to escalate the price of various products to cover carrying costs.

The lack of coordination among governmental agencies left the developers with the responsibility for maintaining and managing the shoreline property dedicated for a public pathway. One review agency requested that the developers dedicate the property for public access and recreation in order to be granted a shoreline stabilization permit. Yet the city government had no desire or intention to include the property in the city's park system. If there had been closer coordination among the governmental representatives and the private developers prior to project initiation, this situation could possibly have been avoided.

One of the keys to the success of Johns Landing was the master plan guiding development. The plan pro-

vided the framework necessary to make rational development decisions and was flexible enough to accommodate changing economic conditions. The concept of clustering the office and retail component along Macadam Avenue and preserving the land closer to the river for residential development worked extremely well.

The effectiveness of the master plan was greatly enhanced by the presence of one architectural firm coordinating the efforts of the various design groups working on individual projects in the Landing. This ensured overall functional and aesthetic compatibility. The coordinating architect also provided the continuity necessary to implement a large-scale project with several phases of development.

5-51

Project Data—Johns Landing

Land Use Information:

Site Area: 70 acres

Land Use Plan:

	Acres	Percent
Residential	22	31
Commercial	10	14
Office	20	29
Open Space and Parks	5.5	11
Circulation	8.5	12
Marinas	2	3
Total	70.0	100

Economic Information:

Site Improvement Cost:

	Public	Private
Roads	\$4,250,000	\$ 250,000
Utilities & Drainage		300,000
Bulkheads, Dredge, and Fill (Riverfront Work)		1,000,000
Total	\$4,250,000	\$1,550,000

Master Developer:

Macadam Investors, Oregon, Ltd.
5331 S.W. Macadam Avenue
Suite 200
Portland, Oregon 97201
(503) 228-2931

Coordinating Architects and Planners:

Griggs, Lee, Ruff, Ankrom/Architects, P.C.
5331 S.W. Macadam Avenue
Suite 205
Portland, Oregon 97201
(503) 241-2720

Dwelling Units:

250 current, 470 projected

Gross Density:

12 to 30 per acre

Marina Slips (Private):

Transient: 5 current

Permanent: 5 current

Parking Spaces:

Residential: 1.76 spaces
per unit (average)

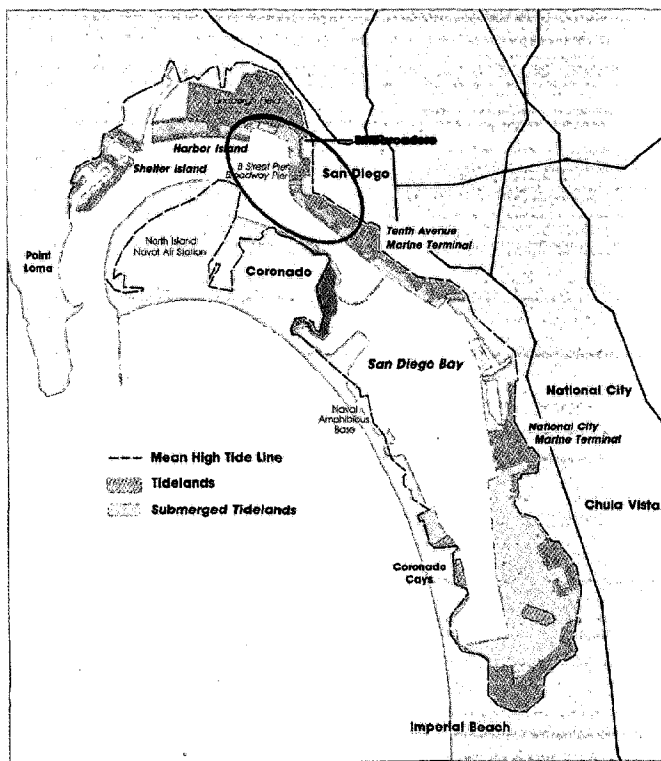
Commercial: 1 space per 330 sq. ft.
of gross leasable area (average)

Restaurants:

5 (10,000 to 12,000 sq. ft. each)

The Embarcadero, San Diego, California

The Embarcadero is the place where San Diego meets the sea. Inland rise the towers of the central business district and on the water the maritime activity is a combination of commercial fishing boats, merchant ships, navy vessels, and pleasure craft. All the pier-side activities related to these boats and ships contribute to the Embarcadero's unique character. To enhance the viability and usefulness of the Embarcadero, the San Diego Unified Port District Commission has been guiding the redevelopment of these three and one-half miles of urban waterfront.



5-52 The Embarcadero is located close to San Diego's central business district.

Unlike most other North American cities, waterfront development in San Diego is not the result of a recent discovery of an underutilized urban shoreline. In fact, quite the opposite is true. The city has always viewed its waterfront as a special urban amenity capable of supporting a variety of uses and activities, and the new projects along the Embarcadero represent the continuation of a recurring cycle of waterfront development in San Diego.

History

San Diego is a city with a rich maritime heritage. Portuguese explorer Juan Rodriguez Cabrillo discovered San Diego Bay, one of the 10 great natural harbors of the world, in 1542. In the late 1700s Spanish vessels began calling at San Diego to bring priests to the missions, supplies for military personnel, and goods to trade with the Indians. By the time of the American Revolution, a regular trading pattern had developed in San Diego Bay.

In 1846, San Diego and all of Southern California officially became U.S. possessions. Following the beginning of the gold rush (1849) and the California population boom, the bay continued to develop and, in 1850, the first commercial wharf was built in the harbor. A year later the first steamship arrived in San Diego from San Francisco, marking the beginning of regular service between these two ports.

In 1911 the state of California transferred control of tidelands within all coastal city borders to the respective municipal governments. In 1912 a \$1 million bond issue was approved by the citizens of San Diego to finance a dredging project for bay improvement in accordance with a condition set forth by the state legislature in deeding tideland control. A second bond issue for \$400,000 was approved in 1914. The funds were used to finance the first municipally supported, large-scale harbor improvement. In 1915 a 30-foot channel was dredged alongside the site of the proposed Broadway Pier cargo terminal extending out to the main channel. The following year the pier itself was built.

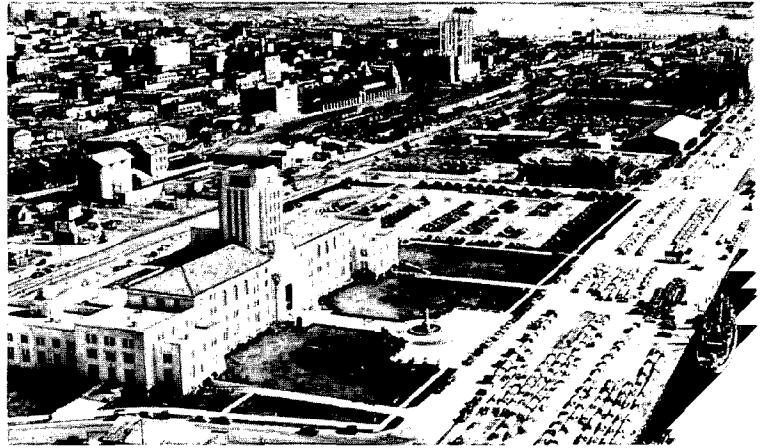
During World War I, naval facilities in San Diego expanded rapidly but commercial activity did not keep pace. Port promotion was weak and haphazard. As a result, there was little demand for additional facilities and tonnage figures declined. Following World War I, the San Diego city council offered to deed to the federal government 79 acres of submerged tidelands, and the Chamber of Commerce promised to raise \$280,000 by public subscription to purchase 135 acres of privately owned land north of the mean high tide line and Rosecrans Street for a navy training station. The Secretary of the Navy accepted these two offers. The first building was started in June 1923, and the training station was commissioned the following October. Substantial acreage was added to the training station as a result of Navy dredging prior to World War II. It now includes 436 acres of land and 64 acres of water.

The city of San Diego granted 88 acres of land and 21 acres of submerged tidelands at the foot of 28th Street to the federal government in 1919. The Navy established a destroyer base on the property in 1922. Its designation was changed in 1943 to the U.S. Naval Repair Base, and in 1946 it became Naval Station, San Diego—its present designation. Now the largest station in the U.S. Navy, it has grown to over 1,000 acres and an investment of more than \$144 million. This complex forms the major West Coast logistic base for operating forces of the Navy. Over 30,000 officers and enlisted men serve on more than 70 ships berthed at the station's piers.

Other land grants and permits from the city of San Diego to various agencies within the perimeter of the Harbor include the Eleventh Naval District Supply Center, the U.S. Marine Corps Recruit Depot, adjacent to the Naval Training Center in the Northeast sector of the Bay; the Fleet Sonar School in the same area; the Navy Athletic Field, and the U.S. Coast Guard Air Station.

In 1926 a second general cargo terminal, the B Street Pier, was built. In that same year, a master plan for developing San Diego Bay, known as the "Nolan Plan," was prepared under the direction of the Harbor Commission. While not followed in every detail, its major parts, consistent with orderly growth, were heeded. Recreational, commercial, industrial, and military developments took place in separate and distinct areas. Unrelated functions were not mixed or placed haphazardly along the bay shore.

From 1926 through the depression years of the thirties, tonnage through the port continued to decline due to the growth and increased facilities of the port of Los Angeles. During World War II, San Diego was virtually closed to commercial shipping and used almost



5-54 In 1941 the Embarcadero was used primarily for open cargo storage.

exclusively for transportation of military supplies and personnel. Beginning in 1948, the port embarked on a policy of dynamic promotion. To keep pace with increased tonnage generated by the promotion campaign, more facilities were needed. In 1955 San Diego voters approved a bond issue of \$9,460,000 to build a new terminal. This facility, the 10th Avenue Marine Terminal, with its two huge transit sheds, was officially opened in November 1958. By January 1960, the sheds were operating at full capacity. Sixty-five ship calls were recorded at the port of San Diego during fiscal year 1952-53. Several times that number call at the port today.

Development of Shelter and Harbor Islands

In the development of San Diego's waterfront, two important features are Shelter Island and Harbor Island. Both islands were created by dredge and fill operations and were primary locations for commercial, recreational, and marina development. Shelter Island is located west of the Embarcadero in the Point Loma area of San Diego. Harbor Island marks the west boundary of the 3.5-mile-long Embarcadero.

As early as 1859, the Shelter Island area was referred to on the U.S. Coast and Geodetic Survey Map as a "shoal or mudbank." During the past century, the surface area of this shoal was raised both by the accumulation of soil carried by the San Diego River into the bay and by sand deposited, layer upon layer, by the ebb and flow of the tide. The shoal area was normally exposed at low tide. From 1934 on, this area was used as a



5-53 The Broadway Pier (left) and B Street Pier as they appeared in 1932.

convenient place for dumping dredged materials. Shortly after World War II, the Harbor Commission undertook a dredging project which was completed in 1950. It provided a new, 400-foot channel entrance to the yacht basin adjacent to Point Loma. The basin has an area of about 200 acres; the channel is 20 feet deep. Dredged material was used to extend the Byron Street mole to connect with Shelter Island. This causeway is 2,150 feet long and 250 feet wide. The rest of the material was used to raise Shelter Island to 14 feet above low water, which leaves it about seven feet above high tide. Shelter Island is an average 300 feet wide and more than a mile long.

Marina facilities in the Shelter Island area were built with Harbor Department funds under the trust transferring tidelands within San Diego from the state of California to the city. Revenue derived from leasehold interests on tidelands, by state law, must be reinvested in tideland facilities. Upon completion of the Shelter Island area, the Harbor Department funded all landscaping programs, including planting of palm trees and construction of the streets, parking areas, utilities, a municipal fishing pier, and a small boat launching ramp. More than \$2 million was spent on Point Loma improvements.

All public facilities in the Shelter Island area are located on the outboard or channel side of the island. The inboard yacht basin side of the island has been leased to private interests. All land available for private lease had been let by 1966. Leaseholders are primarily in two categories: commercial recreation and marine sales and services. They include a number of private yacht clubs, public "boatels," restaurants, marinas, shops, boat building and repair facilities, boat sales and rental companies, and sailmakers. The approximate value of private capital improvements on these leased holdings is \$15 million. The cost of dredging work on Shelter Island, including fill, was approximately \$300,000.

There are over 2,700 slips in the yacht harbor and commercial basin. Each of the motels and boatels on the island has been required to provide two slips for every room. The Harbor Commission included this provision in all lease arrangements because the primary purpose was to provide not only boatel facilities but also adequate mooring space for the small boats and fishing vessels in this part of the harbor.

Harbor Island was formed after the Navy decided in 1961 to dredge the channel from the outer bay to the aircraft carrier docks at North Island to a depth of 42 feet. Dredged materials from the project were offered to the Harbor Department. A shallow area located along the east shore of the bay near the airport was chosen for the deposited material and a fill area similar to the Shelter Island development was created. Harbor Island was completed late that year. Like Shelter Island, Harbor Island was later joined to the mainland by a narrow causeway.

Creation of Port District

In 1962, the state of California approved legislation that allowed the cities of San Diego, National City, Chula Vista, Imperial Beach, and Coronado to form a special purpose district for the purpose of developing all tidelands and industrial lands on San Diego Bay. The measure was given overwhelming approval by the voters of the five proposed Port District communities as well as the county's board of supervisors. The San Diego Unified Port District was established and operations began the next year.

Each of the four bay communities has one representative on the seven-member board. The city of San Diego, which accounts for more than 80 percent of the population of the Port District, has three commissioners on the board. The term of each commissioner is four years.

During its formative years, the Port District acquired all the tideland assets, as well as debts, of its member cities. From 1963 to 1969, the Port District required a small tax levy in order to repay debts incurred for improvements accomplished before the unification. Since then, revenues from the three principal operational areas—harbor, airport, and property management—have been sufficient to support District operations, service bonded indebtedness, and allow for capital improvements. No additional tax levy has been required. The District also created a master plan for full development of the entire bay, which was adopted in January 1964.

Although the Embarcadero was not singled out in the master plan for special development, several projects were, nevertheless, implemented. Of particular significance was the redevelopment of Harbor Island, the renovation of the Broadway Pier, reconstruction of an apron wharf, the development of the Harbor Seafood Market, and the construction of Spanish Landing Park.

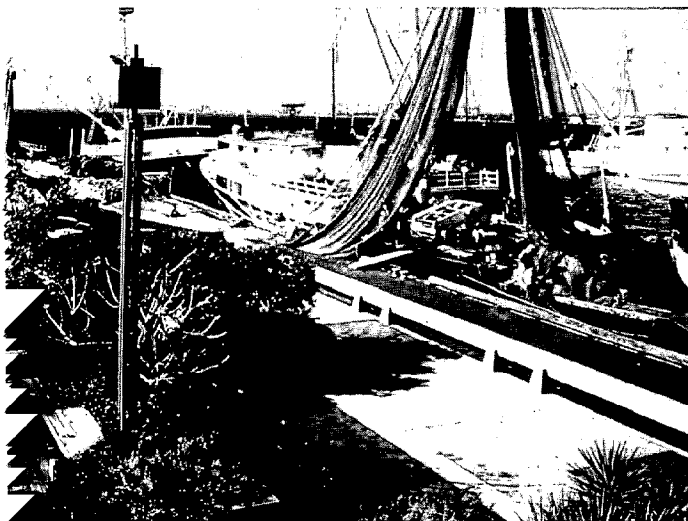
Harbor Island, roughly 300 feet wide and just over a mile and one-half long, became a focal point of development during 1968 and 1969 because of its suitability for recreational/commercial uses. Several leases were granted and by January 1970, three-quarters of the island's acreage had been let. Major hotels were built by Ramada Inns of America (now operated by Sheraton Inns) and Travelodge. Lockheed Ocean Laboratories built a research submarine hangar and Far West Services, Inc., opened three restaurants: one on pilings at the east end of the island and two aboard a "Mississippi Riverboat" replica moored nearby. Capital improvements by the tenants of Harbor Island total approximately \$30 million, port expenditures about \$5 million. Outstanding features of the 80-acre island are its hotels, gourmet restaurants, landscaped park areas, and docking marinas. There are more than 1,100 boat slips, all on the island's inboard side.

Total renovation of the Broadway Pier, completed in 1972, was the next step the Port District took. The construction of a passenger platform, customs building, parking spaces, lighting fixtures, and landscaped plant-

er areas converted this former cargo pier into an attractive esplanade and cruise-ship facility. Now more utilitarian than ever, the 1,000-foot pier provides efficient embarkation-debarkation facilities for passenger ships, space for visitors to relax and view the bay, and a mooring area at its outermost end for tuna seiners. Transforming the Broadway Pier into a maritime park was one of the first steps in the redevelopment of the entire San Diego Embarcadero.

The Harbor Seafood Mart, a unique architectural and business complex, took its place on the Embarcadero in June 1973. The Port District furnished the building, landscaping, parking, and utility connections. Tenants installed their own equipment and provided interior design. Located at the foot of Market Street near the old ferry landing on Pacific Highway, the complex features a Mediterranean theme and a harmonious blending of retail and wholesale fish outlets with quick-order delicacies, a gift shop, and restaurant. Investment by the Port District and tenants in this waterfront addition totaled \$1,590,000.

May 1976 brought the conclusion of two significant Port District projects and the beginning of a third. A major effort, and one basic to the success of Embarcadero improvements, was reconstruction of the apron wharf (a wharf that lies parallel rather than perpendicular to the shoreline) from the Broadway Pier to a point near the Grape Street Piers. A half-mile section of the wharf's old seawall, built in 1913, had slowly begun to lean outward toward the bay. Stabilization of the wall, which is 29 feet high, and replacement of the 25-foot apron wharf took 19 months and cost \$2,300,000. It was a complicated process of replacement and reinforcement in which the port's contractor restricted much of his activity to the off season in order to minimize inconvenience to District tenants in the area.



5-55 The obsolete Broadway Pier was redeveloped to accommodate a public park, a work area for tuna vessels, and U.S. Custom offices to process cruise ship passengers.

Finally, the long-awaited completion of Spanish Landing Park occurred in June 1976. This slender strip of waterfront property between Lindbergh Field and Harbor Island is a 16.6-acre belt of landscaping which affords views of the harbor that are unsurpassed anywhere in San Diego Bay. The total cost of the park, which was completed in three different stages of construction, was just over \$900,000. Improvements include a bicycle path the entire length of the park, landscaping and benches, parking spaces, and a swimming and sunbathing beach.

Embarcadero Development Plan

Unlike the earlier city master plan, when the revised master plan for San Diego Bay was adopted in 1972, the Embarcadero was singled out for special study. The purpose was a more precise determination of the redevelopment options for this three-mile segment of the San Diego waterfront from Harbor Island to Navy Field. The first part of the study included market research and analysis, feasibility testing, and market planning. The second part of the study converted earlier recommendations into a specific, detailed planning program with emphasis on urban design, circulation and parking, landscaping and environmental planning, and engineering considerations.

In 1976, the Port District adopted a precise plan delineating a development strategy for the Embarcadero. The plan carefully integrated future development with the successful Harbor Seafood Mart, the reconstructed apron wharf, and Spanish Landing. For planning purposes, the Embarcadero was divided into four major zones according to land use significance, with specific development recommendations for each zone.

Entry Zone. From Harbor Island to the Coast Guard facility, planning concepts focus on providing a sense of entry into San Diego for travelers coming from Lindbergh Field and Harbor Drive with activities and landscape features that strengthen the image of San Diego as a pleasant place to visit. New commercial uses in the area are intended to be visitor- and recreation-oriented, at a scale consistent with existing development on Harbor Island. Considerable attention will be paid to long-term improvements in general appearance of existing industrial uses and the planned expansion of these uses.

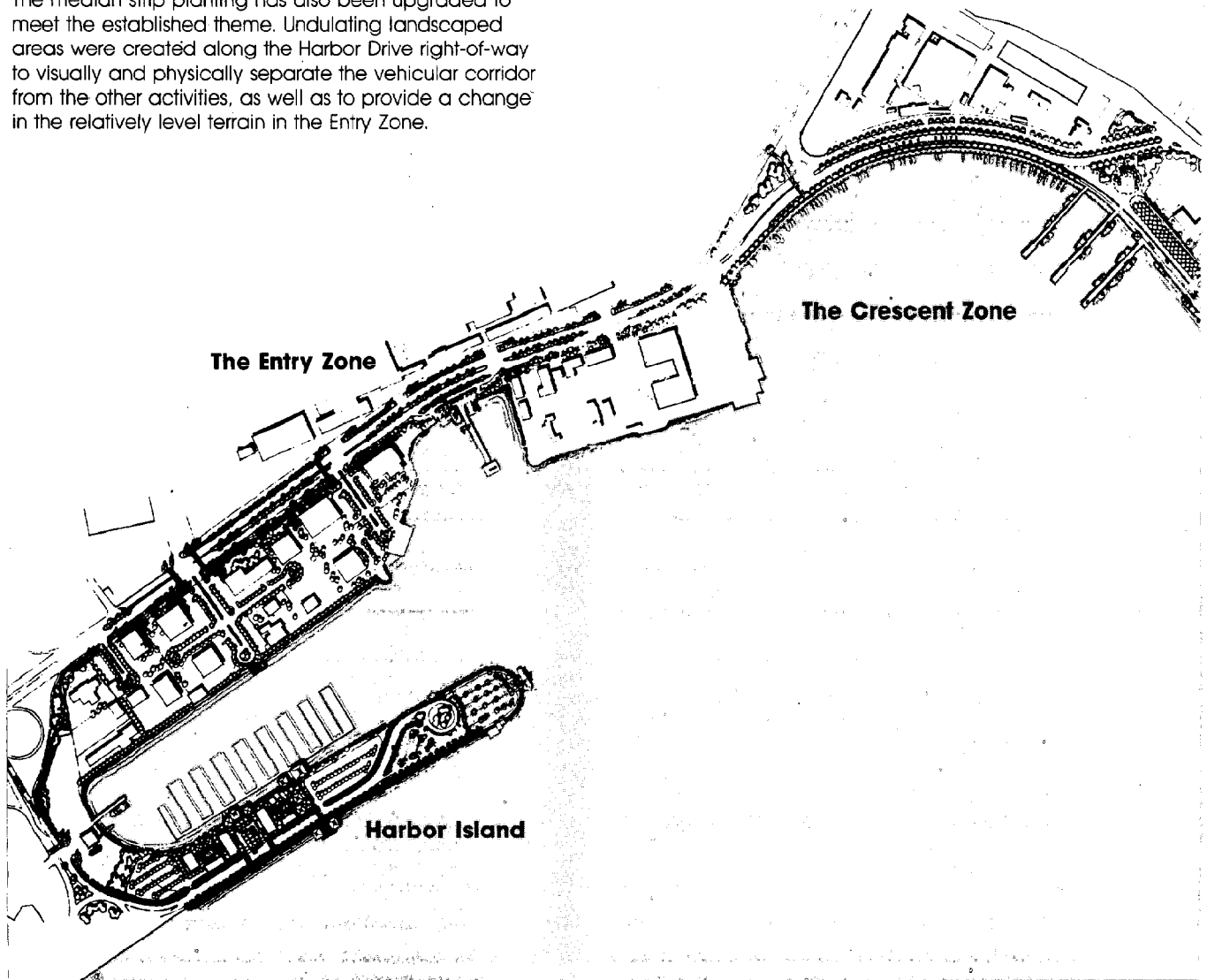
Two hotels, providing about 600 rooms, are planned on Harbor Island. The areas between the structures will be developed into a series of landscaped gardens and terraces. The hotels are proposed as two towers with lower level ancillary structures. The hotels will be situated

to afford maximum views of the water. A marina of approximately 400 berths is recommended for the Harbor Island basin directly adjacent to the hotel complex.

A major landscaping program extending from Harbor Island to the Marina Zone has already been initiated. The 40-foot right-of-way adjacent to either side of Harbor Drive has been developed into a landscaped area to include street trees, shrub, and groundcover plantings. The median strip planting has also been upgraded to meet the established theme. Undulating landscaped areas were created along the Harbor Drive right-of-way to visually and physically separate the vehicular corridor from the other activities, as well as to provide a change in the relatively level terrain in the Entry Zone.

Bicycle paths and pedestrian paths have been constructed for the entire length of Harbor Drive in this zone, using the right-of-way area on the south side of the roadway. A portion of the pathway system extends along the water and is accessible only from the Harbor Drive side and does not connect directly with Harbor Island.

The 27-acre underutilized industrial area across the East Basin from Harbor Island is recommended for eventual redevelopment into a light industrial/business park. This area will include such activities as scientific laboratories, office space, marine-oriented businesses, and light manufacturing plants, with some ancillary storage and warehousing. One of the constraints affecting total redevelopment of the site is the current lease, which continues until 1983.



5-56 The Embarcadero development plan.

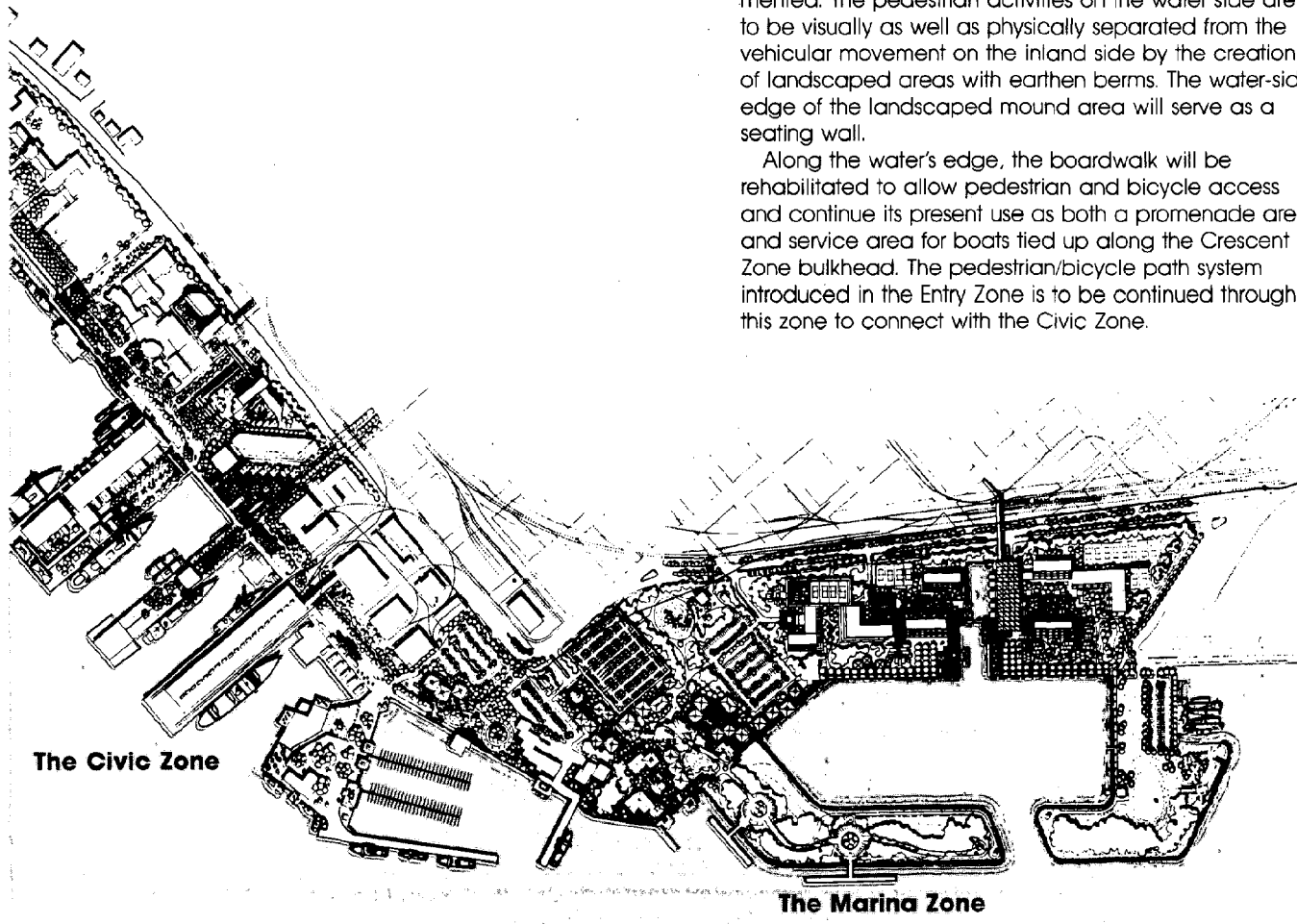
The Coast Guard facility located at the eastern edge of the Entry Zone will remain as part of the long-range plan. Recommended changes relate only to alterations in the parking and landscaped areas as necessary to be compatible with the overall planting program. Between the industrial site and the Coast Guard facility is a small marina area currently being used as a boat tie-up area and an impoundment facility for derelict and unclaimed boats. A small collegiate class sailing center is recommended for development in this existing basin. This facility will serve approximately 50 boats of varying size and purpose and will be limited to sponsored events. The space limitation of the site precludes any extensive general boat trailering. Storage of derelict craft will be relocated to an area outside the Embarcadero.

Crescent Zone. From the Coast Guard facility to Hawthorn Street and Harbor Drive exists a panorama of unobstructed vistas. The concept for this crescent-shaped zone focuses on maximizing public access and enjoyment of the water's edge through provision of increased opportunities for pedestrian and bicycle use and passive recreation.

The most important element influencing design in the Crescent Zone is the curvilinear form of the waterfront. Along this area, dramatic panoramic views can be realized at either vehicular or pedestrian speeds. Once past the Coast Guard complex, the Embarcadero can be viewed in full against the background of the Centre City development skyline. North Island and the naval installations across the bay can also be viewed from this zone.

The plan recommends changing the Crescent Zone from a basic link in the roadway network to a grand promenade and major entry statement for the city of San Diego. Parking will be removed from along the waterfront and a major landscaping program implemented. The pedestrian activities on the water side are to be visually as well as physically separated from the vehicular movement on the inland side by the creation of landscaped areas with earthen berms. The water-side edge of the landscaped mound area will serve as a seating wall.

Along the water's edge, the boardwalk will be rehabilitated to allow pedestrian and bicycle access and continue its present use as both a promenade area and service area for boats tied up along the Crescent Zone bulkhead. The pedestrian/bicycle path system introduced in the Entry Zone is to be continued through this zone to connect with the Civic Zone.





5-57 The public waterfront promenade.

Civic Zone. From Hawthorn Street to the fishmarket lies the zone of highest activity. This area enjoys a prime physical relationship with the Centre City project area; therefore, the concept is to strengthen and enhance this area as the key zone for uses and activities which attract large numbers of people to a water-oriented setting. The piers, which will emphasize pedestrian access, will generate the greatest public use.

Significant redevelopment projects are recommended for this zone, and major changes in the existing land use patterns are proposed. A series of waterfront plazas will be connected by a promenade extending the entire length of the Civic Zone and on into the commercial village in the Marina Zone. The promenade will extend in front of the existing County Administration Building.

Anthony's Restaurant, which currently serves as one of the key attractions in the Civic Zone, will be retained as part of the waterfront fabric and enhanced by landscaped areas. The waterfront near Anthony's will continue to be used as a tie-up and net mending area for tuna boats. This activity has been incorporated into the plan as a desirable element of the working port.

An important recommendation for this zone is the conversion of the old Lane Field site at the foot of Broadway into the Port Plaza complex of buildings and civic open spaces. The Port District headquarters may be relocated to this site to become the central focal point of the Embarcadero. A central building could provide approximately 65,000 square feet of space for the Port District. A second building could house support activities related to the Port, providing commercial and office space, such as travel and shipping agents, or possibly the Naval Facilities Engineering Command.

The existing hotel will be enhanced by the development of a new hotel complex using the remainder of the Lane Field parcel and the parcel currently occupied by the naval functions. This complex will provide approximately 900 additional rooms. If the proposed convention center is located in the area between Columbia Street and Pacific Highway north of Broadway, this block of visitor accommodations will prove to be very

important. If the convention center is not located in this general area, an alternative long-range use of this land might be office buildings.

The B Street Pier, located in front of the Lane Field, provides constraints to the design program because of its size and bulk but it also offers unique opportunities to add character and excitement to the planning area. The south shed on the Pier is to be removed. The western end will be converted to up to 25,000 square feet of commercial uses, such as a shopping bazaar and foods and services reflecting the maritime character of the Embarcadero and supporting the cruise ships that will be docking here. Fifty thousand square feet for a maritime museum or expansion of the shopping bazaar may be developed using portions of both the northern and southern shed areas. The north shed will continue to be used as a storage facility with loading and off-loading capabilities.

Broadway Pier is another advantageous element in the Embarcadero. It is an example of the kinds of improvements which make the area a more pleasant place. The deep-water berthing aspect also provides an opportunity for large vessels, such as cruise ships, to dock in the Embarcadero area. Conversely, the Navy Supply Center and its pier offer limited redevelopment possibilities because current and assumed future use does not allow much flexibility as far as alternative planning solutions are concerned.

The existing Navy buildings north of G Street as well as the Navy Pier facility are planned to be retained. Activities presently housed in the buildings located between G Street and Market Street are recommended for consolidation into other Navy buildings in the ultimate phase. This parcel could then be redeveloped to accommodate surface parking areas and retail commercial space. The commercial space would be an extension of the fishmarket/commercial village activities.



5-58 An aerial view of part of the Embarcadero showing (from top to bottom) the B Street Pier, Broadway Pier, U.S. Navy Pier, the G Street commercial fishing basin, the Seafood Mart, and Seaport Village.

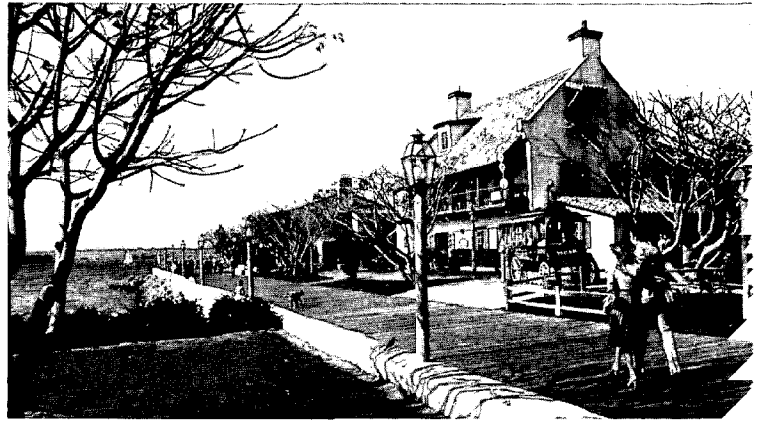
Harbor Drive will be heavily landscaped using the earthen berms and plant material concepts introduced in the other zones. The existing uses on the G Street mole will be reorganized. The tuna fleet offices will be relocated to an expanded site on the mole. A major structure will be developed to house a civic oceanographic facility with restaurants, offices, and marine retail commercial space to be constructed around the periphery of the pier. Parking areas and a transit vehicle terminus are proposed for the central portion of the pier. The eastern edge of the mole is proposed as one of a sequence of maritime plazas suggested for the waterfront.

The transportation network will be significantly changed. Grape Street marks the point of modal split for the proposed transportation network. From this point south to the Marina Zone, private vehicles will be discouraged but allowed. Service vehicles and transit vehicles will not be restricted. Harbor Drive will be narrowed to two opposing traffic lanes with a direct route alignment through the maritime plazas. The remainder of the existing street width will be re-developed as landscaped areas.

Parking along the waterfront adjacent to the County Building will be limited. The existing parking facilities at the County Building will be maintained until an alternative facility can be established. The main north-south flow of traffic along the Embarcadero will be accommodated by Pacific Highway. Access to parking areas will be from this street. Broadway is to be maintained for two-way traffic over the Port Plaza area but traffic flows will be channeled into a specific corridor. Limited-interval parking will be permitted on Broadway Pier. G Street is recommended as being extended to connect with the G Street Mole through the present Navy Supply Depot site. Bicycles and other small-wheeled vehicles will be easily accommodated by the maritime plaza-open space sequence. A special bicycle path is to be provided where necessary to separate activities for safety reasons.

Marina Zone. From the Civic Zone to the end of Navy Field, the Marina Zone will also provide water-related recreation in a park-like setting for both visitors and residents. The proximity of this zone to the Civic Zone and residential redevelopment areas adds to its potential viability.

This zone is also planned to be an intensive activity area along the Embarcadero. Several projects have already been developed. Two marinas are under construction in this zone. One is a commercial fishing marina between the G Street Mole and the commercial village. A pier for tuna seiner berthing and a filled breakwater arm protect approximately 12 acres of maneuvering and docking area. The second marina is the Fifth Avenue Marina. It had been proposed prior to the preparation of the plan and was subsequently included in the recommended land use plans as an assumed use. Given the accepted configuration for the breakwater arms, the marina will accommodate ap-



5-59 Seaport Village, a major specialty retail project, was developed in the marina zone of the Embarcadero.

proximately 500 boats. Due to the anticipated character of this type of urban area marina and the large space required for parking areas for vehicles plus boat trailers, boat launching facilities are not recommended for the Fifth Avenue Marina.

A commercial village was proposed as an expansion of the existing fishmarket area, ultimately extending to the Fifth Avenue Marina. In 1980 the first element of this commercial area, Seaport Village, was developed in this location. (See page 171.) The ultimate phase calls for the Navy Field adjacent to the Fifth Avenue Marina to be acquired by the Port District and developed as a major hotel complex of several hotels of approximately 1,100 rooms total. A central shopping gallery of shopping street is proposed in the central portion of the complex, with connections to the proposed upland residential area using the air rights over the relocated Harbor Drive and the Santa Fe Railroad track corridor. This shopping gallery will contain retail, commercial, and food services. Recreation and open space elements are planned throughout the Marina Zone. The breakwater area forming the Fifth Avenue Marina is recommended as an open space element with landscaped areas and pathways allowing access to the water's edge. Provision for the San Diego Rowing Club should be retained and expanded in the same general area. The entire commercial village will feature a major open space format. Using landscaped areas and urban plazas to connect the pavilions, this whole area will exhibit a soft-edge environment wherever possible. The hotel complex proposed for Navy Field will be set in a park-like area which will extend to the site adjacent to the police station site. The marina edge will be extended into the hotel complex to provide greater access to the water and to allow more shops and restaurants to locate on the water, thereby increasing the value of the individual parcels. Two fishing piers built out from the breakwater arm will allow more public access to the water and provide additional recreational opportunities. These piers can be wood or concrete and should provide seating for those persons not interested in fishing.

The basic design character of the Marina Zone is the park setting for all the land uses. Rather than construct buildings and circulation links to connect the activities and the other zones, the Marina Zone should be considered as an area where the activities are built into a park. The park concept will be constant throughout the zone, with parking structures and parking areas receiving the same landscaped quality as the commercial areas and the hotel complex.

The plan is for a low overall profile of the buildings and structures in the Marina Zone. The commercial village is envisioned as a series of pavilions, two to three stories high at the maximum. The hotels are also seen as low structures rather than towers.

In the general framework of the Embarcadero plan, Harbor Drive is to be relocated along the Pacific Highway alignment, continuing easterly at Market Street and south at Kettner Boulevard along the Santa Fe corridor. Access to all subareas within this zone will be from this new alignment. During the initial phase, the existing alignment of Harbor Drive will continue to be used.

Parking facilities are suggested for several areas in the commercial village. Initially, surface parking would be located adjacent to the fishmarket and the police station sites. Later, a parking structure is recommended for the police station site if the city abandons the station. Surface parking is proposed for the eastern end of the old ferry terminal site adjacent to Navy Field. Access to the fishing piers and the breakwaters of the Fifth Avenue Marina will be through the park areas in the commercial village. Parking for the marina users is to be located inland of the Rowing Club.

The projects described within each zone are tied to a development phasing program that describes a general framework for making incremental development decisions and outlines specific improvements deserving the highest priority. The phasing program allows the Unified Port District Commission to effectively deal with three development variables: the future demands of the market, the expiration of current leases, and the negotiated use of land not presently owned by the Port District. The value of such an approach is that it gives clear direction in the short-term yet retains a great deal of long-range flexibility.

Experience Gained

San Diego's waterfront is undergoing a change from maritime, commercial, and industrial to commercial-, recreation-, and visitor-oriented attractions. Some major marine-oriented uses will remain, not only to take advantage of deep water berthing but also to allow space between the recreational uses. The Embarcadero was identified as the area to concentrate commercial

and recreational development, and Seaport Village is an important element of the Port District's overall strategy to reuse the city's waterfront.

Much of the Embarcadero's success can be attributed to San Diego's waterfront management structure. The Unified Port District is the trustee for most of the tidelands on San Diego Bay and has the combination of legal authority, fiscal strength, and management skill required to plan and implement a comprehensive development program. The presence of a central public sector authority committed to the development of commerce, navigation, fisheries, and recreation helps to reduce conflicts and delays for individual private investors.

Seaport Village and the other development projects also benefit from being part of a larger plan for the reuse of the Embarcadero. The plan is a guide for the incremental development of this portion of the waterfront. It acknowledges the need to enhance the special attributes of the area and provide the critical mass of development necessary to create a viable and exciting waterfront.

Given the positive climate for waterfront development in San Diego, Seaport Village has proved more successful than original estimates had predicted. This situation has lessened some concerns but raised some significant problems.

The primary problem has been parking. The 525 spaces have been inadequate for the traffic, requiring the Port District to build additional spaces nearby and to consider building a parking garage to alleviate the parking problem. The parking problem can be attributed to several factors. There are more employees than estimated due to the small floor area of the shops, and a high percentage of local residents drive to the Village, with a concentration during peak hours, particularly lunch and dinner hours. There is low turnover as visitors stay longer to browse. The lack of adequate loading spaces means that with many small shops, some owners must park in the main lot to resupply their shops. Tour bus parking on the edge of the project has been a problem and needs to be improved. The developer has indicated he is hiring traffic consultants for new projects he is considering in other cities.

Common area maintenance for Seaport Village has been higher than estimated. Although maintenance is covered by the \$5 per square foot fee, this element of the development plan should have been given more attention. The increased maintenance requirement can be attributed to both the type of facility and its tremendous popularity. As future development occurs along the Embarcadero, the maintenance requirements of each project will have to be carefully evaluated to avoid additional problems.

The Port District realized that momentum is very important to the success of the Embarcadero development program. Seaport Village has proved to be the type of facility the Port District felt was necessary to attract people to the Embarcadero. The success of Seaport Village creates momentum for proceeding with other projects.

Seaport Village

Market research had shown that the Embarcadero could become a visitor destination requiring up to 2,000 additional hotel rooms and 225,000 square feet of retail commercial floor area. The old Coronado Ferry Landing, located in the Marina Zone, was targeted in the initial phase of the development plan to become a "commercial village," an extension of the already well-received Harbor Seafood Mart and a destination point for people attracted to the improved waterfront. The concept was to develop the site as one jewel in the necklace of attractions strung along the Embarcadero. The linking mechanism was the gradual conversion of Harbor Drive, which fronts on the bay, from a traffic carrier to a scenic drive and pedestrian path. This concept was realized in 1980 with the completion of a \$14 million specialty shopping complex called Seaport Village.

The site is located just southwest of San Diego's central business district on the water's edge. It was created from fill material in the 1930s and was formerly used as a ferry boat landing. In 1970 the ferries to Coronado were replaced by a bridge and the site was cleared of the few minor remaining structures. The land was flat with good drainage. Other site advantages included nearness to other tourist developments and the downtown, superb views across the bay, good access, waterfront

site, and ability to develop a completely cleared site. Disadvantages related to the size of the site for its purpose and the lack of "freeway identification."

Since the Port District owned the land, it decided to use a competition to select the best developer. The land would be leased to one entity, which would sublease the shops, restaurants, and other commercial activities, under strict control of the District. The request for proposals stipulated lease terms including rental rates and conditions as well as design criteria.

Although the project is within the limits of the city of San Diego, city zoning controls do not apply. All regulation is handled by the Port District, which implements the port master plan, prepares the request for proposals, and issues the master lease. The project is also within the California Coastal Zone, requiring a development permit from the state Coastal Commission.

Of the three developers submitting proposals, the team of Bryant Morris and Sheldon Pollack was selected. The decision was based mainly on concept design but also included analysis of the developer's ability to carry out the project. Construction of Seaport Village began in November 1978 and was completed in April 1980.



5-60 Seaport Village was designed to recapture the waterfront flavor of California a century ago.

The design approved was for "effective utilization of the full potential of the site," identified as central location, bay views, good access, and relation to adjoining uses. Space for parking comparable to a shopping center was not available so the decision was made to allow full development of the buildings and seek supplemental access through public transit and other alternative methods of getting people to the site.

The project contains three major restaurants, 13 food service outlets, and 53 other specialty shops, having a gross leasable floor area of 90,462 square feet. Parking is provided on-site for 525 cars, with an additional 564 spaces provided nearby for overflow and employee parking. Seaport Village opened in May 1980 and has been fully leased since the end of that year.

The complex recaptures the waterfront flavor of California a century ago through the merging of architectural styles reminiscent of traditional Mexico, the Monterey waterfront, and Victorian San Francisco, although these styles are also representative of historic San Diego. Efforts have been made to enhance the shopping experience with cozy shops, meandering paths, outdoor eating areas, and a historic operating carousel.

Surrounding uses complement Seaport Village. The bay occupies the project's south and southwest sides, except for the Embarcadero Marina Park which juts out from the south boundary. This public park, built by the San Diego Unified Port District, provides 22 acres of trees, grass, fishing, and picnicking for the public and visitors to Seaport Village. Adjacent to the west is the Harbor Seafood Mart. North of Seaport Village is the San Diego Police Headquarters, an attractive structure which will be redeveloped with complementary uses to the Village when the city police are relocated as part of a decentralization plan. East is the 27-acre Navy Field, where construction will begin soon on a 1,100-room hotel, a 500-slip marina, and additional recreational facilities. Even before redevelopment of Navy Field and the Police Headquarters, the area was considered conducive to tourist-oriented businesses.

Seaport Village's water frontage is not extensively used for marine activities. The original concept for the frontage area included a display of a two-masted brig replica, a guest dock for visiting boats, and a harbor excursion pier. None of these have been built because of environmental restrictions. Part of the project fronts on the Fifth Avenue Basin which will be developed with a 500-slip recreational marina. The chief benefit of the waterfront location is the ample open space and distant views which provide relief in a concentrated downtown area.

Grouping the many small buildings around three plazas achieved several results: it enclosed an area

exposed to west winds across the bay; it provides a sense of enclosure that adds security; and it reinforces the design theme in views across the plaza. Since there are no major attractors at either end, the shopper tends to visit most of the small shops rather than pass them by.

The plazas also encourage people grouping around the concerts and entertainers featured in Seaport Village. The plazas open at the quadrants to allow access to the parking lot, the waterfront, and the park. Paths connect the plazas, but the transition is subtle and without distinctive architecture. The architecture of the western plaza is Old Mexican or Spanish style; the eastern group is more Victorian or New England, and the central is almost a mixture. Because views within the plazas are foreshortened, building scale has been reduced slightly. Several buildings are landmarks. Authentic details have been added to both the buildings and the grounds.

Few engineering problems were encountered in constructing Seaport Village. In the original design, primary access was to be off an extension of a closed street (Kettner Boulevard), but the Port District required an entrance off Pacific Highway, which is the main traffic street serving the waterfront. The majority of cars now enter at this western gate. When Kettner Boulevard is finally extended, there may be a greater balance between these entrances.

The developer has carefully selected the tenants to complement the design theme. Most sublessees are required to have a five-year lease. Duplication and competition between shops with similar goods is controlled, since small shops would be adversely affected by other shops carrying the same goods. The result has been a very low turnover in tenants and virtually no vacancy.



5-61 One of the three plazas at Seaport Village.

Three high quality restaurants—a Mexican restaurant, seafood restaurant, and family restaurant—represent over one-third of the total floor area of Seaport Village. Each is located in a different plaza to attract shoppers. Currently, there are 13 other food establishments ranging from lunch and snack shops (hamburgers, hot dogs, fish and chips, Greek, Italian, and Chinese foods), to specialty foods (lollipops, fudge, cookies, and nuts).

Gift or specialty stores represent the largest group of businesses: 53 stores occupying 50 percent of the total floor area. Many are one-of-a-kind, including Mexican tiles, heart and rainbow gifts, holiday decorations, left-handed goods, candles, and hammocks. Quality is stressed. Services include a branch bank, law office, travel agency, beauty shops, and photographer. These small shops range in size from 100 square feet to 2,652 square feet, with the median average 522 square feet.

Seaport Village is managed by San Diego Seaport Village, Ltd., the company formed by the original development team. The land (and water) is leased from the San Diego Unified Port District which must approve all subleases, tenants, building construction, alterations, signs, and any activities not specified in the master lease or subsequent subleases.

Rents are \$1.50 per square foot per month plus 10 percent of the gross. Fast-food shops pay \$1.66 per square foot per month plus three percent of food sales

and five percent of alcoholic beverage sales. Major restaurants have customized leases. Seaport Village pays to the Port District 10 percent of the rents plus three percent of food and five percent of alcoholic beverage assessment.

Seaport Village collects \$0.10 a square foot plus 1.5 percent of the gross sales for advertising and promotion. Common area maintenance costs shop owners \$5 per square foot per year; however, this also pays for taxes and insurance.

Seaport Village draws customers from both the San Diego region and from areas outside the region, principally Los Angeles and Arizona. The San Diego SMSA has a population of 1,857,000 and the region has an estimated 17.2 million visitors a year. An estimated three million people visited Seaport Village its first year and four million in 1981. About 70 percent arrive by car, the remainder chiefly by tour bus. It is estimated that about half are local residents or downtown workers, the proportion varying with the season.

5-62

Project Data—Seaport Village

Land Use Information:

Site Area: 14 acres

Gross Leasable Area: 90,462 sq. ft.

Parking Spaces: 500

Tenant Information:

Number of Merchants

3 restaurants
13 small eating places
53 specialty shops
5 service shops

Percent of Gross Leasable Area

33 percent
10 percent
52 percent
5 percent

Economic Information:

Land Rent: 10 percent of rents plus 3 percent of food sales and 5 percent of alcoholic beverage sales.

Rents: \$1.50 per sq. ft. per month plus 10 percent of gross sales. Fast-food shops pay \$1.66 per sq. ft. per month plus 3 percent of food sales and 5 percent of alcoholic beverage sales.

Common Area Charges, Other Areas: \$5 per sq. ft. for common area maintenance, taxes, and insurance.
\$.10 per sq. ft. plus 1.5 percent of gross sales for advertising and promotion.

Total Project Cost: \$14,000,000

Planning and Development Coordinator:

San Diego Unified Port District
P.O. Box 488
San Diego, California 92112
(714) 291-3900

Developer:

San Diego Seaport Village, Ltd.
849 West Harbor Drive, Suite D
San Diego, California 92101
(714) 235-4014

False Creek, Vancouver, British Columbia

The False Creek South Shore project is a medium-density residential development that has turned an old industrial section of Vancouver's waterfront into a new inner city community. It is part of the larger False Creek Redevelopment Program—a city-led public/private redevelopment effort that is expected to take 20 to 30 years to complete. While this case study focuses on False Creek South Shore, two other projects located within the redevelopment area—Granville Island and British Columbia Place—are also featured. Although all three projects are being administered by the public sector, False Creek South Shore is the responsibility of the city of Vancouver, Granville Island is being developed by the Canadian federal government, and British Columbia Place is being planned by the province of British Columbia.

History

False Creek is a basin-like area containing about 500 acres of land and 200 acres of tidal water formed like an elongated horseshoe. The Creek is 40 feet deep and has 14.5 miles of shoreline. The land on the north side of the Creek rises gently towards the downtown, while the south side is mainly flat and separated by a four-lane arterial from the hillside, which rises steeply behind it for a three-block distance.

A little less than one hundred years ago, Vancouver was scarcely more than a village and False Creek was an area dominated by huge fir trees. By 1884 the Canadian Pacific Railway (CPR) had reached the Pacific with Vancouver as its western terminus and in 1887 it agreed, at the request of Vancouver city council, to locate its Pacific terminal yards on the north side of the Creek. Within a few years, there was an abrupt change from forest to an area dominated by water and rail transportation, and industries that were to characterize the Creek for more than 80 years. Shipbuilding yards, sawmills, shingle mills, and various wood-working plants were established there. The water could be used to float the logs in and then serve as a log storage area, while the railway provided access to prairie markets.

Over the next two or three decades more industry, including other railways and their service yards, a creosote mill, and slaughterhouses, located in the Creek. There were also various public and private proposals for



5-63 Overview of False Creek: 1. False Creek South Shore, 2. Granville Island, 3. B. C. Place.

Photo Credit: Allen Aerial Photos, Ltd., Courtesy of Vancouver City Planning Department

docks, wharves, and terminals in connection with use as a coastal and deep seaport. Granville Island was formed by 1915 from material dredged by the city to increase the width and depth of the navigable channel, and industries such as metal fabrication plants located on it. In addition, at various times the Creek was home to a considerable number of residents who squatted in shacks along the shore or lived in houseboats. Forty years after the arrival of the railway, in 1927, the city proposed that the CPR yards be moved and steps taken to upgrade the area.

In 1937 the city council first directed its attention to the need for development policy guidelines for the Creek, but little happened. The council took another stab at the False Creek problem in 1948, establishing a special committee which began a major study in 1950 of the railways, waterways, sawmills, and general economic conditions of the Creek. Except for more talk about possibly filling the Creek, cleaning it up, and building a new fishermen's wharf, not much happened until the mid-1950s when the fishermen's wharf was started by the National Harbours Board, Granville Island was joined to the shore, and the study of a few years earlier was published.

By 1967 the council was being pressured by leaseholders, whose leases expired within the next few years, for a formal indication that the Creek would continue to be used for industrial purposes. In October of that year the council finally did adopt a basic policy for the Creek: to retain it for long-term industrial use. But by March 1968, the council decided, on the basis of a recommendation from the planning department, to reconsider its industrial policy and investigate possible apartment, park, and commercial uses.

Despite the recurrent efforts by the city to improve the deteriorating, underutilized False Creek area, there was no significant change. A major obstacle to redevelopment was the pattern of land ownership. There were several landowners, primarily railway companies more interested in transporting goods than developing real estate. Smaller landowners included the city of Vancouver, the federal government's National Harbours Board, and a number of private owners.

The Creek's problems had been approached for years from an engineering and planning point of view, but it was recognized in the mid 1950s that the real hurdles to change were legal and administrative—the divided ownership and a lack of any unified management. The attempts at joint management made via the landowners' committee established in 1956 had apparently not succeeded because of the inherent difficulties in attempting to have competing railways reach agreement; also, their concerns simply did not extend to improving and maximizing the use of their land. Complicating this situation, the CPR managed the Crown provincial lands, which included 85 acres strategically placed on the south side of the Creek and a smaller parcel, which divided the CPR's land on the north side.



5-64 For 100 years prior to redevelopment, industry used the waterfront along False Creek.

Despite all the problems, there were two possibilities for resolving the impasse: joint management, which had failed in the past, or consolidated ownership, which was preferred by the public and private sectors. A breakthrough came in 1967 when the province and the CPR exchanged some lands to consolidate their individual parcels into two blocks, thereby improving the development potential and management efficiency. A means for acting on this development opportunity appeared about the same time with the establishment by the CPR of a separate development company, Marathon Realty Co., Ltd. Although Marathon first stated in 1968 that it was open to change in the Creek provided the city took the lead, later that same year it announced it would redevelop the CPR yards as an apartment complex at a cost of \$185 million. However, Marathon was unable to proceed at the time, and in the end the city did take the lead.

In 1968 there was an even more dramatic breakthrough. Years earlier the city had acquired 200 acres for a future cemetery on Burnaby Mountain in the adjoining municipality of Burnaby. In the mid 1960s the provincial government decided to construct Simon Fraser University on top of Burnaby Mountain. During 1968 the city and the provincial government began discussions about swapping their lands. The exchange was formalized in early 1969, with the city receiving about 85 acres of land on the south side of False Creek from the province for its 200 acres on Burnaby Mountain, plus \$424,108. By this time, too, the December 31, 1970, expiration date for the small industrial leases on the city's new land was well within sight. The city's acquisition of the south shore property was crucial to the redevelopment of the Creek. It allowed the central planning authority for the area to implement its vision for the Creek and actively pursue its redevelopment.

Vancouver's Development Plan

Rethinking, investigating, determining, and deciding on land use concepts and policies for the redevelopment of False Creek took almost six years, from March 1968 when the council decided to reexamine its industrial land use policy to November 1973 when it adopted a wide-ranging set of policies for redevelopment throughout the Creek and a conceptual land use plan for a major block of the city's south side land.

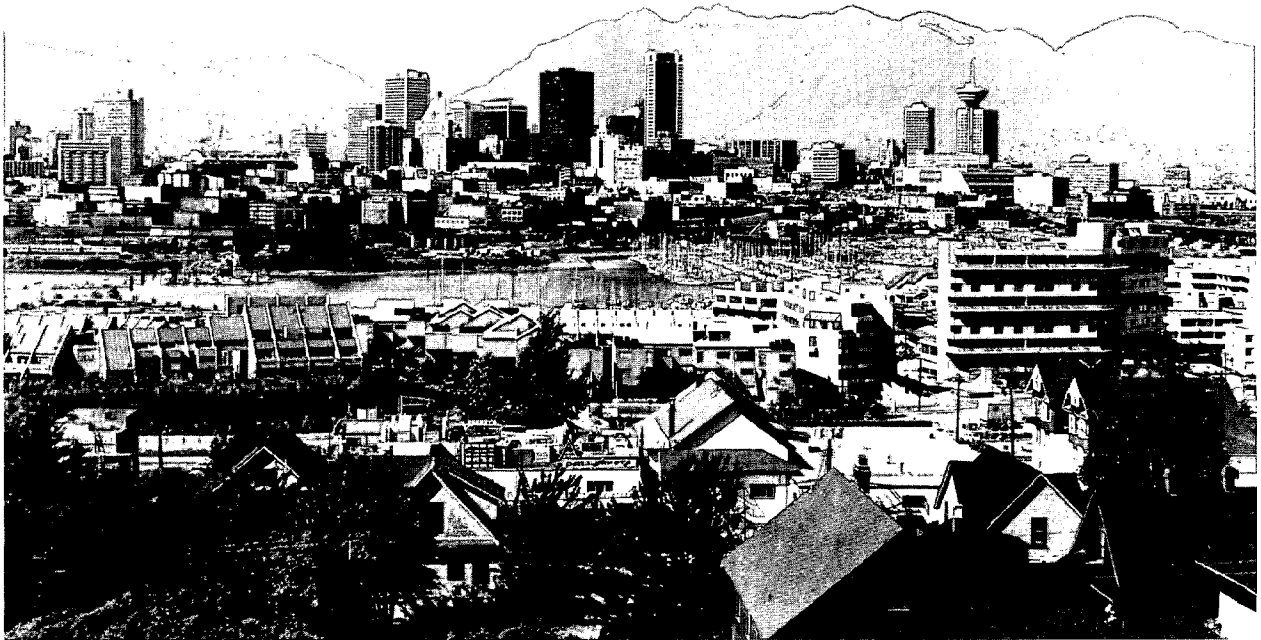
In March 1968 the council agreed that False Creek should be included with the policy plan then being prepared for the downtown and that discussions should be started with the National Harbours Board concerning Granville Island. This work led to the preparation of five alternative development concepts for the Creek, which were presented to the council in November 1969 and then issued in January 1970 expressly to obtain public opinions on the options. As a result of the responses received, the council indicated in April of 1970 that residential, recreational, and commercial uses in the Creek should be considered in further planning department work.

In November 1970, the False Creek Study Group, consisting of the consultants and the assistant director of planning who was responsible for the False Creek

project, was established to prepare suitable proposals for the city's lands. The Study Group completed its final report in April 1972. The proposed policies were intended to be the final step in general planning for False Creek and provide the framework for subsequent zoning, subdivision layout, services and utilities, building, financing, and related activities. All of these reports dealt with the Creek both as a whole and divided into 10 subareas, defined on the basis of such obvious physical boundaries as bridges and arterials. Immediate development was proposed for the city-owned land lying between the Granville and Connaught Bridges.

The city rezoned the whole False Creek basin in July 1974 from a heavy industrial district to a comprehensive development district. This new zoning allowed multiple uses to locate in the same district. The Official Development Plan adopted by the city council includes mandatory requirements and design guidelines, providing qualitative guidance, and allowing for variable interpretation for individual situations. The purpose of the Official Development Plan was to encourage redevelopment of False Creek in the direction set by the policy guidelines (social viability, economic soundness, conformity with the city's lifestyle, and income mix requirements) adopted by the city.¹

¹ For more information about the project's development and evolution, see Roth Rodger, *Creating a Livable Inner City Community—Vancouver's Experience* (Vancouver, B.C.: Agency Press Limited, 1976).



5-65 A view of False Creek and downtown Vancouver from Fairview Slopes.

False Creek South Shore

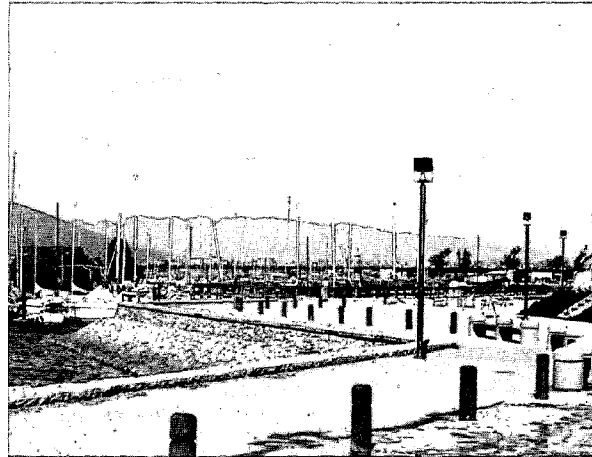
The False Creek South Shore project lies on a thin strip of relatively level land on the Creek's south shore. Rising to the north from the opposite shore of the Creek is Vancouver's central business district, and to the south is Fairview Slopes, now undergoing redevelopment as a residential area. Redevelopment was difficult because the site had severe constraints: industry with long-term leases, rail lines, dominating bridges, industrial noise and pollution, and poor soil conditions. On the positive side, the city owned the land, there were few residents and they were mostly living on boats, there were no replotting problems, and there were only a few deteriorating industrial buildings that could be easily demolished.

To direct and coordinate all aspects of the project, the Vancouver city council in early 1973 hired a local commercial developer as project manager, who reports directly to the city council. The project manager and his staff of an assistant project manager, a development coordinator, and a secretary form the False Creek Development Group. In addition, the city council selected a design scheme from a 1974 competition of three multi-disciplinary designer-developer teams.

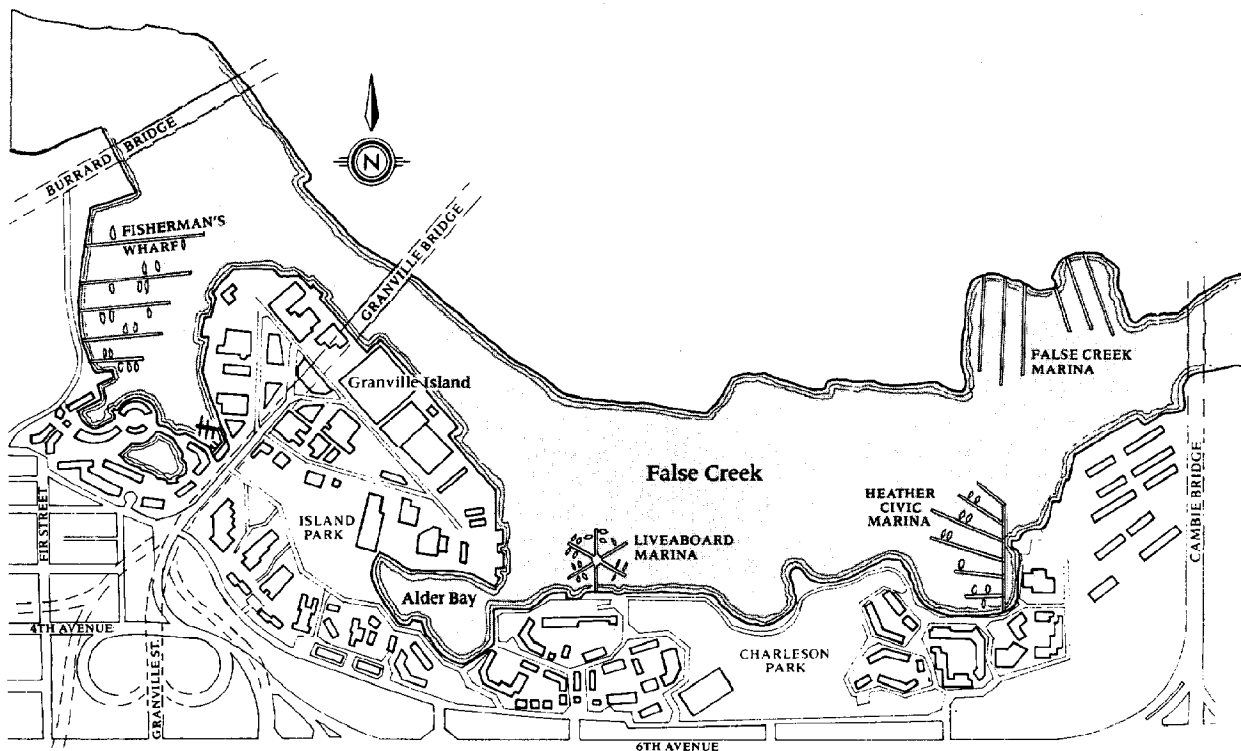
The Development Group formed a development team, which consists of the Development Group, a developer who would build the market residential and commercial portions of the scheme and offer cost advice to the sponsor groups who were selected to build the nonmarket residential portions of the scheme, and a coordinating architect who would supervise the

overall architectural coordination of the project. The sponsors, either builders/developers or nonprofit or co-op groups, were selected by the council in March 1975 and were charged with four prime responsibilities:

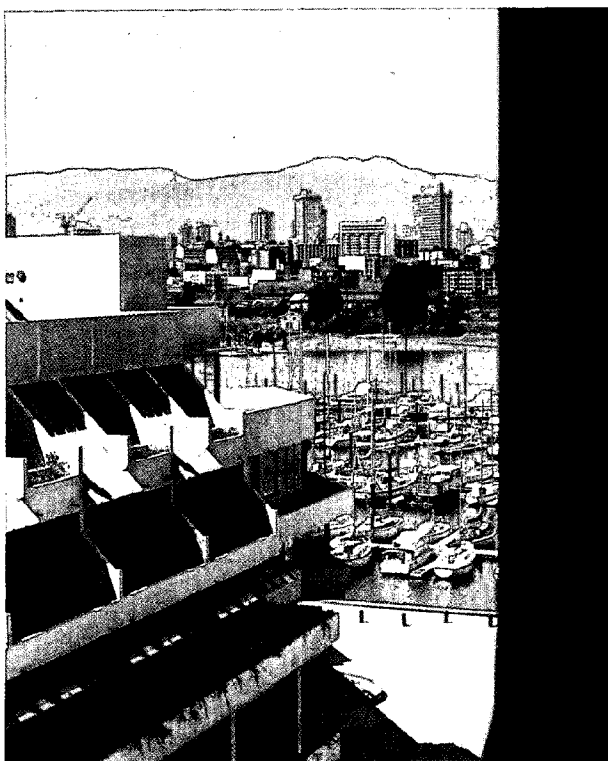
- to hire an architect;
- to hire a contractor;
- to administer applications from people interested in the type of housing the sponsor was producing;
- to involve these people in the on-going design.



5-66 Waterfront walkways provide public access to the water's edge and the two marinas at False Creek South Shore.



5-67 The False Creek South Shore site plan.



5-68 The residential units were designed to provide spectacular views of False Creek and downtown Vancouver.

To help the individual sponsors, the Development Group worked up financial pro formas for each of the housing programs and related them to the particular False Creek requirements. Also, the Development Group relied heavily on several city departments such as Engineering and Parks for major portions of the redevelopment. Once a preliminary development concept of a sponsor was approved by the Development Group, approvals for a development permit and building permit followed the usual city department procedures.

The 1,795-unit False Creek project is being developed in three phases. The first phase is completed. It consists of two distinct neighborhoods (the Heather and the Spruce neighborhoods) containing 852 units and housing a population of approximately 2,150 people. Separating the two neighborhoods is a 15.5-acre regional park with pathways, small ponds, and waterfront walkways.² Adjoining the park at the west end is a 320-student elementary school and a playground. Eighty-eight thousand square feet of commercial space is concentrated mainly in the Leg-in-Boot Square located in the Heather (eastern) neighborhood. In front of this neighborhood is a 250-boat civic marina operated by the city's

² The regional park was treated differently from local and neighborhood parks. Because it was to serve the broader community its cost was not covered by the land rents from the south shore development but from general revenues whereas the cost of the local parks was recovered from the land rents.

Vancouver Parks Board. West of this, in front of the Spruce neighborhood, is a 100-berth co-op marina, currently consisting of half liveaboards (floating communities that have all the services available to land lots) and half recreational boats.

Phase two, which is nearing completion, encompasses approximately 21 acres between the west end of phase one and the Granville Street Bridge. Designed for 608 units clustered in six different waterfront enclaves of low-, mid-, and high-rise structures, the phase two concept provides for additional parkland, local commercial and community facilities, and public access to the water and water-related activities. Construction is underway in the 335-unit third phase, which will contain townhouses and one- and two-story condominiums.

Land Leasing

The city council adopted a policy of leasing its land in False Creek partially to achieve its lifestyle and income mix and partially to retain the long-term development rights for future generations. The city adopted a policy of reducing or writing down the lease value of the land in order to make False Creek affordable for such groups as senior citizens and the handicapped. The land leasing program also had to meet a council policy that the city would recover all front-end costs resulting from the acquisition of the land, associated land servicing, and consultant and development group expenses from the development of the residential and commercial areas. This excluded costs for the school, marina, and the regional park, which were recoverable from the school board, marina operations, and the city general fund, respectively. Some developers, financial institutions, and the provincial government had problems with the leasing program, but their objections were ultimately overcome.

The duration of the original land leases is 60 years.³ At the end of the term of the lease (2038 A.D.), the city has the option to renew the lease for market units only and for terms of not less than five years or purchase the lessee-owner's interest at the then fair market value. Terms for the market and nonmarket portions vary. For example, the basic market land lease for phase one is valued at an average of \$12 per square foot of gross building area. According to the location within this phase, the value may vary from \$6.00 to \$15.50 per square foot. The market condominium purchaser has the choice of four payment options, from varying interest and lease rates to outright lease purchase. The non-market leases are scaled in order to achieve affordability for the mix of incomes, and they vary in recovery figures. In phase one, all nonmarket leases are revalued after year 30. From phase two on, all nonmarket leases were required to be prepaid for the full term (a condition imposed by the funding authority).

³ The most recent nonmarket lease was for only a 40-year term in order to reduce the city's land write-down in an inflated market.

Planning and Design

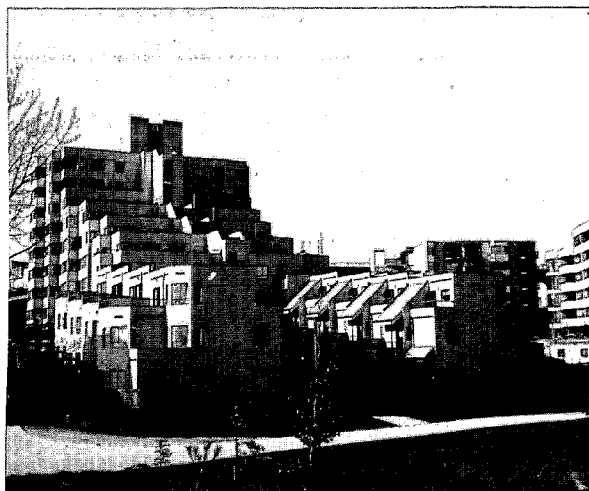
The design concept for phase one creates neighborhoods out of housing clusters, each of which is divided into enclaves from 30 to 130 units per acre. The housing enclaves are formed in donut-like shapes, which allows each unit the advantage of sunlight through one exposure and a view through the other, creating a definite public and private side to each unit. The center of each enclave represents a semi-private open space designed for each individual enclave. Heavy landscaping was introduced as a means of obscuring visual signs of larger, expensive units from smaller, subsidized units. A high quality of exterior appearance was required to avoid obvious denotations of wealth. The relatively high proportion of open space in phase one was primarily the result of the debate between residential and recreational redevelopment options for the area. The first phase can be described as housing in a park, and specifically housing in a park for families with young children.

Vehicular access to the phase one community is by an at-grade crossing at Heather Street and by a grade-separated crossing over the railroad at Alder Street. Another entrance to the project is Anderson Street, which also provides access to Granville Island. A bus system links each neighborhood with the adjacent Fairview area and the downtown. The development has a two-street concept—one for vehicular traffic and one for pedestrians. Vehicles are limited mostly to the south side of the community, with traffic kept away from the waterfront in order to create a linear waterfront park. Only moving cars and vehicles for emergencies, maintenance, and handicapped people are permitted on pedestrian streets. There is a 60-foot-wide pedestrian walkway which crosses over Sixth Avenue and the railway at Laurel Street, providing a park-like link into the Fairview community from the regional park.

Development Controls

Each of the three phases of the False Creek South Shore was developed by different development teams according to different Area Development Plans (ADPs). Area Development Plans are as specific and restrictive as the Official Development Plan is general and open. The ADPs are the specific zoning documents which implement the intent of the Official Development Plan. The ADP stipulates the maximum number of units allowed on the site, the minimum areas of open space, the proposed subdivision and building envelopes (height and built area), and the number of parking stalls to be provided for specific areas of False Creek.

An ADP is usually derived from a specific development proposal put forward by a developer. The ADP for phase one was derived from the winning entry in the architectural competition held in 1974. The ADP for phase two, which was adopted in 1976, was derived



5-69 Phase two of the project consists of 608 residential units clustered in six different waterfront enclaves.

from a plan prepared by the phase two coordinating architects who were different from those for phase one.

Phase three has gone through two ADPs because the development on which the first was based fell through and the ADP had to be radically amended to accommodate the proposal put forward by the subsequent developer. Each ADP is the product of long negotiations between various city departments and the developer. Consequently, many design features in phase one, such as the donut motif, were not carried out in the rest of the development. Each phase is, in effect, designed quite differently, though all respond to the direction set by the Official Development Plan.

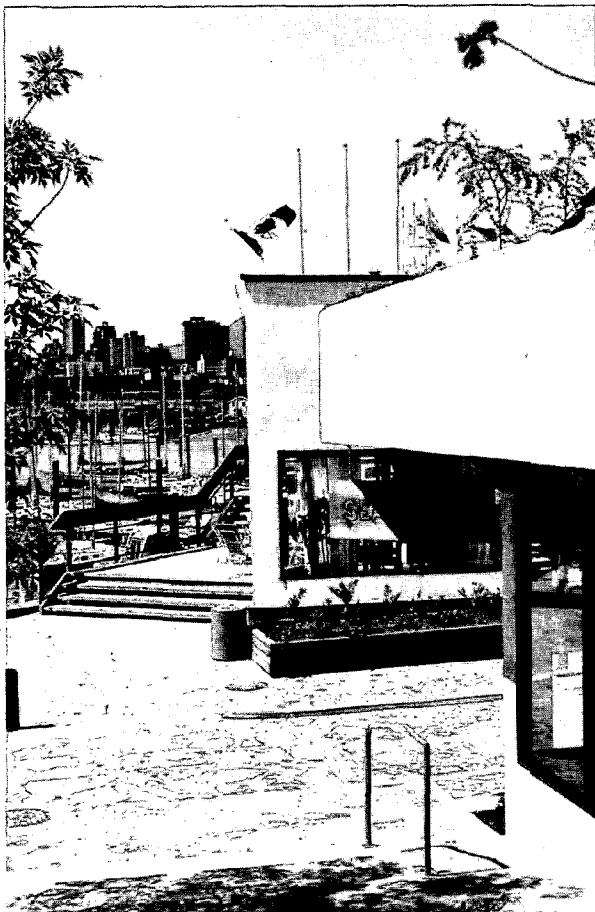
Resident Mix and Self-Selection

A basic redevelopment policy (particularly for phase one) was that the project household income mix should be similar to the mix found in Greater Vancouver, with special emphasis on providing housing opportunities for young families with children. The income mix for the project is roughly one-third each for low-, moderate-, and high-income groups.

Mixing different socioeconomic groups has not been generally successful in the past. However, as a result of considerable research, four principles concerning living in False Creek emerged: not mixing household types (find best coexistence among the various groups); retaining free choice or self-selection of an enclave and housing type by future residents; subsidizing people

rather than units; and identifying future residents as early as possible. A basic belief, then, was that unless future residents understood and could feel involved in the kind of community they were moving into prior to that move, unfulfilled expectations and conflicts would result. Also, if people were involved early and had a hand in creating their environment, this would make them more satisfied with it. An educational program consisting of a newsletter and meetings (after construction started) was helpful to inform future residents about their emerging community.

People expressing an interest in phase one were contacted about living in False Creek in early 1975 by the Development Group. After the interested party completed a questionnaire, the Development Group submitted the questionnaire to an appropriate sponsor or sponsors. Other future residents were identified as the result of displays, brochures, and speeches made by the Development Group and the sponsors.



5-70 Commercial areas are integrated into the development of each phase of False Creek South Shore.

Community Association

In 1976 the False Creek Residents Council was set up on an interim basis. Meetings were open to all and an ad hoc residents' committee was formed to represent the community in all matters affecting residents. In early 1978 a more formal structure was adopted by way of a nonprofit society called the False Creek Community Association. Two representatives from each housing group are represented in the association. Membership is voluntary and no set membership fee has been established at this time since not all the groups are represented yet. The Community Association is currently looking into matters such as general building and ground maintenance, encouragement of group membership, interpretation of association bylaws, and resolution of resident conflicts.

Experience Gained

The False Creek redevelopment program clearly illustrates how cooperative development between the public and private sectors can overcome some of the more serious obstacles to waterfront development. The redevelopment approach is based on the belief that innovative results are achieved by using innovative techniques. In this respect, the city of Vancouver was willing to challenge existing formats and standards when it was necessary to do so. This would not have been possible without the enthusiastic leadership of key members of the city council.

The development of False Creek South Shore required the city to recognize explicitly that it embarked on an inherently risky venture with the same risks usually assumed by private developers. The city invested an unusual amount of its own staff time and funds in the project. This investment was critically important, however, in that it gave the project credibility in the eyes of private developers.

The support of senior representatives of local government agencies is essential to the successful development of a complex redevelopment program like False Creek. Policies must be clearly defined between the development organization and the policymakers. This provides the continuity and accountability necessary to support a public/private partnership.

One of the strengths of the development strategy is the way it combines planning and implementation within one framework. This allows development to occur incrementally in response to various dynamic forces. For a large-scale project with many elements like False Creek, this development approach is extremely valuable. Problems must be resolved simultaneously, not sequentially, in order to avoid costly delays. In the case of False Creek, the development organization was able to win the confidence of the development industry and the financial community by demonstrating that it could deliver on its promises and commitments and translate plans into action.

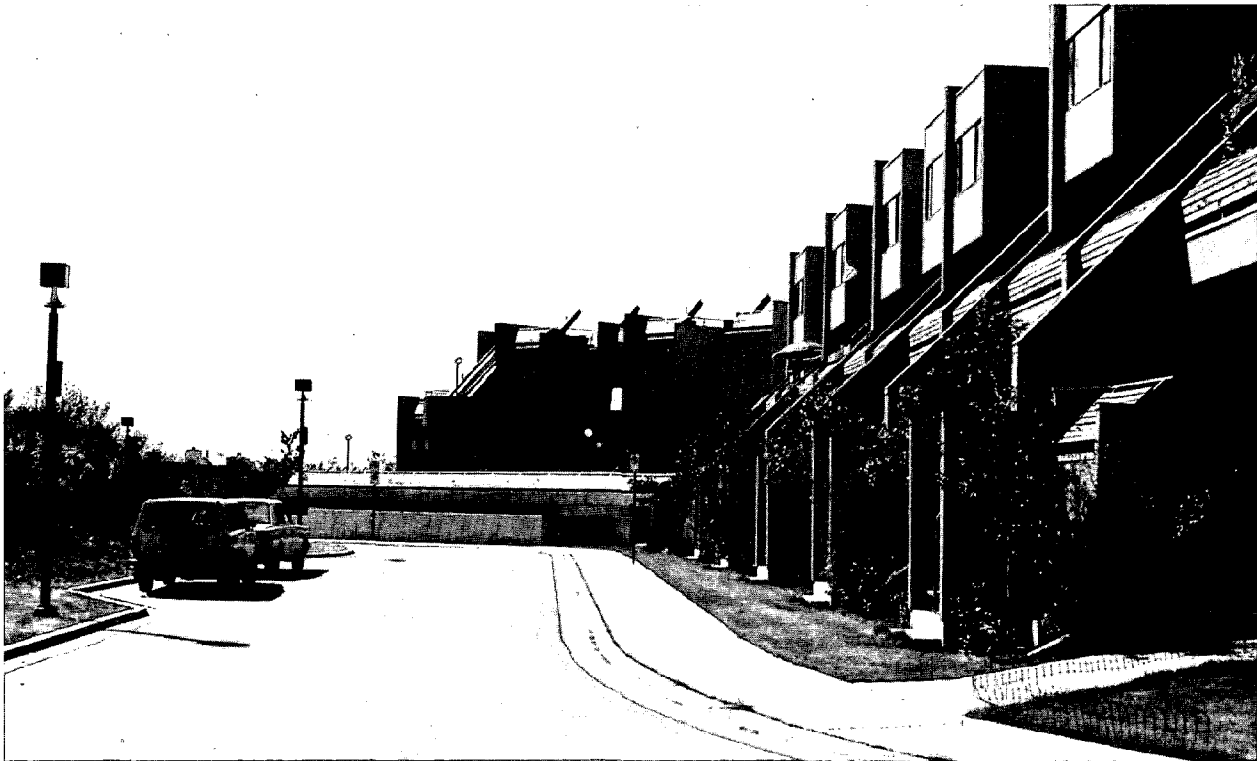
In the development of False Creek South Shore, the pre-identification of both residents and developers allowed the involvement of residents in planning, design, construction, and management. It led to a new system of client-developer relationships in which the city participated with many other groups as both client and developer. The city also achieved development objectives of a kind that the private sector normally cannot achieve. In addition, the detailed financial pro formas by the False Creek South Shore Development Group proved to be an invaluable tool with the sponsors as well as with the government agencies for both controlling costs and establishing budgets.

The integration of various income groups in the development of False Creek South Shore has been successful. The market units have sold well, indicating no reluctance on the part of individual purchasers to buy a dwelling in a socially mixed area. A greater problem has been the mixing of families with children and childless households. There have been some problems with this, largely due to specific design errors, but in general the low density and large amount of open space has diluted any real conflict. Higher density projects could experience more difficulty in this regard and with mixed housing types in general.

The parking and circulation systems at False Creek South Shore have presented some problems. Parking was reduced on the South Shore with little being provided for second cars. This was done in expectation that the location would allow transit to substitute for

automobile use. While automobile use is lower than elsewhere, automobile ownership is not, with the result that there is continuing pressure for the city to supply additional resident parking. This would be difficult and expensive to do without creating parking problems for visitors. The street system was also a problem at first for residents because of its very innovative character, but residents appear to have become used to its anti-vehicle intent and are now among its greatest supporters. However, the hierarchical street system still confuses visitors and makes access to the waterfront difficult.

Another problem is the feeling on the part of citizens in other areas of Vancouver that the South Shore development is an isolated enclave in the city. This is to some degree unavoidable because of the presence of the railway which allows 6th Avenue to be a semi-limited access roadway, acting as a barrier between False Creek South Shore and Fairview Slopes and beyond. There are, however, design features which aggravate the sense of isolation. Phase one of the development in particular turned its back on the railway and hence the rest of the city by design, and this was probably an error. A lesson for other developments in similar positions is that great care should be taken to ensure a successful integration of the new development with the rest of the city.



5-71 The parking and circulation systems at False Creek South Shore have presented some problems primarily because the project anticipated greater transit use rather than automobile use.

Project Data—South Shore (Phase 1)

Land Use Information:

Site Area: 52.4 acres

Dwelling Units: 852¹

Projected Population: 2,150 (1979)

Average Density:

Gross: 16.4 d.u. per acre

Net: 42.5 d.u. per acre²

Parking:

Resident

—owner 1 space per d.u.

—rental ½ space per d.u.

—handicapped ½ space per d.u.

Visitor 160 spaces total³

Commercial 1 space per 750
sq. ft. of gross
leasable area

Land Use Plan:

	Acres	Percent
Development Areas	20.28	38.7
(Residential ⁴ and Commercial ⁵)		
Neighborhood Park	8.65	16.5
School	2.00	3.8
Circulation	5.95	11.4
City Park	15.50	29.6
Total	52.38	100.0

Unit Information

(Typical Examples):

	Market Condominium	Nonprofit Rental	Co-op
Size (sq. ft.)	1,100	890	1,275
Price—sale	\$93,500 ⁶		\$450 ⁶
—rental	plus land lease	\$330 ⁶	
Bedrooms	2	2	3
Bathrooms	1½	1	1

Unit Mix:

	Owner- ship	Nonprofit Co-op	Limited Dividend & Non- profit Rental	Handi- capped & Seniors	Total
Studio	0	0	19	109	128
1 Bedroom	27	9	70	46	152
2 Bedroom	154	17	98	0	269
3 Bedroom	97	144	62	0	303
Total	278	170	249	155	852

Economic Information:⁶

Land Lease: \$6.00 to \$15.50 per sq. ft.⁷

Development Costs:

	Costs	Source of Financing
Serviced land for residential and commercial developments	\$ 8,000,000	C.M.H.C. ⁸ & City
Serviced land for park, school, and marina	5,700,000	
Residential market and semi-market units	20,000,000	Bank of Montreal plus private equity
Residential nonmarket units	20,000,000	C.M.H.C. ⁸ Mortgages plus some private equity and Provincial Government grants
Commercial facilities—		
88,000 sq. ft.	4,400,000	Private
Marina facilities other than land	850,000	City
School Building	2,000,000	School Board and Provincial Government
Total	\$60,950,000	

Construction:

Nonmarket: \$38 to \$42 per sq. ft.

Market: \$65 to \$85 per sq. ft.

Allocation of Front-End Expenditures (1978 estimate):

Development—Phase I	\$ 8,000,000
—Phase II	6,300,000
Recoverable from Marina and School	2,200,000
Public Sector	4,100,000
Total	\$20,600,000

Notes:

¹ In addition, there are 100 liveaboards and 250 marina berths.

² Based on the site area leased to a developer, net density ranges from 29.4 to 132.6 d.u. per acre.

³ Sixty spaces are in the Spruce neighborhood and 100 in the Heather neighborhood.

⁴ This includes common areas inside housing complex clusters.

⁵ This includes retail and offices within the housing blocks.

⁶ All cost figures are in Canadian dollars.

⁷ Lease duration is 60 years (until 2038 A.D.) with four options of financing. At the end of the lease, the city must either renew the lease or purchase the improvements (the home) at the then market value.

⁸ Canada Mortgage and Housing Corporation.

Project Data—South Shore (Phase 2)

Land Use Information:

Site Area: 20.7 gross acres

Dwelling Units: 608

Average Density:

Gross: 29.4 d.u. per acre

Net: 66 d.u. per acre¹

Parking:

Resident

—owner 1 space per d.u.,
2 spaces for 3
bedroom or larger

—nonprofit co-op ... 1 space per d.u.

—nonprofit rental ... 2/3 space per d.u.

—senior 1/2 space per d.u.

Visitor 200 spaces total

Commercial Variable, per city
parking bylaw

Land Use Plan:

	Acres	Percent
Development Area	9.2	44.5
Park	5.0	24.1
Circulation	6.5	31.4
Total	20.7	100.0

Unit Information (Typical Examples—1982):

	Market Condominium	Nonprofit Rental	Nonprofit Co-op
Size (sq. ft.)	1,100	890	1,100
Price—sale	\$170,000	—	—
—rental	—	\$400	\$500
Bedrooms	2	2	3
Bathrooms	2	1	1

Unit Mix:²

	Ownership Co-op	Nonprofit Dividend	Nonprofit Rental	Total
Studio (Senior)	0	0	117	117
1 Bedroom	63	44	45	152
2 Bedroom	126	78	34	238
3 Bedroom +	33	60	8	101
Total	222	182	204	608

Economic Information:³

Land Lease: \$10.00 to \$30.00 per sq. ft.⁴

Development Costs:

	Costs	Source of Financing
Serviced land for residential and commercial developments	\$ 3,600,000	
Serviced land for park	800,000	
Visitor parking garage	400,000	
Development implementation	1,500,000	
Total front-end expenditures	\$ 6,300,000	C.M.H.C. ⁵ and City

Construction:

	Costs	Source of Financing
Market (\$90–\$120 per sq. ft.)	\$35,000,000	Private
Nonmarket (\$50–\$70 per sq. ft.) ...	18,000,000	Private
Total	\$60,000,000	

Notes:

¹ Based on the site area leased to a developer, net density ranges from 40 to 243 units per acre.

² Social mix has been achieved by allocating land to specific sponsors building for specific groups. By ensuring that two- and three-bedroom units are built, an opportunity has been created for families to live in False Creek. There is no requirement that all two- or three-bedroom units house families.

³ All costs are in Canadian dollars.

⁴ Lease duration is 60 years (until 2043) with four options of financing for the market developments. At the end of the lease, the city must purchase the improvements and the then market value. For the nonmarket projects, the leases are prepaid and, when terminated, are surrendered to the city without compensation.

⁵ Canada Mortgage and Housing Corporation.

Planning and Development

Coordinator:

False Creek Development Group
453 West 12th Avenue
Vancouver, British Columbia
Canada V5Y 1V4
(604) 873-7207

Coordinating Developer:

Frank Stanzi Construction Ltd.
6625 Fraser Street
Vancouver, British Columbia
Canada V5X 3T6
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Coordinating Architects:

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Granville Island

Granville Island, located within the False Creek redevelopment area, is a 38-acre manmade island which is being recycled from a decaying industrial and warehousing area to a multiuse development containing offices, theaters, restaurants, a public market, craft studios, and a variety of retail shops. The objective is to provide a contemporary "public place" and a major recreational resource for use by the residents of the False Creek South Shore project and by the broader Vancouver community. Therefore, the various activities provided in the recycling of Granville Island are highly public in nature and encourage user involvement and participation, with an emphasis on a cultural, educational, and recreational mix rather than purely commercial uses.

Granville Island is owned by the Canadian government and the idea for its redevelopment was generated in 1972 by one of Vancouver's Members of Parliament. Arrangements were made for a study of Granville Island to be commissioned through Canada Mortgage and Housing Corporation. As a result of this study, which provided the initial framework of objectives, concept plans, development strategy, and the necessary administrative structure, the federal government made a major commitment to invest \$25 million in the redevelopment of the island. Approximately \$11 million of this total was used to buy out the remaining leases on industrial properties which were to be redeveloped for other uses.

In 1976, the Granville Island Trust (comprised originally of five and now of seven members of the public) was appointed to direct the island's redevelopment. The Trust decided from the outset that some of the island's industrial uses should be retained and that the objective should be to develop a public recreation place which would be woven around the existing uses and the existing street pattern. The Trust engaged a team of urban design consultants to: assist the Canada Mortgage and Housing Corporation (the arm of the federal government administering the project) in arriving at an appropriate development program and implementation strategies; establish the street network and open space; recycle specific buildings as key public projects; and establish specific architectural guidelines for other building projects as they develop. One of the key factors in the project's success has been the entrepreneurial role played by the federal government through Canada Mortgage and Housing Corporation. In essence, the government has created a project which will eventually stimulate further development through private investment.

Since all of the land is federally owned, the city does not control land use or design. The project is not being developed according to a zoning plan, a binding land use plan, a fixed economic pro forma, or other conventional development factors normally applied to a project of this scale. The only criterion is that there be no operating deficit. Revenues generated from leases pay the project's operating costs.

Granville Island is ideally located and is an integral part of the False Creek Redevelopment Area. It is adjacent to the False Creek South Shore project, whose residents provide a ready market, and it is also adjacent to downtown. In fact, the Granville Bridge ramp, which is a major access route to downtown Vancouver, rises directly above the island. The island was once a sandbar in False Creek. In 1913, a bulkhead was built and silt was dredged from False Creek and pumped onto the site to create a new industrial area. At the time the planning process for the redevelopment of Granville Island was initiated in 1973, the island contained several industries which were in operation, including a cement mixing plant and a steel factory. It also contained some vacant buildings, a number of which were usable. The street system was convoluted and there was no open space. Some of the existing industries were too large and costly to relocate. However, the site's strategic location and its single ownership presented a unique development opportunity.

A key planning and design objective was to redevelop the island while maintaining its original feel. Therefore, rather than typically recycling industrial and warehouse buildings for retail and office uses only, the redevelopment has retained some of the existing industries and contains a mix of cultural, educational, commercial, and industrial uses.

In designing the project's open spaces, the underlying objective was to allow the multiple use of a place. For example, one portion of the development can function as a parking lot, an outdoor market, a summer theater square, or a giant backgammon board. The streets on the island have the appearance of pedestrian places into which automobiles are allowed to intrude. This integration of pedestrian and vehicular traffic has worked well. The surface material for the streets (interlocking concrete pavers) was selected for permanence, identification with pedestrian use, and easy access to underground utilities without the need for subsequent patching. The surface also was designed to be continuous from building to building in order to visually reduce the width of the space and to tie together opposing building facades. Conventional curbs, gutters, and boulevards were not used for this reason, and the driving surface edge was defined instead by trees, bollards, and timber poles.

Parking is distributed throughout the island close to the areas people are heading for. Trees planted between car stalls in the small parking lots create the illusion of massing and connections through those open spaces. The entire periphery of the island is unobstructed and a pedestrian walkway was developed to enable visitors to enjoy the unique waterfront setting.

A system of pipes in bright colors supported by heavy timber poles runs between the buildings and through the open spaces and creates the major unifying element for the project. The pipes also contain the street lighting and provide support for canvas canopies to protect pedestrians during inclement weather. In addition, builders are encouraged to continue to use stucco and corrugated sheet metal, the two traditional cladding materials used on the island for building exteriors. This has helped to contribute to the project's unified character. In order to add interest and excitement to the project, different colors have been used for almost every building. Bright colors, traditionally associated with industry, were specified.

British Columbia Place

British Columbia Place is a 232-acre mixed-use development which is being located along False Creek directly across from Granville Island and the False Creek South Shore project. The site is owned by the province of British Columbia. Planning for the project is currently being completed and it is expected that development will be started late in 1982 or early in 1983. As with the False Creek South Shore and Granville Island projects, the development is owned and is being administered by the public sector (in this case, the province of British Columbia) and revenues will be earned by leasing parcels to private developers. British Columbia Place will be developed over about 20 years. Expo '86—the World's Fair, which will be themed on transportation—will occupy approximately 140 acres of the total site until 1987. After this time, this remaining land will also be developed.

The concept plan for British Columbia Place calls for the following development and facilities:

- *Residential development.* Approximately 80 acres have been set aside for housing and mixed residential/commercial development capable of supporting more than 12,000 housing units. The proposed density will average 125 to 150 dwelling units per acre. The housing mix is expected to be as follows: about 10

percent luxury units; up to 75 percent middle-income units; and more than 15 percent nonmarket (subsidized) units. Housing construction is expected to start in the spring of 1983 at the western end of the site. Redevelopment of other residential areas will not start until after Expo '86.

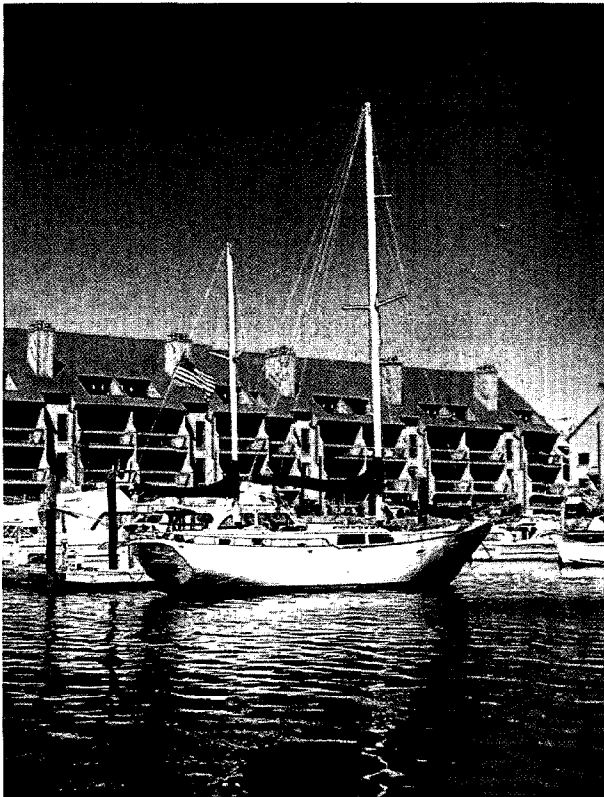
- *Commercial development.* Over the first six to eight years of the project, approximately 3.3 million square feet of office and retail space will be developed on 19 acres of land. It is expected that an additional 4.2 to 4.4 million square feet of commercial space will be developed later on, depending on city needs, growth, and urban policies. As many as 1,000 hotel rooms are also planned. Finally, a 60,000-seat, covered stadium is currently under construction and is scheduled for completion in 1983.
- *Parks.* Approximately 86 acres are being reserved for parks and open space. Great emphasis is also being placed on the provision of high quality landscaping as well as distinctive street furniture, lighting, and paving materials.
- *Transportation.* The planning concept is based on a transit-first policy. Every effort is being made to maximize the use of buses and the potential offered by the proximity of the city's ALRT system (it is expected that this rail system will be operational in 1986). The project's major roadway system is designed to maximize the convenience of public transit and to minimize the disruption of existing neighborhoods which are adjacent to the site.

While the plans for British Columbia Place are undergoing final revision, the redeveloped areas on Granville Island and the South Shore are proof that public/private development efforts can transform an underutilized decaying waterfront into a viable and exciting community. The new challenge to Vancouver is to build upon the experiences of the past five years and to continue to strive for creativity and innovation in the development of British Columbia Place.

Palmer Point, Greenwich, Connecticut

Palmer Point contrasts sharply with most of the other case study projects both in terms of scale and public sector involvement. Unlike the large-scale waterfront redevelopment programs, this small, predominantly residential project was privately financed and developed.

The 74-unit luxury condominium community is located on a five-acre waterfront site overlooking the Mianus River in Greenwich, Connecticut. The site is close to where the river flows into the Long Island Sound and, prior to development, was occupied by several old, dilapidated industrial buildings. The project consists of four separate 2½-story apartment buildings, a luxury 200-seat waterfront restaurant, an 8,000-square-foot office building built for firms in marine-related businesses, and a 154-slip operating marina.



5-73 Palmer Point is a 74-unit condominium community located on a five-acre waterfront site.

History

The Palmer Point site, a basically flat peninsula pointing south, has a long and interesting history. During the American Revolution the harbor, which is in a centrally located section of Greenwich called Cos Cob, was used by General Putnam to spy on the British from whaleboats. A windmill-powered saltworks occupied the peninsula and made salt for ammunition. A grist mill was built on the site in 1763. Driven by water flowing out of the millpond during waning tides, the mill ground grain for over a hundred years, before being destroyed by a fire in the 1890s. Nearby a general store and post office were the center of everyday life in the late 1800s. During this period, Greenwich was a popular summer resort for wealthy New Yorkers and Cos Cob was an active artists' colony.

Following the Civil War prosperous seafarers settled in the area. The neighboring residential streets are still graced with their houses, easily identifiable by their handsome widows' walks. In the 1840s the Palmer family founded the Palmer and Duff shipyard on the site and later generations of Palmers operated a large marine engine business on the point.

Site Development

The property was purchased in 1977 and construction followed in 1978. The industrial buildings were demolished and replaced by the new construction. The marina was upgraded and leased to an independent operator.

Due to the location and history of the site, extensive site improvements were necessary in order to accommodate the proposed development. The floor level of the industrial buildings that were demolished and removed was far below the elevation called for by federal flood insurance guidelines. Thus, the site had to be built up with great amounts of fill prior to development. The established floodplain is 12.7 feet above mean sea level and all occupied or living space has to be above that level. To meet this criteria, the developer had two options: either use special engineering fill material or use piles. The developer selected the latter option primarily for cost reasons.

All storm drainage is tied into the municipal system. The city of Greenwich does not allow any direct drainage discharge to the open sea. The total cost for site improvements was approximately \$1 million. The developer was also required to make off-site improvements costing approximately \$100,000.

The adjoining land is primarily residential with marine-related commercial uses located along the Mianus River. Shops and city services are within walking distance of the project, as is a train station for Conrail's New York-Boston main line. Although the property is situated just to the south of Interstate 95, access to the thruway is approximately 1.5 miles away from the project. A little farther south of Palmer Point a major Conrail bridge crosses the river.

Planning and Design

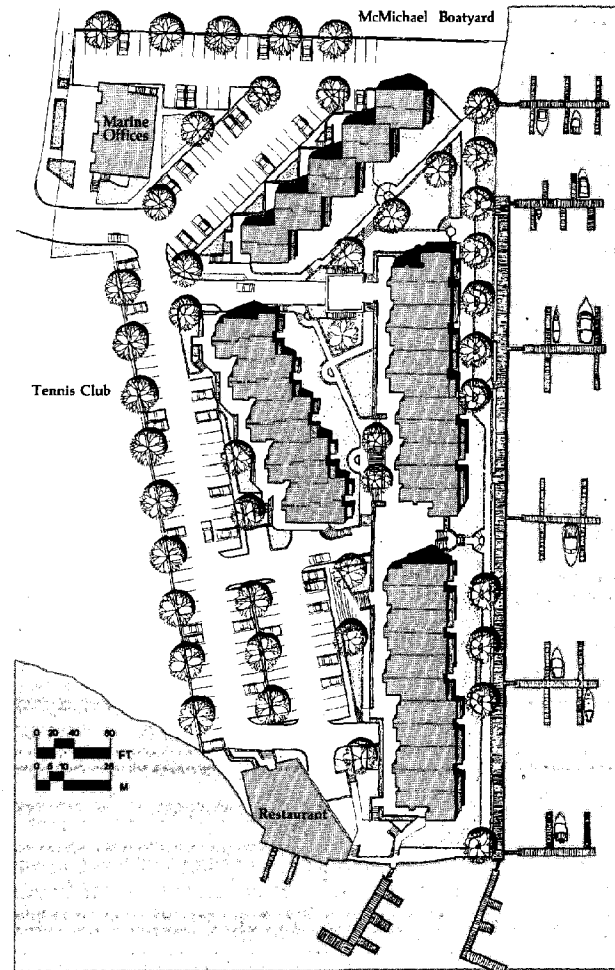
The residential units at Palmer Point are oriented to take advantage of the waterfront setting. The structures are clustered on the site to provide physical as well as visual access to the water's edge. All of the units have fireplaces and balconies with many of the balconies directly overlooking the river. The one-bedroom apartments provide approximately 950 square feet of living space and the two-bedroom units provide 1,250 square feet. Since all of the apartments have either direct walk-in or walk-up entrances, there are no common areas such as elevators, staircases, or hallways. Outdoor open spaces within the project are carefully defined. A pedestrian walkway system covers the site with curving walkways and a boardwalk along the water's edge. The project is intensely landscaped with plant materials and stone walls to provide screening and privacy, soften building surfaces, and create comfortable attractive areas for outdoor activities. Outdoor lighting is provided by brass and copper marine lanterns.

Vehicular traffic does not pass through the site. A single entrance allows vehicular access while maintaining privacy and security for residents. Residential parking, provided at 1.6 spaces per unit, is covered and located at approximately the floodplain elevation underneath the dwelling units. All of the apartments are constructed well above the floodplain elevation. Surface parking is provided near each building for guests.

The architectural style is sophisticated and modern. The primary exterior building materials are pale red brick and natural wood. The combination of brick and wood, which is often used diagonally, is appropriate for the waterfront setting. The brick detailing is used throughout the project and conveys a sense of warmth and sturdiness. The overall effect is a contemporary expression of the New England maritime heritage.

Regulations and Permits

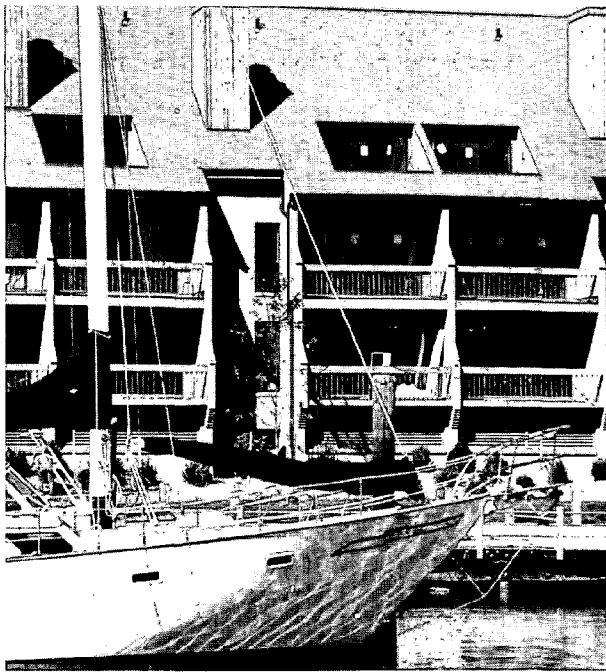
As is the case with most waterfront sites, Palmer Point was subjected to many development regulations and approvals. The site is zoned WB-waterfront business. This category permits water-related commercial uses and residential uses with a maximum floor area ratio of 0.5. A minimum of 20 percent should be devoted to marine-related businesses such as yachting publications, boat brokerage, marine supplies, and so forth. In addition, building height is restricted to 2½ stories or 35 feet maximum height. In the case of a gable roof, mean height is considered the topmost point of the roof and any space under the gable is considered as half a story. Another stipulation was for public access. All public facilities, including restaurants and marina slips, required public access easements. Before the developer could proceed with the project he was required to obtain site plan approval from the town zoning board and design approval from the architectural review board.



5-74 Palmer Point site plan.



5-75 The primary exterior building materials are pale red brick and natural wood.



5-76 Residential units are oriented to take full advantage of the waterfront setting.

The Marina

As previously noted, the 154 marina slips existed prior to the development of Palmer Point. The developer, however, improved the overall condition of the marina by providing boardwalks and minor utility lines. The cost of these improvements was approximately \$250,000. The marina is leased to an independent operator. Although it is open to the general public, condominium owners are given priority when renting the boat slips. The marina slips average 25 feet in length and the rental rate is \$40 per linear foot per year.

Since the marina was already in place and simply required upgrading, it was not subject to the numerous regulations and permits that generally pertain to marina development. The significance of this circumstance cannot be overstated. In most cases, the regulatory process associated with marina development is time consuming and complex. Usually a developer is faced with several different agencies or governing authorities that have jurisdiction over development activity. Furthermore, the cost of improving an existing facility is much less expensive than constructing a new one.

Management and Maintenance

Every condominium owner is a member of the Palmer Point Condominium Association. The agreement calls for all owners to pay for common charges which include central heating, air conditioning, snow removal, open space maintenance and repair, and so forth. The normal charge is about \$165 per month. The association elects a board of trustees and a chairman. The board handles all administrative matters and discusses major issues and decisions during monthly meetings.

Maintenance is more expensive for Palmer Point than it is for comparable residential developments in the Greenwich area. The higher costs are attributable to the additional traffic and use generated by the Marina operation and restaurant.

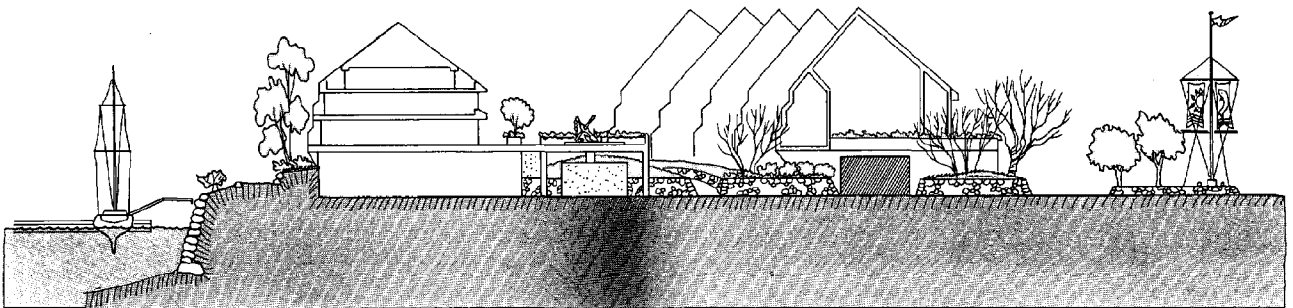
Marketing

There was a ready market in Greenwich for high quality living space in relatively smaller units. Thus, sales efforts were concentrated in Fairfield County, Connecticut. Local magazines and newspapers were used for advertising. In addition, project brochures were prepared that emphasized the local history of the area. This approach reinforced the concept of waterfront living within the limits of the city. In the fall of 1979 the first condominium units were offered for sale. Response has been very positive but sales have been slowed by unfavorable interest rates and other financial uncertainties. At this time, seven of the 74 units remain unsold.

Experience Gained

Although Palmer Point reused an old abandoned industrial site, development was not initiated by a public agency or nonprofit organization as a catalyst for urban revitalization. In this respect, much can be learned from Palmer Point because problems and opportunities associated with the waterfront site were defined within a traditional development context.

The fundamental key to the success of Palmer Point was that the amenities of the waterfront location more than offset the undesirable characteristics of the site. The unusually high site engineering and construction costs



5-77 Cross section drawing of the Palmer Point project.

associated with building on alluvial soils in a floodplain did not inflate the price of the residential units beyond a marketable value. In this respect, the large investment made in landscaping the project was well worth it since the quality of the site was significantly improved.

By improving an existing marina, the project was not subject to the many regulations and approvals covering new marina development in Connecticut. This was very important because securing the permits and approvals for marina construction can be an expensive, time consuming process. In addition, many potential management problems were avoided by leasing the marina to an experienced operator.

The mixed-use zoning requirement created difficulties for the developer because of the very narrow range of commercial uses permitted by the ordinance. As it turned out, the 20 percent of the total floor area ratio

that was required to be provided for marine-related business could not be fulfilled. It would have been more sensible if the city allowed general purpose commercial establishments to fill this space.

Leasing the marina to an independent operator was very important to the success of the project. The developer recognized the potential risks involved with operating a marina facility and decided it was desirable to allocate this responsibility to an experienced operator. This also allowed the developer to concentrate on developing the residential component of the project.

5-78

Project Data—Palmer Point

Land Use Information:

Site Area: 5 acres

Total Dwelling Units: 74

Project Density:

Gross Density: 14.8 units/acre

Net Density: 25 units/acre

Parking Spaces: 1.6/unit

Land Use Plan:

	Acres	Percent
Condominiums	3	60
Restaurant	5	10
Office	5	10
Marina Facilities	1	20
Total	5	100

Economic Information:

Land Acquisition Cost: \$1,400,000

Site Improvement Cost: \$ 450,000

Landscaping: \$ 300,000¹

Construction Costs: \$4,700,000

Unit Information:

Unit Type	Price Range ²	Unit Size	Bedrooms	Bathrooms	Monthly Common Charge
1 Bedroom & Loft	\$127,000–\$145,000	1,000 sq. ft.	1	1	\$152
2 Bedroom	\$179,000–\$259,000	1,250 sq. ft.	2	2	\$162

Notes:

¹ Includes boardwalk.

² As of 1981.

Developer:

Collins Development Corporation
43 Lindstrom Road
Stamford, Connecticut 06902
(203) 357-0123

Planning/Architecture:

Yankee Planning
43 Lindstrom Road
Stamford, Connecticut 06902
(203) 357-0089

Pickering Wharf, Salem, Massachusetts

Pickering Wharf, an unsightly abandoned wharf in Salem, Massachusetts, has been recycled into a 5.2-acre commercial, residential, and theater complex. Its 12 two-, three-, and four-story buildings have been designed to complement the scale and character of 18th century Salem and contain shops or restaurants on the ground floor and either offices or condominium apartments on the upper levels. The project illustrates how the combination of effective public sector leadership and private sector entrepreneurial skills can overcome the obstacles to urban waterfront development.

History

Pickering Wharf, built in the 1700s, was the first of Salem's great wharfs. Originally known as Union Wharf, it was purchased by the Pickering Company early in the

20th century and was first used by the company for the storage of coal and later for the storage of oil and gasoline. In 1974, the Pickering Company relocated its offices in downtown Salem and its storage tanks in another part of the city adjacent to a power plant, thus leaving the wharf unused. At this time, an agreement was reached whereby the city was given a two-year option on the wharf from the Pickering Company in return for giving the company permission to relocate its storage tanks. This option enabled the city to insure that development of the wharf would be in keeping with the traditional character of Salem and would be attractive to tourists without destroying the residents' enjoyment of their community. In addition, the company assured the city that the land would be made available for development at one-half its appraised value of \$560,000.

The site was purchased by the developer from the city in the spring of 1976, on the last day of the city's two-year option on the land. The project is a joint venture of the developer and a local savings bank. The bank's participation in the development, as 50 percent owners, was made possible under a little-used section of Massachusetts's savings bank regulations, called the "leeway" bill, which permits a savings bank to use up to three percent of its deposits in investment ventures outside of conventional savings bank areas.

Site Development

At the time the site was purchased by the developer, it was occupied by 11 storage tanks, a one-story block storage building in poor condition, assorted warehouses, and 1,000 feet of deteriorating bulkhead. It contained no buildings of historic value. However, the site's waterfront location and proximity to Salem's downtown and tourist attractions made it a prime area for development. The wharf is several blocks from the core of historic Salem, adjacent to the National Maritime Park, and within a five-minute walk of major attractions such as the House of the Seven Gables, the Custom House, and the Witch Museum. Approximately 500,000 people live within a 10-mile radius of the site.

A detailed agreement between the developer and the city required, among other things, that demolition of the existing buildings and storage tanks, construction, and project completion would take place within a specified period, and that public access to the waterfront would be maintained. The project was subject to the review and approval of the Salem Redevelopment Authority and the Salem Planning Department, as well as the state Department of Environmental Quality Engineering. A zoning change was also required, involving the extension of the city's mixed-use urban renewal zone from downtown to include the wharf. Construction was started in 1977 and the project was completed in May 1980.



Photo credit: Steve Rosenthal

5-79 Pickering Wharf has been redeveloped into a commercial and residential complex.

Urban Design

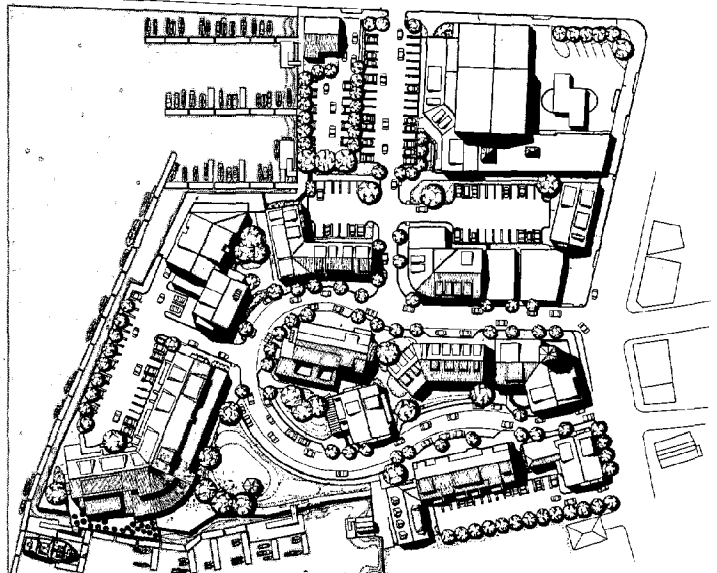
The basic urban design concept was to recreate a traditional New England dockside environment and to respect and complement the scale and character of old Salem. The mix of retail, office, and residential uses has assured an active setting 24 hours a day. A pedestrian scale and atmosphere has been emphasized throughout the project, thereby encouraging a bustling, streetscape environment reminiscent of Salem's waterfront in the 18th century. The buildings are oriented to form a progression of pedestrian ways and comfortable open spaces which complement those in Salem's restored downtown. Surface materials have been geared for pedestrian traffic and consist of granite cobblestones, grass, and brick. Public pedestrian access to the waterfront is emphasized. Attractively landscaped open space with benches is provided along a portion of the waterfront. In addition, public waterside access is assured by the provision of a walkway along the edge of the wharf and by the marina facilities.

The project contains only one interior street, which curves through the site and serves primarily as a pedestrian mall. Automobile and bus traffic on the site are tightly controlled, with vehicular access limited primarily to the perimeter of the site. Parking is isolated in several contained areas and reserved parking for residents is provided in two protected parking lots, one located along the water at the southern edge of the site and the other concealed by buildings on the west side of the curving main street. Parking areas also are designated for visitors to the museum and theater complex and for restaurant patrons. Parking is not available on the site for daytime workers or tourists. Service areas for the restaurants are also isolated from main public circulation.

The project's various uses are carefully located. Retail activity consisting of three restaurants, a specialty food cluster, and a variety of arts, crafts, and specialty shops has been restricted to the ground floors of all buildings, while offices and condominium units ranging in size from 1,000 to 1,500 square feet have been limited to the upper floors. Buildings contain either all offices or all residences on the upper levels. Offices occupy the upper floors of those buildings located either on the interior of the site or on those exterior portions of the site which are farthest from the water. The condominium units occupy the upper levels of buildings which are closest to the waterfront. This provides the residences with the dual advantages of superb views of the harbor and some separation from office activity. The project's three restaurants also are located to provide waterfront views and outdoor eating areas.



5-80 The wharf was underused and in poor condition at the time it was purchased by the developer.



5-81 Pickering Wharf site plan.

Architecture and Engineering

The buildings have a traditional New England design and are evocative in form, character, and materials of 18th century Salem. They are freestanding, two-, three-, and four-story, gable and hip-roofed structures with exteriors of either clapboards, shingles, or brick. Buildings closest to the water have cedar shingles so that their exteriors will weather naturally when exposed to the salt air, wind, and rain. Exterior colors reflect those popular in the Colonial period.

While the buildings' design, materials, and detailing recall Salem's architectural vernacular, their floor plans and elevations do not follow 18th century tradition. Floor plans for the condominium units vary considerably and include lofts, duplexes, and through-floor units. Units have either one or two-bedrooms and most have both an interior and exterior stairway entrance. They also feature fireplaces, large closets, stained exposed beams, outdoor balconies, and skylights. A few units also contain wood-burning stoves as an alternative, non-fossil fuel heating source. One of the six buildings containing condominium units was equipped with an elevator to provide access to several units specially designed for the handicapped. In addition, all shops and all areas of the site are accessible by wheelchair.

The project was constructed using concrete grade beams on steel piles and building foundations are all concrete slabs on a grade. Construction on the ground floor of each building is steel columns and beams supporting wood floors, while woodframe mill-type construction was used for the buildings' upper levels. All buildings are fully insulated from each other. Energy conservation was also encouraged by providing a single HVAC system.

Marketing

The retail tenants were carefully chosen to provide shoppers with a pleasurable and exciting experience. The various shops complement each other and the duplication of similar shop types was avoided. Care was taken to provide the optimum mix within the project of price levels and merchandise. Retail tenants are primarily crafts shops and boutiques attracted by the unique character of both the project and the Salem area. Service stores such as groceries have not been included.

The residential units were marketed extensively within the Salem region. The marketing concept portrayed Pickering Wharf as an alternative to suburban living, stressing its convenience and amenities. This approach was based on market studies that identified a demand for high quality inner city housing. The basic idea was to establish a special identity for the project that would appeal to this market.



5-82 The project has a traditional New England design similar in form and character to the buildings of 18th century Salem.



5-83 The retail tenants were carefully selected to complement each other and provide the optimum mix of merchandise to shoppers.

Experience Gained

The redevelopment of Pickering Wharf benefited greatly from Salem's long involvement in urban revitalization. The city's leadership recognized that the project could act as a catalyst for the revitalization of the city's waterfront and made special efforts to stimulate the redevelopment of the wharf. Considering the site's strategic location as a link between the city's downtown and waterfront, the action taken by city officials was highly appropriate.

The project's complexity made the government approval process unusually long and involved, despite the full cooperation of the city of Salem. A detailed analysis of the reviews required by the various agencies with jurisdiction over waterfront development would have been very beneficial. It would have helped the developer anticipate and perhaps even avoid many project delays.

Pickering Wharf has clearly demonstrated the importance of understanding functional relationships in a mixed-use development of this type. It is imperative, for instance, when combining residential and retail uses that separate, reserved parking be provided for residents. In addition, the retail tenants closest to residential units must not generate excessive noise or odors and must close each day at a reasonable hour. In this respect it is

advisable not to locate residences over top of restaurants. Furthermore, the control of vehicular access to the site was important in establishing the desired pedestrian atmosphere and in assuring that the reserved parking for residents was not used by retail patrons.

In the design of projects that attempt to recreate a historic ambiance, it is important to balance design authenticity with contemporary practicality. For example, at Pickering Wharf instead of using traditional multiframe colonial windows for the retail space, the architects used large, open frame windows that provide maximum visibility for shops and restaurants. This alteration greatly enhances the ability of merchants to attract business.

Phasing proved to be very significant at Pickering Wharf. The retail space was leased before the office space, and the activity created by the various street level shops made the upper level office space more attractive. The developer also had the foresight to file condominium documents for the project's office and retail space. Although the space is presently being rented, this action has provided the developer the flexibility to sell this space at a future date if circumstances require it.

5-84

Project Data—Pickering Wharf

Land Use Information:

Site Area: 5.2 acres

Gross Leasable Area (GLA):

Retail	71,000 sq. ft.
Office	30,000 sq. ft.
Residential	67,000 sq. ft. ¹
Theater Complex ..	12,500 sq. ft.
Total	180,500 sq. ft.

Gross Building Area (GBA):

207,575 sq. ft.

Floor Area Ratio (FAR)²: .92

Parking: 150 spaces³

Land Use Plan:

	Acres	Percent
Buildings	1.9	36.0
Parking/Circulation	1.5	30.0
Open Space/Landscaping	1.8	34.0
Total	5.2	100.0

Notes:

¹ Approximate total. There are 54 condominium units which range in size from 1,000 to 1,500 sq. ft.

² FAR equals GBA divided by total site area.

³ Includes 60 spaces which are reserved for the residential units.

Economic Information:

Site Cost: \$280,000 (1976)

Site Improvement Cost: \$1.7 million

Total Project Cost: \$10 million

Developer:

Heritage Trust Co. of Salem
P.O. Box 809
Salem, Massachusetts 01970
(617) 745-5555

Architecture/Planning:

ADD, Inc.
1166 Massachusetts Avenue
Cambridge, Massachusetts 02138
(617) 661-0165

Leasing Agent:

Wilder-Manley Associates, Inc.
Derby Building at Pickering Wharf
Salem, Massachusetts 01970
(617) 745-9540

City Waterway, Tacoma, Washington

After decades of steady decline, Tacoma's City Waterway is being redeveloped through a cooperative private and public effort coordinated by the city. The redevelopment program contrasts sharply with the efforts of other cities in terms of the development scale and strategy. By using an approach tailored to match the resources of the city and the potential of the waterway, Tacoma has been able to make significant progress towards recapturing a valuable urban amenity.



5-85 Tacoma's City Waterway prior to redevelopment.

History

Tacoma, Washington, is located on the shores of Commencement Bay, one of the few natural deepwater harbors in the world. Around the turn of the century, Tacomans boasted that the one-mile-long string of docks and warehouses lining the bay and City Waterway constituted the "World's Longest Dock." Sailing ships lined the waterfront docks unloading supplies into warehouses for easy transfer to the railroads, which ran along the other side of the warehouses. Then they loaded lumber, grain, and other commodities for the return voyage.

In the 1940s, the Port of Tacoma, just to the east, began a massive 3,000-acre industrial development which included landfilling for new staging areas and dredging of deeper and wider waterways to keep up with the needs of larger ships. As shipping activity moved away from City Waterway, the area turned to industrial uses, many of which were unrelated to the water. The waterway slowly declined. Warehouses sat vacant and several spectacular fires left unsightly pilings along the shoreline.

Redevelopment Strategy

When the city officials began looking at redevelopment of the waterway, 31 percent of the buildings or properties were vacant, 62 percent were highly deteriorated, and 20 percent were not water-dependent. City officials began to discuss the potential of the waterway for redevelopment into water-related and more public uses. After discussions with numerous city commissions and community groups, city officials drafted a City Waterway Policy Plan.

The city council adopted the final policy plan in October 1974, designating the western shoreline and the southern half of the eastern shoreline for redevelopment. The council's goal was to redevelop the waterway with marinas, restaurants, specialty and import shops, and green open spaces. Rather than initiating a disruptive plan of massive relocation, the city chose a flexible policy of encouraging non-water-related developments to relocate to other parts of the city. No new industrial uses were allowed, but existing industrial businesses were permitted to stay until they chose to relocate. The city expected that completion of a few demonstration projects would encourage future water-related uses and that market forces would encourage incompatible businesses to move.

To ensure that the plan was implemented, the city appointed a waterfront development manager. The position was placed in the city's Community Development Department under the Economic Development Unit and funded from Community Development Block Grant funds. The waterfront manager's primary responsibilities were to persuade government bodies, developers, and financial institutions to invest in the project.

In 1976, as the plan was being developed, a seafood market on the waterway was relocated because of the deteriorating condition of the building they leased. The project cost \$350,000. Working with city staff, the owner of the market leased city-owned property on the waterway. The presence of the market helped to enhance the credibility of the city's plan for redevelopment.

In 1977, the city further showed its commitment to public/private cooperation by using special funds, city general funds, and a state grant to develop a public float along the shoreline in front of the seafood market. The float cost \$110,000 and can be used for temporary moorage of visiting boats or seaplanes or by people fishing or just relaxing. The project includes a public guest float, pier, and access ramp located along the frontage of the new seafood facility, with public parking space in the stub end of 15th Street.

Even though the city began with a successful project, many difficult and complex problems blocked waterway development. The two major problems were the lack of sanitary sewers and the need for expanded harbor lines. The city concentrated its efforts on resolving these constraints.

Environmental agencies refused to allow any further development until sanitary sewers were installed. After successful negotiations over a local improvement district with the Burlington Northern Railway, a major property holder, and approval of Economic Development Administration, Environmental Protection Agency, and Community Development Block Grant funding, the city began a series of sewer, water main, and street improvements on both sides of the waterway.

More than \$8 million in public funds was invested in the waterway: about \$1 million in water mains, \$3.5 million in sewer improvements, and \$4 million in street paving, lighting, and landscaping. These public improvements helped stimulate \$8 million in private developments.

The Dock Street Sanitary Sewer Project was completed at a cost of \$217,000, including a \$30,000 pump station. Existing and future development will be connected to this facility, thereby eliminating further dumping of sanitary and industrial waste into the City Waterway along this frontage.

Since one of the major goals of the policy plan was to develop marinas along the waterway, state harbor lines had to be extended out from the shoreline. The city took the lead role in applying for the harbor line changes. After about a year and a half of discussions, applications, and hearings, the state approved extension of the harbor lines for about half a mile on each side of the waterway opening the way for marina development. Nothing could be built over the water until the state created these new leasable areas.

Projects now completed or in progress

1. BRS Enterprises
2. Totem Marina Redevelopment & Expansion
3. Cooperative Salmon Rearing Pens
4. Old Johnny's Seafood
5. Old Atlas Foundry Storage
6. New Johnny's Seafood
7. Public Float Project
8. Pick's Cove Marina
9. Johnny's Dock Restaurant
10. Marina/Restaurant—Jones Property
11. Marina—Marshall Penow

Other project proposals now under consideration

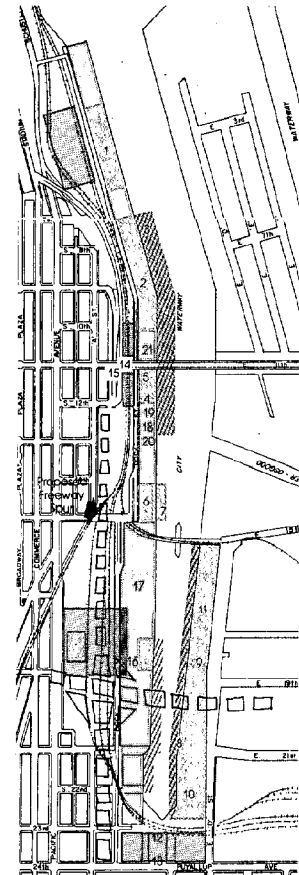
12. Bridge Park Pedestrian Way
13. Mechanical People Mover System
14. 15th Street Bridge Connection (A Street to Dock Street)
15. 21st Street Bridge and Ramp
16. Marina—Pacific Coast Oil Company
17. Marina—North Pacific Plywood

Other city properties

18. Pacific Machine
19. Coast Iron and Machine
20. Western Fish and Oyster Company
21. Municipal Dock Building

Legend—Private Redevelopment

- Completed or in Progress
- Harbor Areas
- Potential Waterfront
- Potential Air Rights



5-86 City Waterway site plan showing the major redevelopment projects.

Next, the city conducted a feasibility study of marina development on the waterway. The study concluded that there were several suitable sites on the City Waterway which would not require major environmental problems of dredging and disruption of natural areas and wildlife. The study concluded that there was an immediate demand in the region for 1,100 more boat moorage spaces, and that demand could be met by development of the City Waterway. While the city was applying for the harbor line extensions, city staff began working with marina developers hoping they could be ready to begin construction soon after the lines were extended.

One of Tacoma's finest restaurants was forced out of its long-time home on the Port of Tacoma about this time, so city officials approached the owner about moving to the City Waterway. The negotiations were successful and the restaurant built a new home which opened to customers in 1979. In addition to normal restaurant business, the owner has developed a small marina where guests can



5-87 One of the major goals of the policy plan was to develop marinas along the City Waterway.

arrive by boat and diners can watch the boats outside the windows with downtown Tacoma as a backdrop. The restaurant marina has about 40 spaces for permanent or transient moorages. The project cost was estimated at \$800,000.

The restaurant is currently planning expansion of its marina, and three other developers on both sides are in various stages of marina development. Because of the increased boating traffic, the city has negotiated with a railroad line to keep a bridge crossing the waterway open on weekends for easier marine passage.

Totem Marina

The largest development thus far, and the most difficult to arrange, is the \$3.3 million Totem Marina, now completed. This once small City Waterway marina has expanded to cover about 10 acres along half a mile of shoreline providing 454 wet moorage and 126 dry moorage spaces. This is one of the finest private marinas in the Puget Sound region.

City staff members assisted the developers all the way through the process, beginning with the creation of state harbor areas and the granting of shoreline permits from the state and Corps of Engineers. The project required leases with the city, Burlington Northern, and the state before a financial package could be put together for presentation to lenders. Two abandoned buildings were removed from the waterway to provide ample parking space for the marina.

The north end of the marina can be used as a fishing dock, a marine supply store is available, parking has been built, and a boardwalk lines the waterfront. Totem has resumed a salmon rearing project again this year, releasing about 40,000 salmon a year into the waterway. With the marina completed, the developer plans to develop another major restaurant on the site of a deteriorated city dock and warehouse adjacent to the marina.



5-88 View of the Totem Marina project (right side of bridge) and downtown Tacoma.

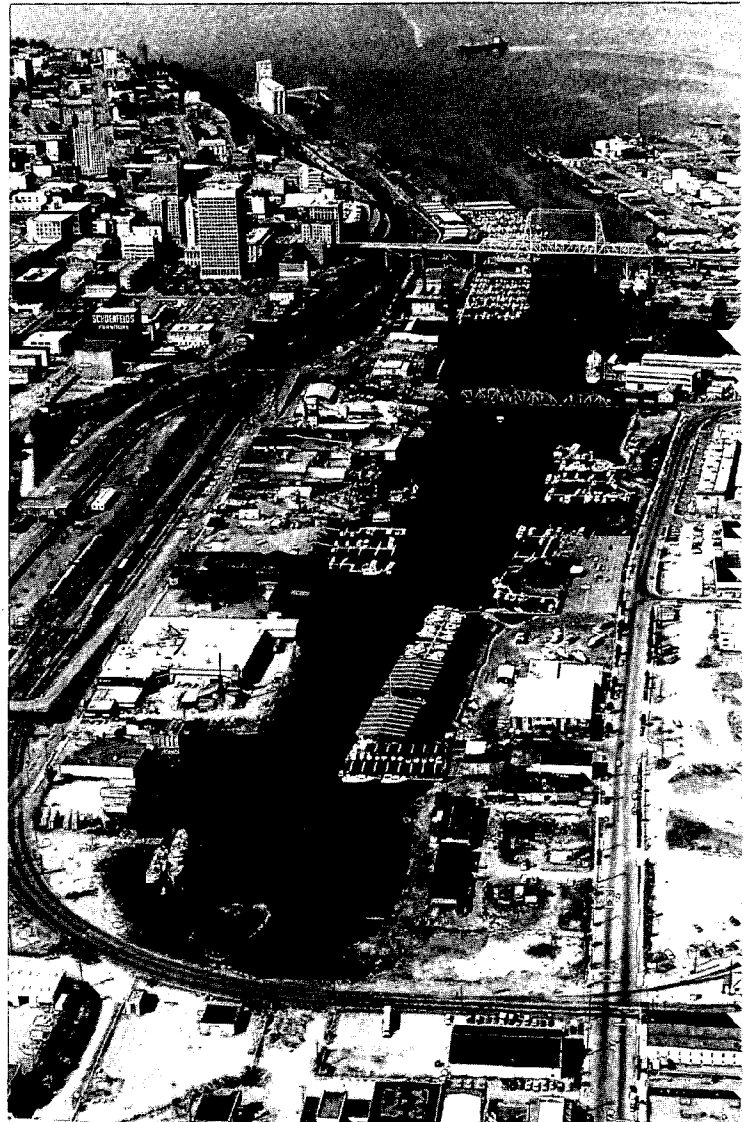
Additional Development Projects

When Tacoma began its City Waterway redevelopment, it hoped to produce some examples which would encourage other property owners to consider redevelopment as well. Now that many of the originally planned projects are completed or underway, more and more property owners, including some originally opposed to the plan, are exploring the possibility of redevelopment. One property owner hopes to develop an old warehouse into shops and restaurants. Another warehouse, recently destroyed by fire, is currently being demolished, and the owner is considering various redevelopment alternatives. Other developers are exploring the possibility of additional marinas, restaurants, shops, and even residences. Ultimately, the city hopes to develop a continuous pedestrian path, in a combination of boardwalks and concrete sidewalks, around the entire perimeter of the waterway.

The city is continuing to explore options for future development. City staff has been working with consultants designing a freeway spur project to coordinate waterway plans with the freeway project. Options are being explored to replace one bridge, to remove another bridge, and to build an access road around the southern end of the waterway. Although the City Waterway is within walking distance of downtown, it is separated from downtown by railroad tracks and a steep slope. City officials have been exploring several options for improving access between downtown and the waterfront. Green space developments are also being considered.

State harbor line revisions, approved by the state in 1976 and again in 1981, are providing opportunities for substantial marina development in the waterway, and further revisions are being considered. In addition, a request is now pending to modify a federal U.S. Army Corps of Engineers project on the City Waterway. This will eliminate an unrealistic and costly bonding requirement affecting marina development in the waterway.

Private sector redevelopment efforts are numerous. The conversion of Pacific Storage Warehouse, located on Burlington Northern property between South 4th and 11th Streets and Dock Street and the waterway, to commercial use is in progress. The project sponsors have purchased the property and have completed certain building maintenance improvements and general site cleanup in anticipation of securing leasehold tenants for future restaurant and other commercial developments. Such restaurant and commercial development has not yet occurred, and in the interim, this property continues to be used for light industrial purposes.

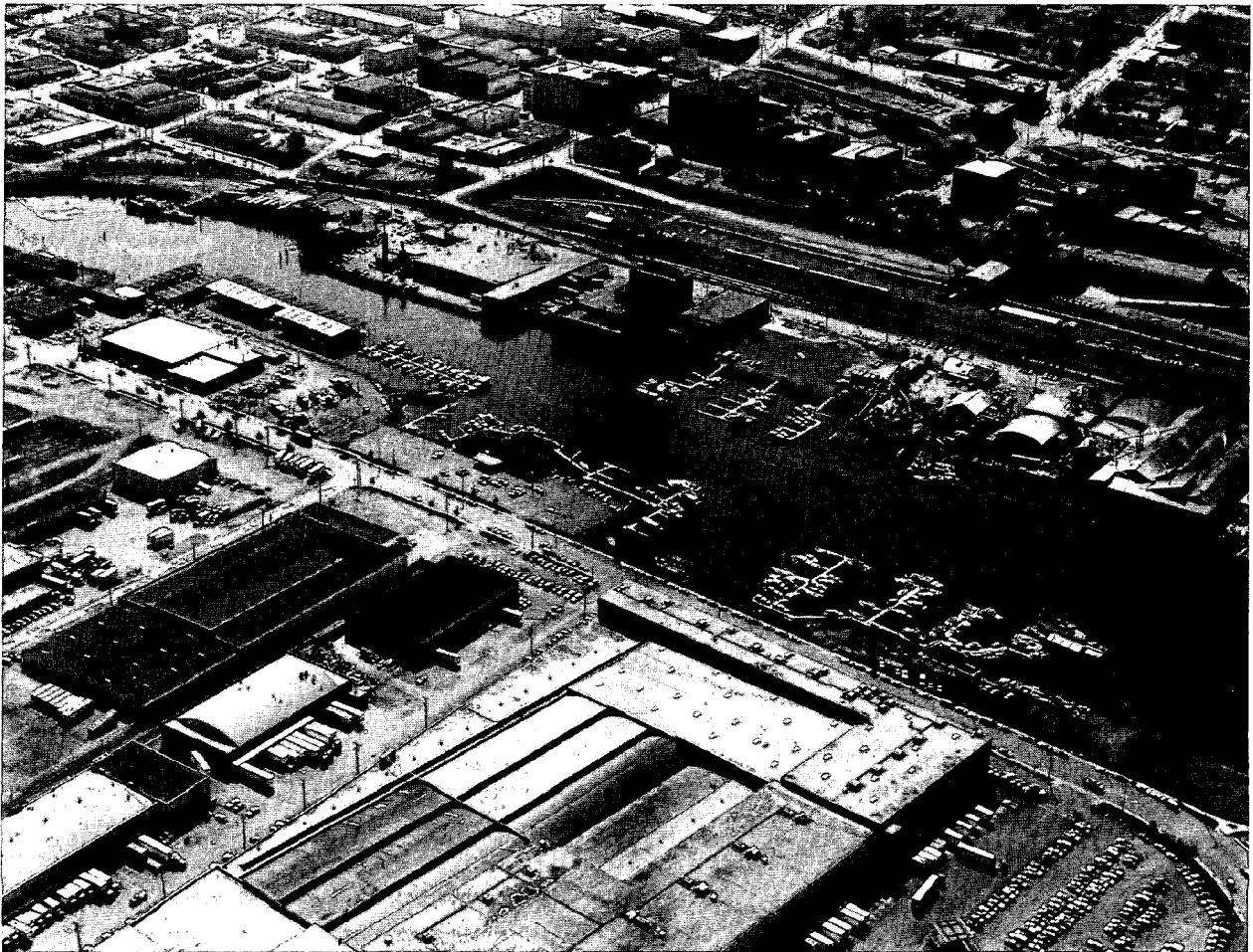


5-89 Now that many of the City Waterway projects are completed or underway, other property owners are considering similar redevelopment alternatives.

The 15th Street Bridge over the City Waterway is owned by Union Pacific Railroad and is projected to be closed permanently and removed within the near future pending future plans of the railroad. A decision on future plans may be accelerated by increased bridge opening demands from boat traffic to and from marinas located at the south end of the Waterway.

Other projects have significantly improved the viability of the waterway. The Picks Cover Marina project was completed at a cost of \$350,000. It includes 100 wet moorage spaces and 24 dry storage spaces. A shoreline permit has been approved for development of a marina (60 wet and 324 dry) and restaurant facilities on the Jones property, located on the east side at the very south end of the waterway. A Corps of Engineers permit has also been secured. Alternate plans are being considered by the developer, and thus, status of this project is uncertain at this time. All permits are approved

and work is in progress for a 157-boat marina on the east side of the waterway between 15th and 18th Street. An initial stage of development has been completed. Total development is projected for completion by the end of 1982. The Pacific Coast Oil Company marina project will significantly expand the moorage capacity of the waterway. A first stage of development, involving 18 wet moorage slips, is now completed, at an approximate cost of \$80,000. A further final stage of marina development contemplates extending out into the water approximately 100 feet into recently approved additional state harbor areas. Other upland commercial development is also being planned at this location. Finally, proposed plans for the old vehicular ramp structure under the west approach to the 11th Street Bridge include continued use as a pedestrian way with the addition of landscaping features to create a park-like pathway between the downtown area and Dock Street. Further development of these plans has been held pending conclusion of redevelopment of the Municipal Dock Building property immediately adjacent to the north of 11th Street.



5-90 City officials are exploring several options for improving access from downtown Tacoma to the City Waterway.

Experience Gained

The Tacoma City Waterway redevelopment program illustrates the importance of formulating an urban waterfront development plan that is practical and manageable. City officials recognized that with limited resources and a questionable market, the best development strategy for the City Waterway was an incremental approach designed to use public improvements as a catalyst for private investment. By adopting a flexible development policy instead of a definitive plan, the city was able to take advantage of redevelopment opportunities as they occurred.

The appointment of a waterfront development manager by the city was extremely important to the success of the program. This office was the conduit for the flow of information and communication between private developers and public agencies. Furthermore, the manager was able to coordinate the decisions and actions of local, state, and federal government agencies involved in the redevelopment of the waterway.

The early redevelopment of the seafood market was very significant because it attracted public attention to the waterway and greatly enhanced the credibility of the city's plans for further redevelopment. With an incremental development program like Tacoma's, it is very important to initially show some progress or change in order to create momentum and interest in the program.

One reason the City Waterway program has been so successful is because it did not try to copy the more glamorous and grandiose waterfront projects of larger North American cities. Instead, Tacoma tailored the redevelopment of the waterway to reflect the unique characteristics of the city. This realistic approach is producing remarkable results.

5-91

Project Data—City Waterway

Land Use Information:

Site Area: 117 acres

Existing Development:

Public: Site improvements include streets, sidewalks, landscaping, lighting, water mains, sewers, and public docks.

Private: 4 marinas (900 slips), a 300-seat restaurant and dock, a seafood sales and distribution facility.

Future Development:

Public: Additional site improvements including park development, pedestrian facilities, and bridge replacement are anticipated. Implementation will depend on the availability of public funds.

Private: There are no specific targets or plan numbers for future private development. The city is promoting more of the same type of private development to the maximum extent possible. There is physical space for as many as 1,000 additional marina spaces. There is physical space for three or four more restaurants and three or four hotels/motels, in combination with possible residential and other commercial development. The eventual total development will depend on market prices and cannot be predicted at this time.

Economic Information:

Cost of Existing Development:

Public:

Water mains	\$1 million
Sewers	3.5 million
Streets, lighting, and landscaping	4 million
Other	1.5 million
Total	\$10 million

Private:

Total: \$8 million

Planning and Development

Coordinator:

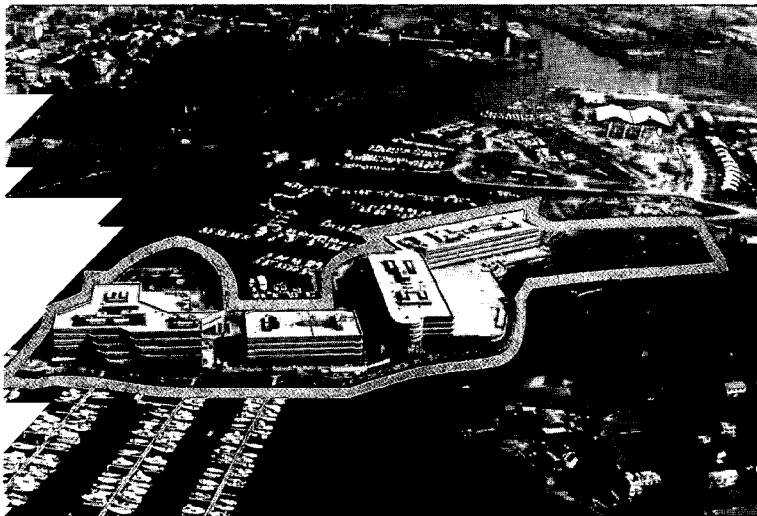
Waterfront Development Manager
Community Development
Department
City of Tacoma
740 St. Helens Avenue
Tacoma, Washington 98402
(206) 591-5200

Harbor Plaza, Stamford, Connecticut

Harbor Plaza is an office and retail complex located on an 18-acre site overlooking Long Island Sound in Stamford, Connecticut. Surrounded by the largest marina in the Northeast (a 400-slip facility undergoing renovation and expansion), the project demonstrates successful private redevelopment of an urban waterfront site for primarily office use. Harbor Plaza shows that an office project can be an appropriate shoreline development alternative if the site plans and building designs complement the scale and character of the waterfront setting.

History

The Harbor Plaza site has undergone many changes since the turn of the century. At that time it was nothing more than a small grassy peninsula with an island located near the shoreline. The 1.2-acre Ware Island marked the entrance to the East Branch, a narrow tidal creek extending 1½ miles inland from Stamford Harbor. By 1938, two buildings on the peninsula and a single dwelling on Ware Island had been constructed. Industrial development was concentrated north of the site along the East Branch where two large shipyards and a marine works were located.



5-92 Harbor Plaza is located on an 18-acre site overlooking Long Island Sound.

In the late 1950s there was an urgent need for storm protection of the low-lying urbanized areas bordering the East Branch and Stamford Harbor. These areas of the city experienced 75 percent (\$2.5 million) of the total damage to Stamford resulting from Hurricane Hazel in 1954, and had been victimized by previous hurricanes and severe storms. Most of the damage was to manufacturing facilities.

After completing a study of the storm-ravaged area, the U.S. Army Corps of Engineers recommended the construction of a hurricane barrier as the major feature of a comprehensive storm protection program for Stamford. The barrier was completed in 1958 and consists of 1,030 feet of earth-filled dike, with rock faces and ties. It extends across the East Branch at a point about 1,000 feet above its mouth (about 900 feet north of Ware Island). The barrier has a top elevation of 18 feet (mean sea level) and a top width of 200 feet. A grated opening, 75 feet wide, is built into the barrier where it crosses the navigation channel. The barrier protects 460 acres of property, maintains water depths, and acts as a haven for recreational craft and commercial vessels during severe storms. Completion of the hurricane barrier stimulated marina development near the Harbor Plaza site along the East Branch.

During the early 1960s Ware Island was joined to the mainland by a narrow causeway. A few years later, land was created on each side of the causeway with fill material. This produced a flat, almost S-shaped area of land, significantly expanding the size and water frontage of the peninsula.

In recent years Stamford has become a major headquarters location for large corporations, with a resulting economic shift from a primarily manufacturing production economy to an office/service-based economy. It is expected that Stamford's role as the major urban center of southwestern Connecticut will intensify during the 1980s. A majority of Stamford's office development is taking place in conventional downtown locations.

Site Development

The Harbor Plaza site is located in the Shippan Point section of Stamford, just south of the city's central business district. The site is near an affluent residential area and a large public park. Across the East Branch is Kosciusko Park and the Woodland Cemetery. These two shoreline uses are an additional buffer between the site and Stamford's industrial south end.

For the city of Stamford, the development of Harbor Plaza ended 10 years of uncertainty regarding the future of the 18-acre waterfront site. Until 1971 the site was owned by Scott-Paine Marine Corporation, which planned to develop an apartment complex. However, this proposal required a change in zoning from light industrial to residential and was strongly opposed by the residents of the exclusive Shippan Point community. Shortly after this proposal was defeated, the Scott-Paine

Corporation was acquired by Marina America, Inc., which presented a proposal for a condominium development on the site. The proposal was rejected by the city's planning commission and the land was put up for sale.

The site was then purchased by the Collins Development Corporation in 1976. Collins recognized that under the city's zoning ordinance the site's location in a light industrial district would allow it to be developed for office use without any change in zoning. Further, Collins recognized that with the Stamford office market growing dramatically this presented the opportunity for a unique office complex on the waterfront.

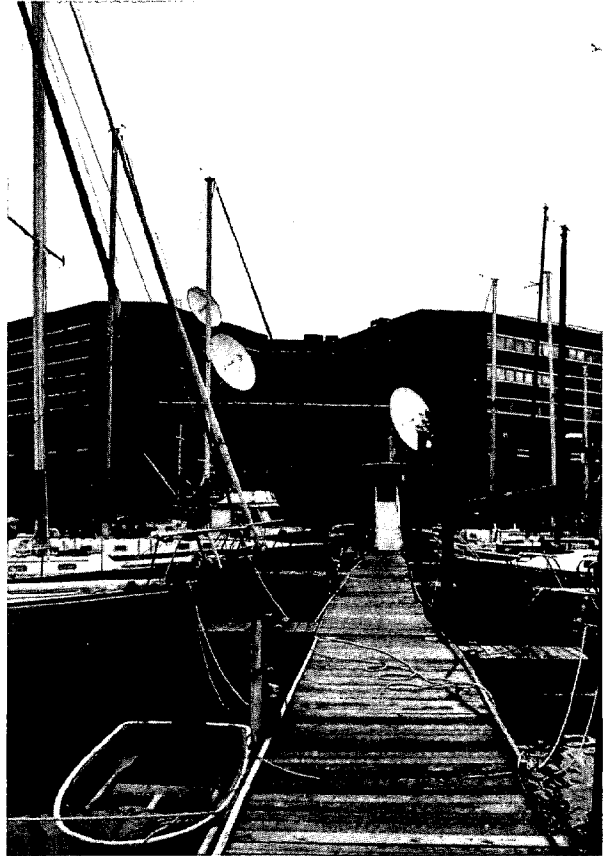
As part of the sale terms, Marina America, Inc., required that boat owners be assured access to the slips and parking on the site. The city required that three parking spaces per 1,000 square feet (NRA) be provided as well as 1.5 spaces per marina slip. However, about 400 of the additional 600 spaces ended up being eliminated from this requirement due to a grandfather clause. On weekdays, 50 parking spaces are reserved on the site for marina patrons. On weekends, marina patrons may use any of the project's parking facilities. Under the city's zoning ordinance, 80 percent coverage was permitted on the site with structures no greater than 60 feet high.

The project has been under construction since 1977 and is virtually complete, with the final building, a multiuse facility containing 84,000 square feet of office space above 17,000 square feet of ground level retail space, about to begin tenant occupancy. The majority of Harbor Plaza is leased and occupied and currently houses 1,900 employees.

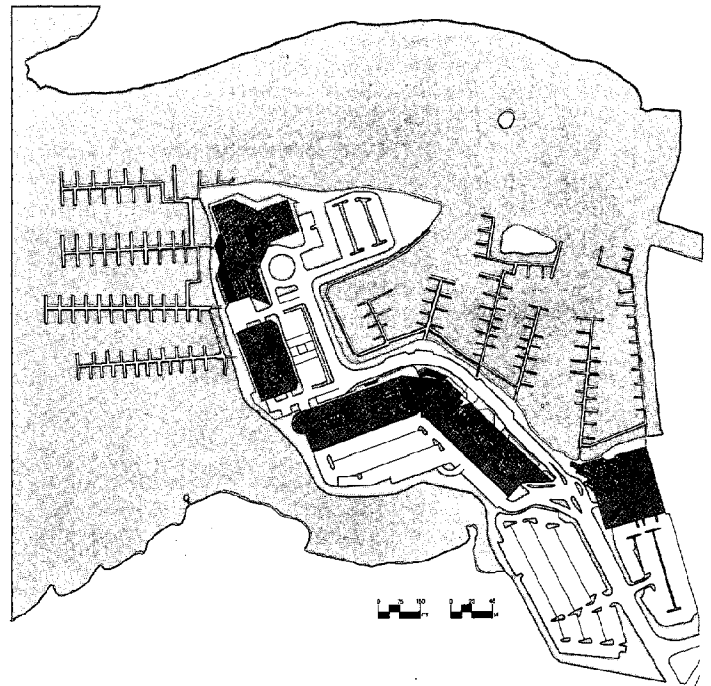
Planning and Design

The plan takes full advantage of the project's waterfront location. The buildings are carefully placed along the narrow peninsula and have a distinctive orientation to the shape of the land, the water, and the view potential. The buildings are arranged in such a way that several "windows" to Long Island Sound were created. An important consideration was to create an overall link and access to the waterfront, while protecting the shoreline's ecosystem. Pedestrian and marina uses were accommodated by creating a peripheral pathway, skirting the entire site at the water's edge, with landscaped berms. The major portion of this pathway consists of a boardwalk running along the edge of the inside, sheltered cove.

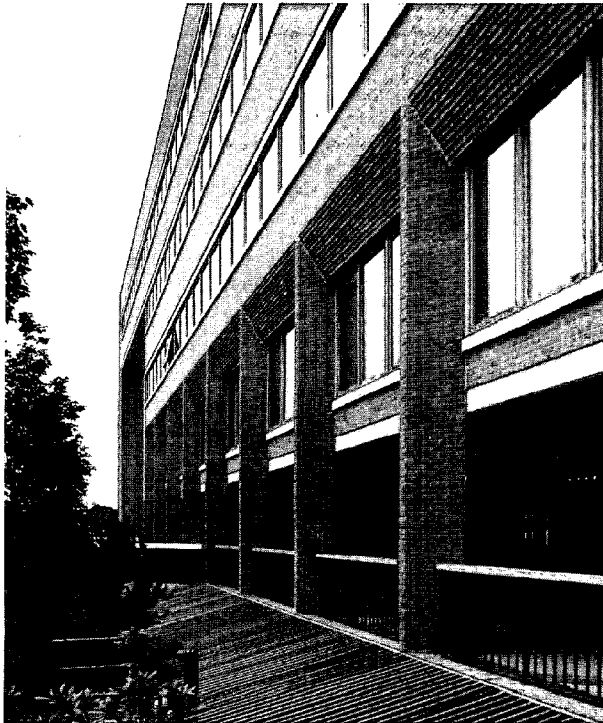
Unlike most corporate headquarters, the buildings were not designed to have a monumental appearance, but rather to respond in scale and materials to the traditional New England waterfront and to the surrounding residential areas. Even though the floor area ratio (FAR) under the local zoning ordinance permitted the site to be intensively developed, the development team sought to achieve an optimum size which would assure economic viability yet would be compatible with surrounding development.



5-93 Access to marina uses is provided by a pathway which skirts the edge of the site.



5-94 Harbor Plaza site plan.



5-95 The buildings feature operable windows with solid teak frames.

The predominant image conveyed by the project's design is that of a traditional New England waterfront. The buildings do not have slick aluminum and steel facades, but instead are heavy, solid structures. Buildings are five or six stories and feature natural materials, including concrete, soft pink-based brick, and wood-framed windows. The windows are operable and are triple-glazed with solid teak frames. These windows are ideal for waterfront use, being corrosion-resistant as well as energy-efficient. They also proved to be economical compared to aluminum assemblies. Certain entrance portions of the buildings were treated with grandeur by using atriums and other architectural treatments. The facades of the buildings' ground floors were designed to accommodate the pedestrian and function as an arcade, providing access to the water's edge. Throughout the site, many waterfront elements were incorporated as part of the landscaping, including boardwalks, waterfront gazebos, and prism-lens, nautical lanterns.

Engineering

Extensive improvements were required for shore stabilization. Rip-rap was installed as well as a limited amount of bulkheading. For building construction, pressure-injected concrete piles (known as Frankie Piles) were used extensively. This piling system was successful both from an economic and an engineering standpoint. These piles are very durable, particularly for a site with saltwater, and work well with sandy soil conditions.

Parking areas are mostly located under the buildings. Parking level slabs allowed enough room in ceiling areas for mechanical distribution. The 100-year flood line is approximately nine feet above the mean high water table, and the lowest level of parking was established 13 feet above the mean high water table in order to insure against flooding.

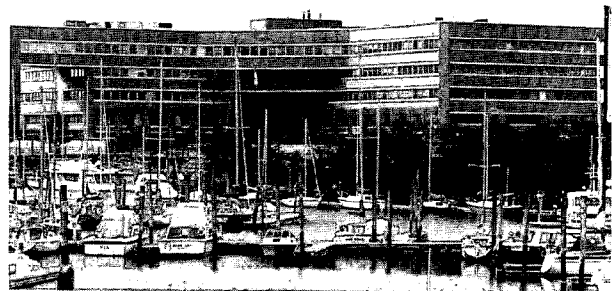
The majority of the site's stormwater runoff is discharged directly to the sea, with proper filtering devices. The project's sanitary sewers are tied to the municipal system. The developer was required to make major off-site improvements. These included the construction of an access roadway through nearby parkland so that traffic generated by the project can bypass neighboring residential areas and extensive dredging to ensure that channels would be navigable and marine use would expand or at least remain at its present levels.

Market and Tenants

The Stamford region of lower Fairfield County, Connecticut, is the fastest growing office market in the New York metropolitan area. During the last 15 years, a large number of Fortune 500 companies made an exodus from New York City to Fairfield County. The impact in the Stamford area was to triple office rents over the past three years, peaking at nearly \$30 per square foot for prime office space. Harbor Plaza's waterfront site and easy access (via Interstate-95 and the Conrail/Amtrak line), in conjunction with general office market trends, made it one of the most sought after office complexes in the area. The project's initial 110,000 square feet were speculative. Since then, more than 500,000 square feet have been rented to a single tenant, Continental Group International, as their World Headquarters and offices for their subsidiaries.

Experience Gained

Harbor Plaza has demonstrated that a waterfront site which is removed from Stamford's downtown activity can be successful as a corporate office center. The project



5-96 Harbor Plaza demonstrates that office development can be compatible with waterfront recreational uses.

has been a catalyst for the renewed interest in Stamford's deteriorating waterfront. Furthermore, the intensity of office use has created a viable market for additional complementary waterfront uses in the area.

During the planning stages of the project, Harbor Plaza was often cited as an example of why the waterfront needed to be controlled and was considered to be one of the determining factors in the passage of Connecticut's Coastal Area Management Act. However, the project, in fact, rejuvenated the waterfront by improving its physical appearance and enhancing its recreational potential.

Harbor Plaza's success conclusively illustrates that the amenities of a waterfront location are of such a high magnitude that they can overshadow many serious site constraints. Office tenants, like homebuyers, are willing to pay a premium price for a waterfront setting. The \$28.50 per square foot rent for office space in Harbor Plaza is among the highest rents in Stamford.

Nevertheless, the site's location and configuration presented higher predevelopment costs. The analysis of the site conditions required specialized engineering and

environmental studies. Also, extensive improvements were required for shoreline stabilization and flood control prior to project construction. Furthermore, the city required the developer to contribute 75 percent of the total cost of the new access roadway. Negotiations regarding the roadway were a time-consuming process, with five separate factions of the city government involved. In addition, the developer's intent of soliciting contributions from Harbor Plaza tenants was not realized.

Of particular significance to this waterfront project was the trade-off between design and economic value. The provision of an extensive, multilevel under-the-building parking facility greatly enhanced the appearance of the project but created capacity limitations. Due to the structure module supporting the superstructure above, it was impossible to implement an efficient parking stall plan. If parking at Harbor Plaza had been housed in a garage on-grade with freestanding columns independent of the office facilities, up to 15 percent more parking spaces could have been provided.

5-97

Project Data—Harbor Plaza

Land Use Information:

Site Area: 18 acres¹

Gross Building Area (GBA): 740,000 sq. ft.²

Net Rentable Area (NRA): 700,000 sq. ft.

Floor Area Ratio (FAR):³ 1.36

Parking Spaces: 2,300

Land Use Plan:

	Acres	Percent
Buildings	10.00	55.5
Landscaping	1.25	7.0
On-Grade Parking	5.00	27.7
Roads/Walkways	1.75	9.8
Total	18.00	100.0

Tenant Information:⁴

Unit Size (sq. ft.)	Tenants	Percent of Net Rentable Area
455,289	1	65.0
126,000	1	18.0
9,800	1	1.4
3,870	1	.5
10,000	1	1.4
25,103	1	3.6
630,062	6	89.9

Economic Information:

Site Acquisition Cost: \$4 million⁵

Site Improvement Cost: \$3 million

Construction Cost: \$129 per sq. ft.⁶

Lease Information:

Rate: \$28.50 per sq. ft. of NRA⁷

Length: 10 years or more

Developer:

Collins Development Corporation
43 Lindstrom Road
Stamford, Connecticut 06902
(203) 357-0123

Planning and Architecture:

Yankee Planning
43 Lindstrom Road
Stamford, Connecticut 06902
(203) 357-0089

Major Tenants: The Continental Group—World Headquarters; American Maize Products Co.—Headquarters; Distillers Ltd.; Group W Satellite Communications; Rusty Scupper Restaurant; Marina America, Inc.

Notes:

¹ The site occupies 18.0 acres if the marina is included.

² Corporate offices occupy 650,000 sq. ft. and convenience commercial, restaurants, and professional offices occupy 90,000 sq. ft.

³ FAR equals GBA divided by total site area.

⁴ Space leased as of August 1982.

⁵ The site was acquired in 1976.

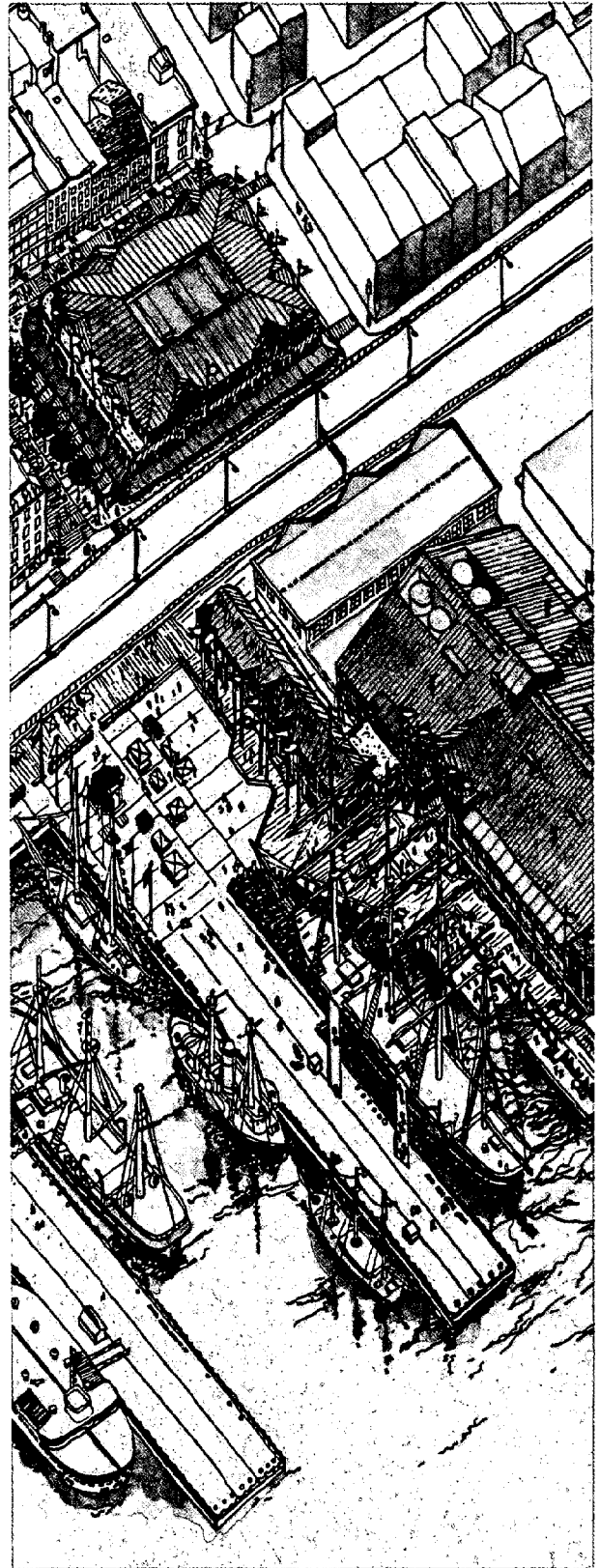
⁶ Hard costs only. Total construction cost was \$84 million.

⁷ Rent is increased after the first five years and is then monitored by the current market rate at 10-year intervals.

VI. Development Issues and Trends

At one time, the commercial life of North American cities depended almost exclusively on the activities of their ports. This is no longer true; the shift in importance along with the significant changes in cargo handling and steadily decreasing waterborne passenger travel has left large areas of waterfront land underused. Few cities, however, can afford to ignore the wealth of benefits offered by the full and productive utilization of their waterfronts.

By providing unique development opportunities, urban waterfronts are regaining a significant role in supporting the viability of North American cities. In the process, some important issues concerning waterfront development have emerged. These issues and the lessons learned through experience will greatly influence future opportunities for development.



Development Issues

While the incentives and constraints to development vary widely depending on a city's size, age, and history of shoreline use, there are four common development issues which stem from judgments made during the development process and which generate controversy for waterfront projects. These are: regulations and permits, appropriate use of waterfronts, public access, and citizen participation.

Regulations and Permits

One of the most controversial aspects of waterfront development is the regulatory requirements imposed on waterfront lands. Urban waterfronts generally have a jurisdictional structure that far exceeds the typical urban governmental framework in both size and complexity. The presence of the water resource not only introduces additional and overlapping agencies at each level of government, but also calls for the involvement of various special purpose government agents with authority over specific shoreline resources and uses. As a result, waterfront development is subject to a multitude of governmental regulations and permit requirements.

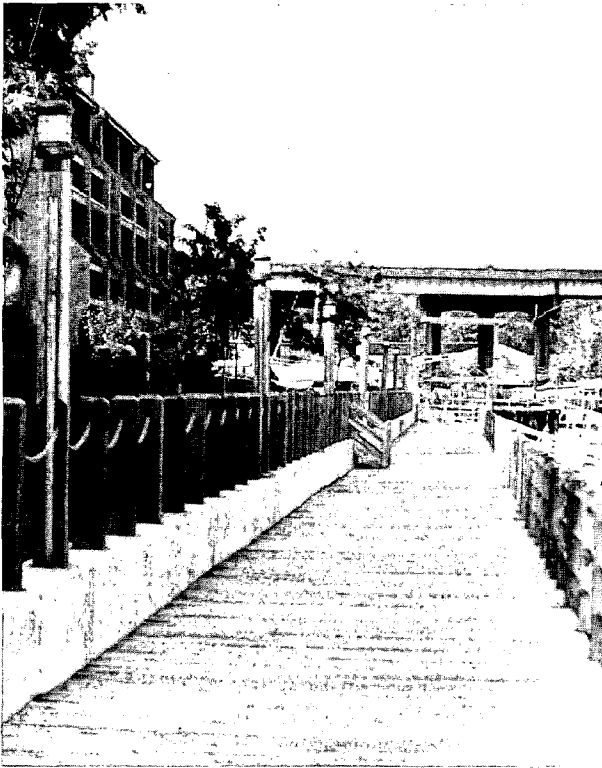
From the viewpoint of the private developer, the jurisdictional framework guiding the development process is difficult and counterproductive. The multijurisdictional structure produces redundancy and inefficiency. The fundamental problem is that the permitting process is not tailored to be compatible with the development process.

The developer is caught in a web of waterfront regulations that is discouraging for two reasons. First, the range of development opportunities is limited by restrictions pertaining to use, density, design, and access. Secondly, the review and approval process is time consuming and laborious. Under these circumstances, the developer is faced with an elongated if not indefinite development time frame that is stretched to the point of undermining the project's feasibility.

The impact of the regulatory process is manifested in several ways. Regulations add to development costs and basically the risk of the project increases with the rise in development costs. This worries investors and lenders, and the developer responds to the risk by either abandoning the project or changing certain aspects of the project to increase the expected return on investment. Sometimes this translates into focusing on a higher income market, and other times it means increasing the intensity of development. When regulations are oppressively complex and stringent, developers are overly cautious and deliberate. There is concern among developers that an innovative, imaginative proposal would be swallowed up by the regulatory beast and never successfully digested. This undercurrent of concern stifles creativity, and projects are predictably bland.



6-1 In Seattle, regulations that were put in place to stimulate maritime commerce have actually worked to delay the revitalization of the central waterfront.



6-2 Public walkways along the shoreline at Palmer Point in Greenwich, Connecticut, were required by zoning regulations.

The developer has a vested interest in the immediate and long-term success of a project and given the chance would only develop an economically sensible project without serious environmental degradation. Thus, his argument is that many regulations are not necessary and the process is unresponsive to waterfront development efforts.

On the other hand, many lawmakers, regulators, and citizens embrace a different viewpoint of the jurisdictional framework guiding waterfront development. From their perspective, regulations were enacted for environmental protection and pollution control basically because private industry, including the development industry, was not doing the job. Regulations are more complex and abundant for waterfront lands because shorelines are limited, fragile resources of tremendous public value. It is in the public interest to control and manage this resource, and the permitting process serves as a mechanism to accomplish this. This view holds that if a development proposal is truly meritorious it will sail through the regulatory process without a scratch.

The argument is also based on the contention that regulations help to coordinate the disjointed and incremental decisions affecting urban waterfronts. Although the process creates delays and expense, it also safeguards against pursuing immediate financial rewards at the expense of long-term environmental or community degradation. This side of the argument concludes that regulations are necessary and exist primarily because of problems created by the policies or practices of developers in the past.

Government agencies on all levels have a mandated responsibility to protect waterfront resources; it is clearly in the public interest. This purpose must be satisfied, however, in a way that does not inadvertently penalize the development industry. That is to say, the regulatory process needs to be restructured to be more responsive to both development opportunities and problems. Just as it is in the public interest to manage shorelines for future productivity and enjoyment, it is also in the public interest for cities to realize economic development opportunities.

Review periods need to be shortened and redundancies that are a result of jurisdictional overlaps removed. In many cities, the cost of shepherding a development proposal through the permitting process is much too high. One effective remedy available to city governments is to assign one staff member to a waterfront development proposal for the expressed purpose of guiding it through the permitting and approval process. In Tacoma, Washington, for example, the city appointed a waterfront development manager to insure that the City Waterway project was successfully implemented.

Improvements could also be made if all regulations were written in a clear, concise manner. Furthermore, whenever possible, performance standards should be used instead of design standards. The Georgetown waterfront project proposal in Washington, D.C., illustrates the importance of this point. In that case, the city government made a commitment to transfer 12 acres of city-owned waterfront property to the Western Development Corporation in return for the shoreline property held by private interests. The land transfer proposal in effect created the following design stipulation: a 160-foot-wide strip of shoreline property was to be turned over to the National Park Service and preserved as public parkland. While the intent of this requirement was to provide public access and shoreline recreation, it produced a long relatively narrow development envelope that seriously limited the range of design alternatives. Following the rejection of the initial design by the Fine Arts Commission, the developers decided not to pursue the land transfer until after design approval was obtained. Thus, project designers could operate under a performance standard that allowed construction along the water's edge as long as public access was provided. This

change in approach eliminated the 160-foot setback standard and project designers were able to improve the overall design of the project by adding a small small boat basin to the design and retaining more land surrounding the project as park and open space. Another contradiction should be noted: the city wished to encourage water-related uses along the shoreline, yet in this case the closest structure would have been 160 feet away from the water, making many water-oriented uses infeasible.

While regulatory changes are certainly in order, private developers must also take steps to improve existing circumstances. Developers should acknowledge that waterfronts are unique urban resources that require special treatment. It is the responsibility of private developers to take advantage of information sources and study jurisdictional policies and regulations pertaining to shoreline development. The wheels of the regulatory process should be lubricated with cooperation and good faith. In San Diego, the Unified Port District Commission has proven that shoreline regulation and management can be tailored to accommodate private development without sacrificing public interests.

Deciding Appropriate Use

The appropriate use of waterfront land is an issue that commonly paralyzes the redevelopment of urban shorelines. The controversy centers on distinguishing among water-dependent uses, water-related uses, and uses that are not dependent on or have any relationship to the water. In some cities, policy makers contend that urban shorelines should be preserved exclusively for uses which could not exist in any other location but on the water. A more common policy is to also allow uses which may be helped by locating along the shoreline, but could function elsewhere (water-related uses). In contrast, some jurisdictions place no special restrictions on the use of waterfront lands. This approach is supported by most private developers. They contend that shoreline uses should be determined by site suitability factors and market conditions.

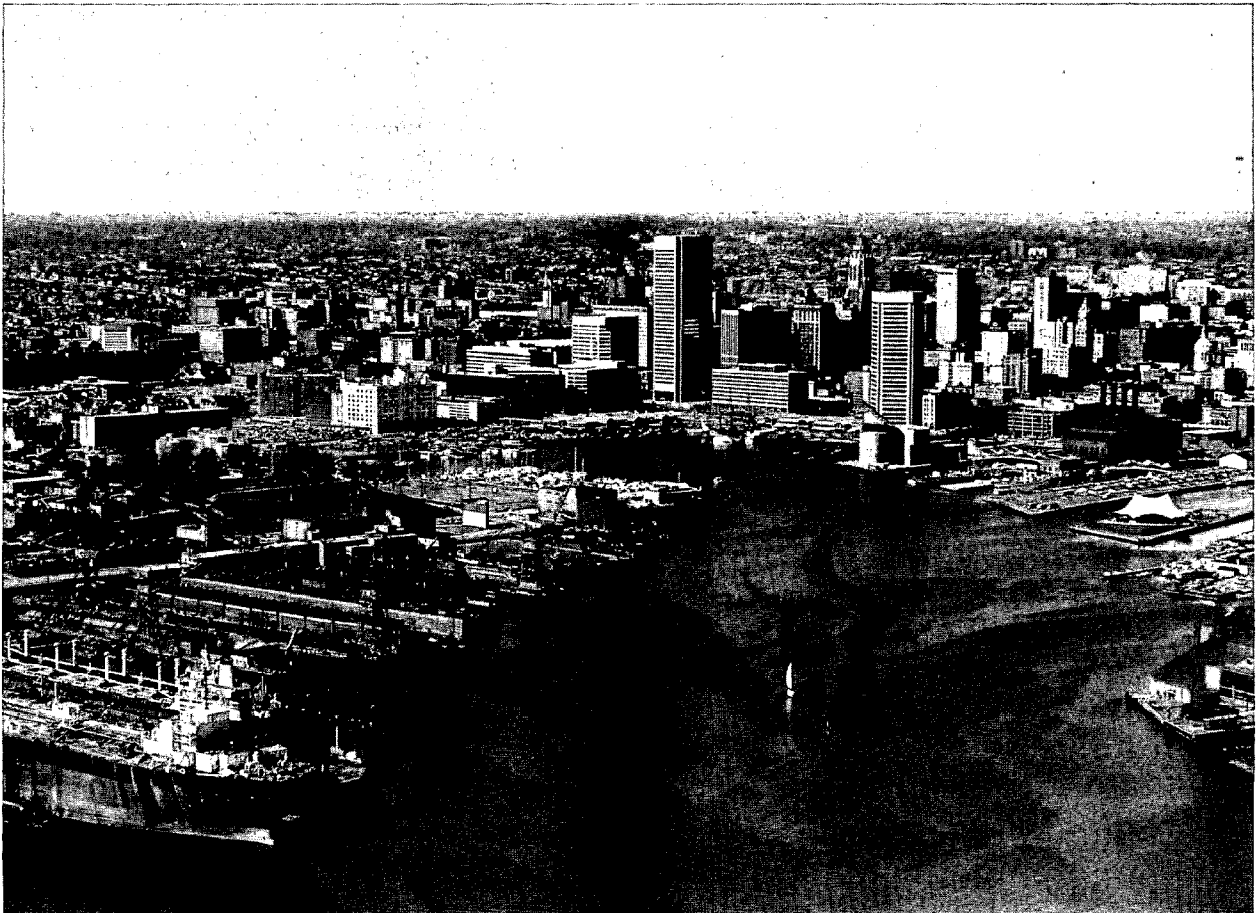


6-3 In San Francisco, water-dependent uses, such as commercial fishing, are given the highest priority.

The argument made in support of a very restrictive policy is that given a finite amount of waterfront land, it is in the public interest to reserve it for uses that need a shoreline site to exist. Uses such as cargo shipping terminals, ferry and passenger terminals, marine construction and repair facilities, marinas and moorage facilities, and tug and barge companies should not have to compete with residential, retail, and office uses for waterfront sites. Conservationists point out that water-dependent uses have no choice but to locate along the water's edge, and competition from other urban uses can drive up land values to the point of making the water-dependent uses obsolete. Therefore, these uses should be given preferential treatment in order to capitalize on the full potential of the water resource. Furthermore, by allowing a non-water-related use on the waterfront, a city loses the opportunity to develop a water-dependent use on the site in the future.

A less restrictive policy is to allow water-related uses in addition to uses absolutely dependent on a shoreline location. Under this policy a use is considered to be water-related if real cost savings or revenue advantages can be attributed to a waterfront location. Thus, single-user terminals, seafood plants, petroleum processing plants, waterfront parks, public resorts, aquariums, and restaurants are permitted uses. This approach offers more flexibility; it encourages traditional waterfront uses while allowing functional changes to occur. Conservationists feel that this policy provides for the full use of waterfront lands and strengthens the functional attachment of the city to the water resource.

Most private developers do not see the need for excluding primary urban uses from city waterfronts. From their perspective the highest and best use of waterfront land should be determined by site characteristics and market forces. Developers point out that because of technological innovations many water-dependent uses are no longer economically viable in central city locations. Consequently use restrictions perpetuate the underutilization and deterioration of urban waterfronts. In effect, land is reserved for uses that it cannot support.



6-4 Baltimore's Inner Harbor redevelopment program combines water-dependent and conventional urban uses.

The desire to preserve waterfront lands for water-related uses should not overshadow important citywide objectives to stimulate economic development and make physical improvements. In support of this belief, developers point to cities such as Boston, Baltimore, and San Diego where the lack of restrictions did not produce exclusively non-water-related development. In some cases, office, retail, and residential uses generate enough revenue to cover the cost of developing secondary water-related uses that otherwise would not be feasible.

It is difficult to make blanket statements regarding the appropriate use of urban waterfronts because each city has a unique set of conditions and circumstances that must be taken into account. In general terms, a use is only appropriate if it reflects the special characteristics of a waterfront site and responds adequately to community needs. This criteria rewards both water dependency and economic viability; it is a balanced approach that injects flexibility into a waterfront management program.

Certainly in cities where competition for waterfront sites threaten the continued existence of valuable water-dependent uses, intervention is justifiable. However, while use limitations may discourage real estate speculation and land development, these restrictions will not guarantee the continued viability of the allowable water-related uses. There are other public sector initiatives such as tax incentives and public improvements that work better than land use restrictions in preserving maritime uses along urban shorelines.

Another drawback to allowing only water-related uses along urban shorelines is the exclusion of mixed-use development projects. This is particularly unfortunate when waterfront areas are in need of full-scale revitalization because water-related uses that would otherwise not be feasible can be developed within a mixed-use concept. A mixed-use project can produce the critical mass of development necessary to attract people to the water's edge and provide the full range of services and facilities necessary to support a variety of maritime uses.

Portland, Maine, is an excellent example of a city that has devised a waterfront management strategy to protect existing maritime uses while allowing new urban development to take place. The city's waterfront area consists of approximately 250 acres. In 1973 a study made of this area found that it was in a state of transformation. There was considerable underutilization of land and buildings, with transportation and warehousing/wholesaling the primary culprits. In 1973, more than 50 percent of the land on the waterfront was used for transportation-related purposes, and warehousing/wholesaling accounted for 12 percent of the land. The report concluded that the vast land holdings of the railroad were out of scale to their needs. This condition was largely responsible for the domination of transportation uses along the waterfront and contributed to the severe underutilization of the waterfront area.

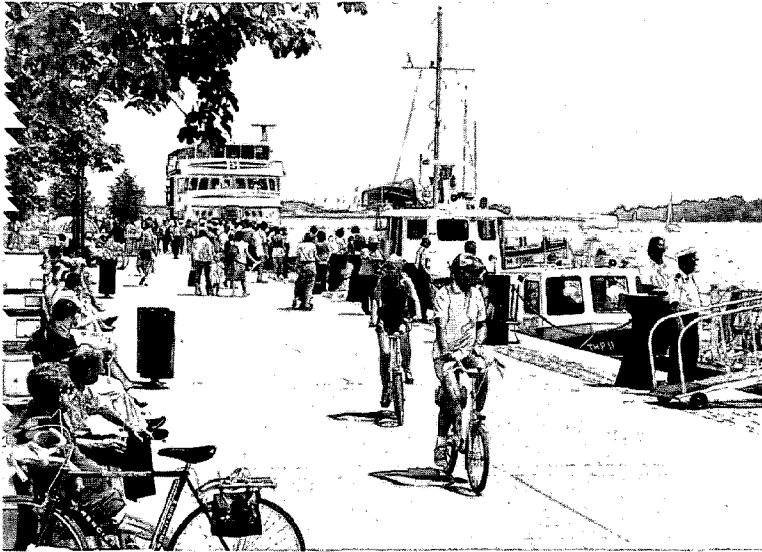
Nine years after the study, the waterfront area is still undergoing transformation and is vastly underutilized. However, one significant change has occurred: the ongoing construction of a \$25 million fishing pier complex has reversed a long-standing trend of diminishing marine-related activity. Furthermore, the \$46 million expansion of the Bath Iron Works ship overhaul and repair operation to the Portland waterfront has provided additional momentum to the resurgence of the area. At the same time the vast development and redevelopment opportunities of the waterfront are beginning to be identified and pursued.

Faced with parallel efforts to both reindustrialize and redevelop its waterfront lands, the city formulated a strategy that would encourage commercial, retail, and residential development without jeopardizing any of the existing or proposed maritime uses. Since zoning is the principal tool available to the city to promote the establishment of certain types of uses and to channel those activities to specific areas, the city's waterfront management strategy is centered around new zoning recommendations.¹

The major recommendation is the creation of a new waterfront zone (W-2). This zone would be a specialty zone, specifically designed for the unique nature and needs of waterfront dependent uses. The intent is to reserve a substantial portion of the waterfront for uses where waterfront access/location is critical. In addition, the W-2 zone is designed to protect waterfront dependent uses from other competing but noncompatible uses of the waterfront. W-2 is basically a marine and marine related use zone. Most nonmarine and fishing-related uses would not be allowed (existing uses would be grandfathered). The new W-2 zone would provide assurance to Portland's marine and fishing industries that the Portland waterfront will continue to remain a working waterfront. Waterfront access for waterfront dependent uses would be guaranteed through the adoption of the W-2 zone. Noncompatible uses such as professional offices, hotels, convention centers, and residences would not be permitted in the W-2 zone.

The second major zoning recommendation is a change in text and boundary of the existing W-1 zone. The intent of the revised W-1 zone is to permit a diversity of uses which can coexist with each other. It is a mixed-use zone that would permit all of the marine and fishing uses of the W-2 plus a variety of commercial, industrial, and residential uses.

¹ *Strategies for the Development and Revitalization of the Portland Waterfront* (Portland, Maine: The City Administration, April 1982), page 19.



6-5 Public access was an important objective in the development of Harbourfront in Toronto.

Portland's strategy is exemplary because it acknowledges both water dependency and economic viability as desirable features of waterfront development. The zoning recommendations reflect the city's view of the waterfront as not just an industrial area supporting maritime uses, but also as a catalyst for urban redevelopment, economic growth, and community enhancement. It is the type of approach that other cities might find beneficial.

Providing Public Access

The issue of the public's right to have direct access to the water's edge is another controversial aspect of waterfront development. In recent years there has been a great deal of debate over the allocation of public and private uses along urban shorelines. Improvements in water quality due to public investments in pollution control facilities have significantly enhanced the potential of waterfront lands for both private development and public use. While many local governments support the widespread public use of the water's edge, few can afford to finance it since public holdings of waterfront lands are limited. At the same time, there has been public opposition to private development projects that would restrict either physical or visual access to the shoreline.

In response to citizen demands, many communities are using their zoning or project permitting authority to win concessions from developers of waterfront lands to allow public access. In San Francisco, for example, the Bay Conservation and Development Commission has for years used its permitting authority to require provision of direct public access to the Bay waters. The shoreline management program developed by Seattle uses permits to preserve visual access to the waterfront.

Complicated legal questions are involved in the decision on providing access. The shore may be in public ownership but only up to a certain point, such as the normal high tide mark. States have different laws defining the line near the water's edge where private ownership stops and public ownership begins. Private investors, property owners, and developers naturally want to maximize the return on their investment in waterfront sites. This objective may not always be compatible with public sector demands for shoreline access.

The prevailing opinion among city officials, government agency representatives, and urban residents is that public access to the water's edge should not be limited by the private development of waterfront lands. This viewpoint is based on the premise that an urban shoreline is a public resource and should be managed to benefit the greatest number of people in the best way possible. Under this policy, private developers are encouraged to enhance the public use and enjoyment of urban shorelines by providing access to the water's edge.

There are a few basic reasons why public sector representatives feel that provisions for access should be imposed on private property owners and developers. One reason is that waterways are publicly owned and maintained. Therefore, the public costs of water quality and navigational improvements should be balanced by public benefits of an equal magnitude. This can be achieved in part by improving the accessibility of the water resource.

Another reason cited in support of public access requirements is the tremendous recreational potential of urban waterfronts. Many water-related recreational opportunities can be realized simply by allowing public access to the shoreline. It is unfortunate that in some jurisdictions public waterfront areas are burdened with overcrowding because access is restricted to a few locations. Furthermore, without mandatory requirements to provide public access the shoreline is chopped into segments corresponding to the pattern of property ownership. This condition effectively eliminates recreational uses dependent upon movement along the shoreline as well as the ability to interconnect dispersed waterfront facilities with a walkway or trail system.

Visual access to the water's edge is just as important as physical access. Waterways are special visual amenities with the potential to greatly enhance the appearance of urban environments. It is in the public interest to make sure that views to and from the shoreline are not blocked by unbroken masses of large structures.

With the above stated reasons in mind, city officials and regulatory agencies feel justified in demanding that private property owners and developers provide public access to the shoreline in order to gain approval of proposed development projects.

Although most private developers agree that public access to the water's edge is a worthwhile objective, they take issue with having mandatory requirements for the provision of access incorporated into the development approval process. Developers point out that rigid demands for access do not take into consideration either existing environmental variations or differences in the type or intensity of proposed project uses. The uniform application of a public access requirement essentially penalizes some developers more than others, depending on shoreline characteristics and market demands.

If, for example, public access provisions require buildings to be set back from the shoreline to allow for uninterrupted movement along the water's edge, or place limitations on building heights to permit visual access to the water, then the size of the development envelope for a particular site can be significantly reduced. With the inherent high costs of waterfront development, these limitations affect project feasibility. When a portion of a waterfront site is allocated to a non-revenue producing use, a developer tries to compensate by either building a product that can be sold or leased at a higher price or increasing the intensity of development on the remainder of the site. Developers see the irony of this situation: government efforts to ensure public access to urban shorelines indirectly encourages private developers to be more exclusive and focus on the high end of the market for each use.

Developers maintain that the need for providing public access should not overshadow the rights of private property owners. Local governments have to reconcile the need for access with the need for personal security and property protection. Obviously public access is less compatible with some urban uses than with others, and developers feel this factor should be given more consideration.

Another concern for private developers is the maintenance and management of public access areas within a waterfront development project. For shoreline projects that combine various uses within public and private areas, formal written agreements should clearly define which party will be responsible for management and maintenance of each portion of the project, and who will pay which costs on what basis. Jurisdictions that impose access provisions on private development projects should be prepared to provide support for

maintenance and management functions. In this regard, developers are not only concerned about costs but also about quality standards and the ability of the public sector to fulfill its commitments.

The conclusion reached by most private developers is that public access to the water's edge can be provided in many different ways depending on factors such as the site characteristics, type of uses, and public funding. Therefore, regulations should be flexible enough to accommodate a broad range of waterfront development opportunities and to balance the public's right for access with the property rights of private landowners.

The controversy over requiring private developers to provide public access to urban shorelines centers not so much on the public's right to be able to get to the water's edge as it does on the approach used to accomplish this objective. Certainly waterfront developers have an obligation to meet the public's need for increased recreational opportunities in urban areas, but not at the risk of undermining the financial feasibility of a project. In this respect, mandatory requirements for public access can, in fact, be a self-defeating obstacle to achieving other important public objectives such as economic revitalization and community development. Instead of incorporating mandatory public access provisions into the development approval process, a better approach might be to impose access requirements that vary in relationship to existing conditions, proposed uses, and public sector goals. One criterion that should be used to determine the requirement is the existing public accessibility of the shoreline. In this respect, it seems reasonable to maintain the level of public access that exists prior to site development and to offer incentives to encourage developers to provide public access in locations where it does not exist.



6-6 Shoreline access is provided at Pier 39 in San Francisco, but pedestrians must share the walkway with service vehicles.

Attention should also be given to the quality of public access provided by developers. Depending on the circumstances, it may be better for a city to have a limited number of shoreline access points that are nicely landscaped and complete with boat docks, parking areas, and observation decks than to have continuous access to the shoreline in the form of a pathway that lacks other basic amenities.

The Pier 39 development project in San Francisco is a good illustration of what can happen when direct access requirements are imposed on waterfront development. The project falls under the jurisdiction of the Bay Conservation and Development Commission (BCDC) which has for years used its permitting authority to require provision of direct public access to the Bay waters. The developer's response to this requirement was to build a 24-foot-wide pedestrian walkway around a reconstructed pier containing restaurants and shops. Unfortunately the walkway serves as both a path for pedestrians and a service alley for the restaurants and shops. The ambience of the water's edge is spoiled by garbage bins, delivery vehicles, and other unsightly items typically relegated to the backside of restaurants and shops. If BCDC had been more flexible with its public access requirements and the developer more sensitive to the advantages of providing shoreline access, perhaps a better design solution could have been created. As it stands now, the project represents a missed opportunity by both the private and public sector to integrate shoreline access into a waterfront development project.

The public sector's desire for unobstructed access to the shoreline and the private sector's desire to develop waterfront projects are not mutually exclusive. As new projects are developed, access can be built into the design and public ownership of shoreside territory can be clarified. In return for public investment in support of development projects, parks, public piers, or marina facilities can be incorporated into approved private ventures.

Citizen Participation

The role of citizen groups in the waterfront development process is another issue that often generates a great deal of controversy. Since urban waterways are public resources capable of supporting a variety of activities and uses, waterfront development proposals draw the attention of a diverse collection of interest groups and citizen organizations. Shoreline development projects are usually the concern of fishing interests, conservation groups, and recreational boating organizations, in addition to groups such as neighborhood associations and historic preservation societies that are typically associated with urban development.

If the involvement of these citizen groups in the development process is not structured in a coherent and systematic way, then it can produce costly project delays and unnecessary conflicts. In many jurisdictions public policy regarding the responsibility of private developers to solicit and respond to the concerns of public interest organizations is ambiguous and arbitrary. Often waterfront development projects become trapped in a crossfire of conflicting demands by different citizen interest groups.

Public officials and representatives view citizen participation as an important ingredient of the waterfront development process. They argue that if private development activities are to be compatible with community values and objectives, then it is logical and appropriate to give citizens a voice in the decision-making process. Furthermore, the fact that shoreline development affects the condition and use of a publicly owned water resource magnifies the importance of citizen involvement.

Local governments use a variety of methods to encourage citizen involvement. Surveys, meetings, and public hearings are techniques commonly used to solicit participation. When there is strong citizen reaction to a project proposal, most local governments make it the responsibility of the private developer to respond. The reasoning behind this policy is simple: the private developer is initiating an action that could have significant community impact and is therefore responsible for addressing citizen concerns. If a dispute occurs over some aspect of the proposal, it is reasonable to require the developer to have a special impact assessment prepared showing that the objection is unfounded and inconsequential or explaining how the project proposal can be revised to eliminate the cause of the objection.

Local governments are established to deliver services and protect the interests of their citizens. To perform this function successfully, city officials contend that they must weigh the public costs and benefits of private development projects in terms of the values articulated by their constituents. From their viewpoint, citizen involvement in urban waterfront projects helps to enhance the quality of development.

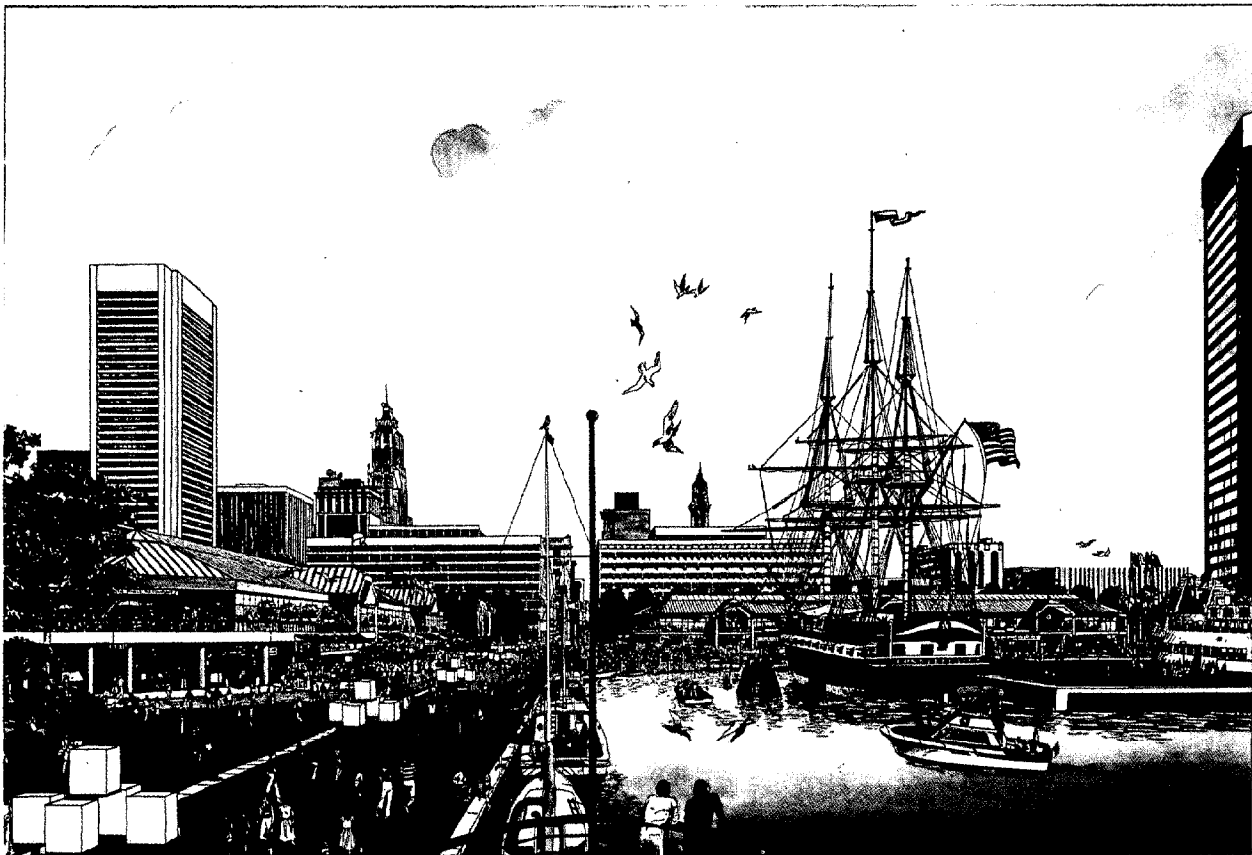
Most private developers recognize the potentially mutual benefits of working closely with citizens and public interest groups. From their viewpoint, however, the potential benefits cannot be gained unless there is an orderly and systematic process to facilitate public participation. This is particularly true for urban waterfront projects. It is absolutely necessary for developers to avoid a situation where community interests are not fully identified and addressed early in the predevelopment stage of a project.

Once community input has been solicited, a reasonable approach should be used to refine the project proposal. That is, the recommendations and objections voiced by citizen groups should be evaluated in terms of their validity and feasibility. A degree of flexibility must be maintained during this process so that a developer can explore alternative solutions to the problems identified by citizens.

Developers contend that there must be some control over the time frame allocated for citizen involvement. The public participation process must be synchronized with the overall development process. Otherwise, delays and scheduling conflicts will significantly damage project feasibility.

Private developers and investors look to local government officials and representatives for the leadership necessary to manage citizen involvement in waterfront development. This, in fact, is one of the Rouse Company's basic criteria in evaluating project opportunities in waterfront locations. Without the commitment of local governments to work with the private sector, waterfront development is extremely difficult.

Citizen participation is necessary to ensure that public sector values are not sacrificed in order to accommodate private development. It is likewise needed to make sure that development opportunities are not eliminated by a small vocal minority of citizens. The public and private sectors must work together to create a manageable community involvement process that respects both public objectives and private property rights.



6-7 Controversy over the Harborplace project in Baltimore was generated primarily by the public's misconception of the development concept.

Communication is the key element of this process. All too often a misunderstanding regarding the developer's intentions creates misguided community opposition. Baltimore's Harborplace project, for example, generated a great deal of citizen opposition primarily because it was perceived as a conventional suburban shopping mall ill-suited for the city's waterfront. Despite tremendous efforts by the Rouse Company to correct this misconception, it took a public referendum to determine the fate of the project. Furthermore, opponents of the mayor on other issues created, fostered, and promoted the misconception. Often major development projects get caught up in politics that have nothing to do with the project.

It is clear that local governments and private developers share the responsibility for facilitating community involvement in the development of urban waterfronts. The process used to encourage public participation should be structured to minimize delays and uncertainty, while retaining the flexibility necessary for a developer to respond to the dynamic factors influencing shoreline development. While this balanced approach may be difficult to maintain, it is certainly worth the effort.

Major Development Lessons

The 12 case studies contained in chapter five clearly show the broad range of development opportunities offered by urban waterfronts. In each case, the types of uses, scale, and pace of development activity, public and private involvement, and other project characteristics are a unique reflection of the waterfront's location, jurisdictional structure, and urban context. While the projects are different in many ways, collectively they provide several important lessons regarding urban waterfront development.

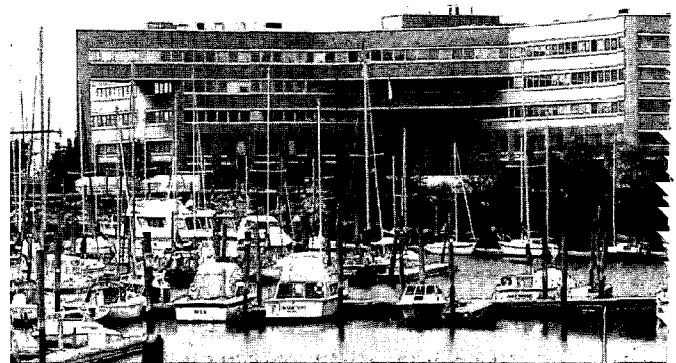
One important lesson concerns the controversy generated by waterfront development projects. The amount of waterfront land in a city is usually very limited and decisions regarding development are often challenged by government agencies, citizen organizations, and private interest groups. The intense competition among various interests for access and use of the shoreline can magnify the impact of development decisions. Therefore, it is very important to understand the basic values motivating development of a waterfront project prior to initiating predevelopment activities. Without an expression of the fundamental objectives of a project, there is no basis for rational decision making or

evaluation. Given the numerous disjointed and incremental actions affecting the development process, a set of clearly stated project objectives is absolutely necessary to provide a sense of direction and overcome the objections to development.

It is clear that a great deal can be learned from the initiatives taken by local governments, and private urban waterfront development opportunities are greatly enhanced when local governments and private developers take a cooperative approach to project development. Local governments are most effective when waterfront development is identified as one unified concern instead of a conglomeration of separate responsibilities and interests. It is desirable for public sector planning, zoning, design, and management policies to relate specifically to the waterfront areas of a city and be managed by one authority or office.

The case study projects indicate that the efforts of private development interests are generally more successful if specifically tailored to respect the waterfront management structure and policies of local jurisdictions. Private developers and investors have greater operational flexibility than local governments and should use the freedom to respond more effectively to different development opportunities. The best approach is a development strategy that is sensitive to public sector priorities and responsibilities, yet firmly embraces private sector objectives.

The ultimate success of any development effort not only depends upon its sensitivity to public sector priorities but also how responsive it is to the unique qualities defining a specific waterfront. The types of uses and facilities should be selected and designed based on an extensive analysis of environmental factors and market conditions. This analysis should be structured to assess both the immediate and long-range implication of each variable.



6-8 Harbor Plaza in Stamford, Connecticut, demonstrates that office development does not necessarily prohibit water-dependent uses of an urban waterfront site.

The case study projects show that a plan is absolutely essential to guide the development of an urban waterfront. As an instrument to effect change, a waterfront development plan should, at minimum, consist of a physical site design, a financial strategy, and a phasing program. The best waterfront plans are specific enough to provide a framework for development, yet flexible enough to respond to dynamic factors influencing project implementation.

Major waterfront redevelopment programs, such as the Inner Harbor in Baltimore or Laclede's Landing in St. Louis, require several years to plan and implement. For such an undertaking to be successful, there must be a strong public sector commitment to carry the program through to completion. In this respect, it is very important to maintain the momentum of the program to ensure continued funding and public support. However, it may be difficult to do this within the 10- to 20-year time frame typically associated with a major redevelopment program. One very effective way to maintain project momentum is to stage festivals or special events along the waterfront during times when actual development activity is slowed down. Cultural and recreational programming is a relatively low cost way to generate excitement and interest in the waterfront redevelopment project. Public announcements and promotions of various community activities reinforces the idea that progress is taking place and the waterfront development program is producing results.

The recent experiences in cities undergoing waterfront redevelopment emphasize the need to give greater consideration to management and maintenance requirements. Rarely has this concern been given adequate attention, and it is fundamental to the long-term viability of a project. Management and maintenance responsibilities must be addressed during the early stages of predevelopment and continuously revised and updated throughout the development process.

Finally, the local government representatives and private development interests should be very careful not to be blinded by the reflection of the water; that is, the amenity of the water's edge will not compensate for poor judgment and bad management in developing urban waterfront sites. In fact, the difficulties of shoreline development will only be exacerbated by incompetent development efforts. Waterfront development opportunities require more than just water and land; there must be sharp entrepreneurial skill, public leadership, and market demand to produce successful projects.

Photo credit: Jim Wilson



6-9 The *Pride of Baltimore* and *Sloop Providence* were main attractions at a waterfront festival held in Alexandria, Virginia.

Future Development Opportunities

As urban waterfront development efforts continue in cities and towns across North America, it is important to step back from the projects under development and consider what the opportunities will be for waterfront development in the future. Certainly waterfront development in the years to come will differ from what has occurred in the past. However, it is safe to assume that future development efforts will depend on the same type of forward vision and determination characterizing contemporary projects.

By tracing the historical role of urban waterfronts in the development of cities, it is apparent that waterfronts change in response to dynamic demands for new uses.

The adaptations to new functional requirements over time have resulted in a reoccurring cycle of waterfront development. The current rediscovery of waterfront sites as potential opportunities for economic development and public enjoyment represents the continuation of this pattern of reuse.

Although current redevelopment activities in a few cities date back to the late 1950s, this latest cycle of reuse is in its infancy. Throughout North America, public officials and private development interests are investigating waterfront development opportunities, and the level of development activity during the last five years should continue to rise through the 1980s.

Future waterfront development opportunities will be influenced by several factors. For instance, if government regulations affecting shoreline uses become less restrictive in many jurisdictions, then opportunities will exist for the development of waterfront sites previously reserved for water-dependent uses. If this occurs, developers will have much greater flexibility to respond to market demands. This shift in policy is very probable in cities where economic revitalization is necessary.



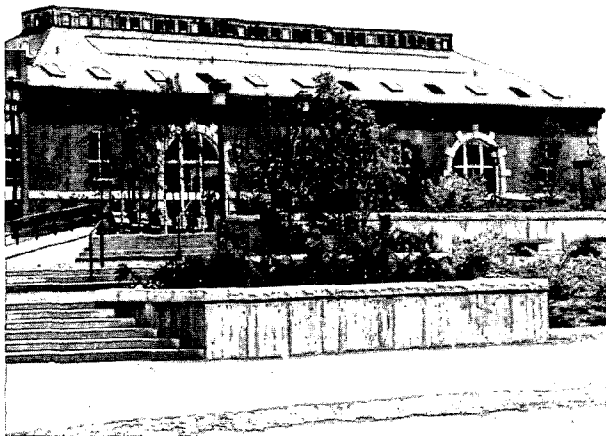
6-10 Future waterfront development opportunities in Seattle could be greatly improved if government regulations affecting shoreline uses become less restrictive.

Underused or abandoned industrial sites should continue to provide opportunities for waterfront development. As older manufacturing operations either relocate or go out of business, facilities and sites should become available. The extent to which these waterfront sites and buildings are redeveloped will depend on the economic feasibility of conversion.

Many future urban waterfront development opportunities could be provided by the reuse of surplus government property. The federal government has designated several waterfront properties as surplus and available for disposition to local governments. Many of these properties are large military complexes and could be redeveloped along the lines of the Charlestown Navy Yard in Boston.

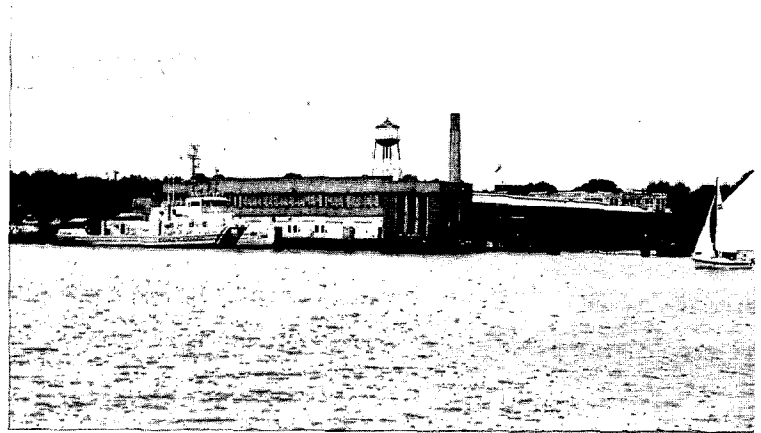
New development opportunities could also be created by the reuse of older commercial airports located along urban waterfronts. As air travel continues to decline, commercial operations could be consolidated at modern regional airports located outside of the metropolitan areas. The older city airports could be closed and redeveloped as large-scale mixed-use projects. Some of the revenues generated by redevelopment could be placed in a special fund to support ground transportation improvements to make the regional airport more easily accessible to the city residents. In addition, by removing the airport operation outside the inner city, many waterfront areas would no longer be adversely affected by the noise generated by aircraft.

Opportunities to develop large-scale mixed-use projects in cities where waterfront areas are in need of complete revitalization should continue. The emphasis will be on providing a balance between revenue-generating use and other uses. This requirement will reflect the need to cover the high cost of maintaining waterfront projects without placing the burden on local governments or individual users.



6-11 The Charlestown Navy Yard project in Boston clearly shows the benefits of redeveloping surplus government property.

Photo credit: Jim Wilson.



6-12 The Ford plant, an old federally owned warehouse located in Alexandria, Virginia, is the type of facility that could offer waterfront development opportunities in the future.

There may be a renewed interest in urban waterfronts providing transportation functions. Water taxis and passenger ferries are gaining popularity although the financial viability of the operations may remain questionable. Certainly this potential should not be ignored.

In future years, urban waterfront development will continue to call for cooperation between public and private development interests. Co-development arrangements with local governments sharing the risks and financial profits of development will become more prevalent.

It appears that the demand for urban waterfronts to provide recreational opportunities will continue to escalate. The factors contributing to this demand in the 1970s will be stronger in the years ahead. The orientation of this demand, however, is shifting from primarily traditional water-based sports and programs to a broader range of leisure activities related more to urban living.

No matter what the form and nature of development, one thing is certain; urban waterfronts will be the focus of the development activity in cities throughout North America in the years ahead. Public and private sector leaders will concentrate on creative solutions to the problem associated with waterfront development and work together to recapture these valuable urban amenities.

Metric Conversion Table

Meters	=	feet \times 0.305
Kilometers	=	Miles \times 1.609
Square Meters	=	square feet \times 0.093
Square Kilometers	=	square miles \times 2.590
Cubic Meters	=	cubic feet \times 0.028
Cubic Meters	=	cubic yards \times 0.765
Hectares	=	acres \times 0.405
(a hectare is 10,000 square meters)		

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