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MY BROTHER AND I once had our own battleship to play with. Clad in U.S. Navy steel helmets, we had the run of the USS California for an Autumn afternoon in 1959. She was moored at Boston Scrap Metal Company pier in Baltimore. It was the last wharf to which the battleship would tie up: even as we played “Sink the Bismark” from her bridge, wrecking crews were removing her light armament; 20 mm anti-aircraft guns were already piled like discarded Dinkey Toys on the concrete apron. In the adjacent slip the USS Tennessee, like the California a survivor of the Pearl Harbor attack, had been dismembered beyond recognition. But Tony and I were oblivious to the melancholic overtones of the occasion. We loved our barbor romp. From the aft gun turrets we enjoyed our games and the maritime vista. Across Curtis Bay we saw the coal piers, grain elevators, ship building facilities, and dozens of ships in the anchorage. Tug boats shuttled about, and the air was full of the distinctive, discordant smells that we all associate with barbors. Beginning then, the sensual exuberance available on a waterfront became a powerful elixir for me. In 1964 my first summer job was as an engine boy on the MS/Tema—a Norwegian freighter that spent three months cruising the coast of West Africa. The exotic barbors with romantic (at least to me at the time) names like Abidjan and Douala were the most vivid and lasting images of that trip. Later still, it was the grand sweep of the Bay and the familiar barbor scenes and smells that first struck a sympathetic chord when I came to San Francisco. That hardly makes me unique. Most people who live near the water’s edge find it stimulating.

The technology of moving cargo has changed dramatically since my trip in 1964. The bolds of the Tema were filled
with crates of all sizes, sacks of flour on pallets, automobiles, and steel pipe (for what became the Nigerian oil fields). Today most general cargo moves in standardized steel containers. Break bulk cargo that could be unloaded directly into sheds has been replaced by containerized shipping that functions best with huge areas of open space. Many people say the existing piers of San Francisco are now obsolete. This issue of the Review discusses the options for the redevelopment of these facilities and the future of the San Francisco Port.

The process of selecting future uses is already underway. The Fisherman’s Wharf Action Plan outlines the revitalization and reuse of that area of the city. The City Planning Department has hired a consultant to restudy the Central Waterfront Plan while the Port of San Francisco is heading up a study of the major part of the Northeast Waterfront from piers 9 to 35. The Port also has long-range plans to expand container facilities around Islais Creek. The eventual recommendations of the I-80 Transfer Program could substantially change an important part of the waterfront, and the downtown stadium (if constructed) will reshape the land use and transportation in adjacent port areas. Federal agencies are planning for the expansion of facilities in the Golden Gate National Recreation Area. Meanwhile, developers are actively pushing dozens of projects ranging from simple renovation to huge new construction on sites near the water.

San Francisco is bounded on three sides by water, but this issue of the Review will discuss only the section of the shoreline from the Presidio on the north to Hunters Point on the south. This area can be loosely divided into three districts. The section from the Golden Gate Bridge to the eastern end of Fort Mason is the Golden Gate National Recreation Area managed by the Park Service of the federal government’s Department of the Interior. The next subdivision, the Northeast Waterfront, extends from Aquatic Park to China Basin. It includes Fisherman’s Wharf and the finger piers along the Embarcadero. The Central Waterfront runs from China Basin south to

USS California in dry dock at Hunters Point in 1922

What activities should take place along the San Francisco waterfront? Should it remain devoted primarily to active maritime uses such as wharves, passenger terminals and ship repair? If so, can these facilities be competitive with Oakland, Richmond and the other ports of Northern California, let alone Los Angeles, Long Beach, and Seattle? Or should this unique resource be opened up and made into recreation facilities for the entire community’s use—a continuous series of parks from the Pacific Ocean to Mission Bay dedicated to promenades, fishing piers and public access?

In the next few years San Francisco will have to choose between these options and determine the direction of the future of the waterfront. By presenting some Port history, past and present proposals for the barbor’s reuse, the thoughts of some government officials responsible for shaping policy for the waterfront, and some enlightened personal opinions, I hope this issue of the Review will increase the reader’s awareness of the choices for the utilization of one of the city’s most valuable resources.

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the Hunter’s Point area. (Hunter’s Point is a United States Navy shipyard, largely beyond local control. Since the Department of the Navy has not publicly announced plans to dispose of this facility, Hunter’s Point is not discussed in detail in this issue although it may someday supply the land for the construction of additional maritime facilities.)

Along both the Northeast and Central Waterfronts the Port of San Francisco, a city government agency, has jurisdiction over the piers, bulkheads and seawall lots. The land and facilities administered by the Port of San Francisco cannot be sold; it can only be leased, usually after a formal bid process. The City Planning Department, in compliance with the city’s charter, must maintain “a comprehensive, long-term general plan for the improvement and future development of the city”—also plans for the Northeast and Central Waterfronts. As city agencies both the Port and the Planning Department are responsible to the Mayor and the Board of Supervisors, so conflicts between them are ultimately resolved in City Hall. All development plans that the city proposes must be reviewed and approved by the Bay Conservation and Development Commission. The BCDC is a state agency charged with overseeing all development on the shores of the Bay. BCDC regulations limit some of the City’s options for its waterfront. For example, housing and parking on piers are currently prohibited by BCDC regulations.

From the Golden Gate to Hunter’s Point encompasses a lot of territory and represents an enormous amount past and present planning. To better understand this complex picture, the Review presents:

- A history of the San Francisco harbor
- A look at the evolution of the shoreline
- A portfolio of unbuilt projects representing past suggestions for the best use of waterfront
- A summary of current proposals
- Interviews with some of the government officials responsible for planning the waterfront’s future
- The academic view of the future, a collection of provocative recent theses from the architecture students at the University of California Berkeley
- Two well-reasoned personal opinions on what should be the primary future uses of the waterfront

I would like to thank all those who helped with this issue, particularly the authors, the firms that contributed material, the government officials who generously shared their time and knowledge with us (particularly Randy Rossi and George Williams), the Port and the National Maritime Museum for the use of their photographs, Chuck Wollenberg for his insightful captions, Carol Acree for her tireless efforts to secure advertising and Bob Hersey for his consistent support.

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I. Everyone Who Saw The Port of San Francisco Was Crazy About It

Like many once-great cities, San Francisco came into being because of its waterfront—its frontage on navigable waters, its access to the sea, the sheltered and hospitable port it offered for men and material arriving by ship. The hilly peninsula itself was regarded as virtually uninhabitable, a waste of sage and sand. But everyone who saw it was crazy about the port.

"This newly discovered port of San Francisco" (reported the first man to sail into it, in 1775) "is the best I have seen on this coast north of Cape Horn." "If California ever becomes a prosperous country," Richard Henry Dana wrote in the 1830s, "this bay will be the center of prosperity."

Port dominated city for so long that much of the history of this semi-mythical city (a city born overnight, isolated from "civilization," and founded on greedy dreams) is the history of its harbor. San Francisco was worth civilizing after 1849 because it offered the nearest deepwater harbor to the mines.

More than 200 ships were anchored in the Bay at once in 1849; more than 500 in 1850. A famous set of photographs (on display at the Maritime Museum) allows one to count the masts of more than 800 vessels, many of them deserted by gold-hungry crews.

The Central Wharf [wrote William Davis, who lived in the city during 1849–50], being the only one in the City, was the thoroughfare for communication with the vessels, and was crowded from morning till night with drays and wagons coming and going. Sailors, miners, and others of all nationalities, speaking a great variety of tongues, moved busily about; steamers were arriving and departing, schooners were

Gold Rush: California's Chief Window on the World

In 1850 the steamship on which writer Richard Henry Dana was traveling dropped anchor off the San Francisco waterfront. Though it was past midnight, "the city was alive from the salute of our guns, spreading the news that the fortnightly steamer had come, bringing mail and passengers from the Atlantic world." Dana saw "clipper ships of the largest size" and "high-pressure steamers, as large and strong as those of the Hudson or Mississippi." The wharves and nearby streets "were densely crowded with express wagons and hand carts to take luggage, coaches and cabs for
the passengers, and with men... "Once the great migration of gold seekers began in 1848, the San Francisco waterfront became the hub of an ocean-bay-river route to the mines, the major transfer point for men, supplies and wealth coming to and from the Mother Lode. San Francisco's 1848 populations of about 600 grew to 25,000 by late 1849, and to nearly 50,000 by 1852. The former bayside village had become the urban core of the Gold Rush economy. By 1859 the San Francisco waterfront was California's chief window on the world and the major economic foundation of the only real city in the American far west. —Charles Wollenberg.

Within a few years, long wharves reached out into Yerba Buena Cove, which now lies under the Golden Gateway, Embarcadero Center, and the cluster of high-rises on lower Market Street. For twenty years, this busy waterfront was the only way most people or goods came to or left the populated portion of California. The city's very survival depended on keeping the harbor welcoming and busy. As more ships arrived, as more goods were unloaded, as more passengers disembarked, the city spread inland from its port, and began climbing up and over the hills.

The visible logic of waterborne commerce—a city growing from the water—persisted even after the transcontinental railroad reached Oakland in 1869. Most intercoastal commerce traveled around Cape Horn for another 50 years. Bulky cargoes, then as now, had to travel by ship. Goods to or from Asia, the Pacific islands, or South America could only come by ship; and for many years, there was no place on the Coast to unload them except San Francisco.

The great tea clipper trade from China (via San Francisco) ended with the opening of the Suez Canal. It was supplanted by huge fleets of British square riggers, which carried California wheat around the Horn to Europe. More than 500 sailing ships cleared the Gate each year during the '80s, the peak years of the grain-ship trade. Coastwise coalers and lumber schooners, Italian and Chinese-manned fishing boats, whalers and sealing ships to Alaska, the sugar traders from Hawaii came in to fill the wharves when they left—sixteen long "finger" piers built out at the end of streets, beyond the growing Embarcadero Seawall. "At the end of our street are spars," wrote George Sterling, our second-rate local poet...

At the end of our streets is sunset;  
At the end of our streets—the stars.  
Ever the winds of morning  
Are cool from the flashing sea—
Flowing swift from our ocean,  
Till the fog-dunes crumble and flee.  
Splendor spars in the offing,  
Mast and yard in the slips—  
How they tell on the azure  
Of the sea-containing ships!

In 1914 the six-mile long seawall (built by the state, which had taken over the port in 1863) was finally finished, and San Francisco’s waterfront reached its present extent. Under the fill lay dozens of old abandoned vessels—including the Massachusetts whaler Lydia of 1840, dug up and identified beneath Levi’s Plaza just a few years ago. Thanks to the Alaska salmon fleet, Robert Dollar’s collection of expropriated German barks, and a number of other wind-driven vessels, one-fifth of the world’s larger sailing ships still in service called San Francisco home as late as 1928.

But the “forest of masts” of Gold Rush days, the bowsprits that once rode over city streets, were mostly gone by 1910, displaced by iron-hulled, steam-powered craft. The fire of 1906 had left the seedy waterfront virtually untouched. Teddy Roosevelt’s Great White Fleet (16 battleships, four destroyers) paraded grandly around the Bay in 1908. Some shippers feared that the new canal at Panama might deflect Asian trade away from San Francisco; but for a few years, at least, it enhanced the port’s prosperity, through intercoastal traffic and stopovers to and from the Orient.

Pacific Mail, then the Dollar Steamship Company; Oceanic, Matson; Panama Pacific brought passenger liners into the Bay before any similar American service crossed the Atlantic. They carried people to and from the East Coast, the Northwest, Hawaii, Australia, the Far East. Our liner traffic may have been slight compared to New York’s, but it was still enough to form the stuff of at least minor romance, as passenger liners generally do. Shorter runs—the Harvard and Yale overnight to Los Angeles, jolly river boats to Sacramento, the 8,357-ton H. F. Alexander (originally the Great Northern) beating the train up to Portland, scores of ferries criss-crossing the Bay—these kept the harbor full of ships that carried people as well cargo in the 1920s and 1930s. At the peak years, there were 50 million Bay ferryboat passengers a year. The San Francisco Ferry Building was the world’s second busiest terminal, next to Charing Cross Station in London. And all these passengers inevitably saw
Barbary Coast: Brothels, Bars, Shanghai, and Bloody Labor Conflicts

One foundation of the city's waterfront economy was the infamous Barbary Coast, home of much of the largely-immigrant maritime workforce. The "Coast," located adjacent to the northern waterfront docks, provided rest and recreation for merchant seamen and an efficient recruiting system for ship owners. Many of the district's bar, brothel and boardinghouse operators were also labor contractors, supplying more or less able-bodied crews by hook or crook. The term "Shanghai" (as in: shanghaiing a sailor against his will) was coined on the Barbary Coast. Attempts to form effective maritime trade unions were opposed both by powerful employers and by some of the toughest elements of San Francisco's underworld. Establishment of union hiring halls not only would reduce employers' power, but would also destroy the lucrative activities of Barbara Coast labor contractors. For a half century beginning in the mid-1880s, the waterfront was the scene of some of San Francisco's bloodiest labor-management conflicts. It finally took the 1934 citywide General Strike to achieve union hiring halls on the docks. —Charles Wollenberg.
San Francisco first as a port, a city built on and by the water.

The city's seaborne commerce fell into decline between 1920 and 1941. Bitter industrial disputes closed the port entirely for long periods in 1934 and 1936. The higher labor costs that resulted from the unions' victory led to the loss of most domestic cargoes to land carriers, and benefited rival Pacific Coast ports. The building of the bridges in '36 and '37 meant the end of commuter ferries.

But World War II (the Bay's busiest scene since the Gold Rush) fixed and redoubled the "port city" image—the idea that San Francisco's primary raison d'être was its spectacular harbor. More than a million and a half military personnel sailed from Fort Mason (and other Bay ports) in 45 months, along with 24 million tons of supplies—off to fight Pacific front battles, and to prepare for an invasion of Japan that never took place. During those months, thousands of ships were built, by hundreds of thousands of workers, at Hunters Point, Richmond, Mare Island, Alameda, Sausalito, South City and Oakland.

Mountains of supplies were assembled, whole cities of soldiers housed, on new bases built into the Bay out of Oakland. Downtown San Francisco streets were crowded with soldiers and sailors on leave, and all 42 piers were kept busy loading supplies for the war. In three years, San Francisco grew from America's 18th to its number two port. For a few hectic months near the end of the war, it was number one.

After the war, the Golden Gate city kept growing, its waterfront prospering. Traffic doubled between 1950 and 1960—the glory years of San Francisco's modern waterfront. Matson brought back the Lurline, the Mariposa, and the Monterey from troopship service, and sent 750 passengers every week to Hawaii and the South Seas in mock-Polynesian luxury from Pier 35. American President Line (successor to Dollar S.S. Co.) had two sleek new 23,000-ton liners built in Bethlehem's San Francisco yards, to add to its large fleet of "Presidents" sailing to the Orient and around the world.

For APL, the port built a 19-acre, eight-berth terminal on top of Mission Rock. A new Foreign Trade Zone at Pier 45, the joining and modernizing of Piers 30 and 32 for Matson, a giant new terminal at the end of Army Street, special docks for grain and foreign cars and produce, a new lighter-aboard-ship ("LASH") facility for Pacific Far East Line.

Nothing was too good for the city's life-giving, wealth-creating harbor. More than 200 lines of their agencies had offices in San Francisco during the 1950s; and 4,000 of their ships docked here every year.
The Ferry Building: For Autbile, the Symbol of Civic Progress

The waterfront was the center of a well-developed local transportation system that did much to mold the Bay Area into an integrated metropolitan region. The ubiquitous scow schooners were the late 19th century equivalents of modern trucks, carrying all manner of cargoes between San Francisco and other Bay Area communities. Paddle wheel steamers delivered cargo and passengers around the bay, up the rivers, down the sloughs. Although some ferry boat routes dated from the 1850s, major ferry development began in 1869, when the Central (later Southern) Pacific chose Oakland as the terminus of the first transcontinental railroad. Oakland became an integral part of the region's urban core, and the railroad's ferry route between Oakland and San Francisco emerged as the Bay Area's most important transit corridor. Sausalito and Tiburon had regular ferry service to the city because they were railheads for trucks serving Marin, Sonoma and points north. Vallejo was terminus for train lines stretching into the Napa and Central Valleys—thus the Vallejo-to-San Francisco ferry route. When Santa Fe built into Richmond in 1900, the railroad quickly established Richmond-to-San Francisco ferry service. Just as most roads in France are supposed to lead to Paris, most important ferry routes on the bay led to the San Francisco waterfront. While other late 19th century American and European cities built great train depots as symbols of civic growth and progress, San Francisco built a magnificent Ferry Building. In the early 20th century, the ferry lines were tied to new electric interurban train systems that promoted rapid suburban growth around the bay. San Francisco's own rail transportation system, cable cars and, after the 1906 earthquake, electric trolleys, also converged at the great terminal at the foot of Market Street. The Ferry Building was the key link in the massive regional rail and water transit network that served most of the populated parts of the Bay Area. Only Peninsula commuters arrived by land rather than water. Completion of the Golden Gate and Bay Bridges in the mid-1930s destroyed the old ferry system. The bay itself had been the last impediment to the triumph of the automobile, and construction of bridges on the East Bay and Marin transit routes was a fatal blow to the ferries. World War II gasoline rationing and shipyard labor transportation demands produced a brief recovery, but after the war, what had been the world's most extensive ferry boat network virtually ceased to exist. The automobile also greatly reduced bay, river and coastal shipping. Trucks replaced river boats, lumber schooners, other local cargo vessels. Efficient air service cut deeply into passenger liner service.

—Charles Wollenberg.
III. It Seems To Be A Losing Battle

THEN EVERYTHING fell apart. Labor costs, and airline competition, killed the deepwater passenger trade. Matson sold off its last big liner in 1970, its last passenger-cargo ships (the second Matsonia and Monterey) in 1971. Pacific Far East Line, which bought the latter, went bankrupt in 1978. The 30-year-old Monterey, a relic of the debacle, still lies rust-stained and flaking at Pier 46. APL dumped the President Wilson and President Cleveland in 1973, to the same Hong Kong ship collector who had bought the Matsonia. None has sailed since. Both Matson and APL retained large and active cargo fleets, but they moved them across the Bay to Oakland.

Oakland, in 1962, had begun to build several vast new-style container-ship terminals: huge parking lots for metal boxes full of goods, like truck trailers without wheels, which could be loaded on or unloaded from ships moored along the perimeter by mammoth moving cranes—thus dispensing with costly hand labor.

By 1966, Oakland had overtaken San Francisco as the Bay’s leading port. (It now leads by about two to one in revenues, four to one in traffic. Both Bay cities, meanwhile, have fallen behind Los Angeles, Long Beach and Seattle.) The senior city tried to catch up, but with seven container cranes to Oakland’s 21, and only a fraction of its container-ship berths and storage acres, the battle seems a losing one. Hunters Point, a shipyard the size of a city, and the smaller Bethlehem yards, were abandoned. Weeds grow through cracks in the concrete of the brave new grain and auto terminals. The state-of-the-art LASH terminal at Pier 96 proved to be a flop. The new Pier 94 sunk and cracked over its garbage fill. In 1965, the Army left Fort Mason for a new port of embarkation, in (of course) Oakland.

In 1969, San Francisco politicians finally won local ownership of the port from the state of California—and with it, a $55 million burden in debt. Most of the piers the city obtained were over half a century old. Six were condemned, and 15 others regarded as unsafe for serious cargo use.

Today, five of these piers are used for parking cars or recreational vehicles. Three others were torn down and replaced by the popular $30 million tourist pier attraction, Pier 39, designed by Walker and Moody, filled with 120 imitation-old restaurants and shops. The six condemned piers were demolished to create a waterfront promenade just south of the Ferry Building, designed by William Turnbull. A small amount of ship repair work now goes on at five other piers, as well as at the old Bethlehem (now Todd) and Hunters Point yards. About a dozen (there were once 200) commercial fishing boats actively use Fisherman’s Wharf, better known as the second most popular tourist attraction in California. (Only Disneyland draws more.)

Nine San Francisco piers are still visited by occasional ships—about two ships a day now, instead of the ten or twelve of earlier years. Fort Mason has become a heterogeneous civic cultural precinct, which no longer has much to do with the sea. A renovated Pier 35 serves as the Bay’s terminal for foreign-flag coastal cruise ships, and a couple of larger liners that call in on their round the world tours. Passengers, at least—50,000 of them each cruise season—still prefer to board and disembark in San Francisco. The Port of San Francisco, needless to say, now has plans to improve all of these statistics.
The Evolution of the Shoreline

BY BONNIE FISHER AND BORIS DRAMOV

An understanding of the evolution of San Francisco's shoreline helps to establish a basis for design and planning decisions. While today the shoreline edge seems to be a thing of permanence, it has actually undergone dramatic changes—especially over the past 150 years. The original shoreline closely skirted the base of the hills, creating numerous small inlets and coves. At the time of the Gold Rush, the major port was Yerba Buena Bay in the vicinity of the Ferry Building, where naturally deep water could be found for mooring of large ships. Incremental filling occurred as the city gained ground and moved closer and closer to deep water. Wharves and piers were built as extensions of city streets, water lots staked out on either side and eventually filled in and sold for private development. Though the waterfront was city-owned, it was privately controlled and maritime facilities were made by speculators eager to reap profits on the sale of adjacent water lots. The bit-by-bit filling of the bay continued until San Franciscans finally wrested the waterfront from private control and placed it under state jurisdiction.

One of the first acts taken by the State Board of Harbor Commissioners in the 1880s was to establish a permanent shoreline through the construction of the Great Seawall. As one of the greatest public works projects in city history, the Great Seawall transformed the waterfront from a complex assortment of edge conditions to a smoothly curved shoreline rounding the bend from Fisherman's Wharf to China Basin. Meanwhile, the city expanded bayward through filling in other parts of the waterfront. To the south of China Basin in Mission Bay, filling proceeded as sand hills were cut down for this purpose. Another major modification to the shoreline occurred during the Pan-Pacific Exposition when the wetlands in what is now the Marina were filled to create another area of expansion in the city. Today, the only remaining areas of natural shoreline are the once-defensible promontories and military-owned land lying between them, such as Fort Mason, Fort Point and the Presidio.

While the waterfront has undergone dramatic transforma-
tions in the past, it is unlikely that its physical configuration will significantly change in the future. The Great Seawall is an enormous fortification of mammoth proportions that establishes a resilient edge reinforced by the Embarcadero roadway above it and, recently, by the construction of a 20-foot diameter sewer immediately behind it. Penetrating the shoreline to dredge new basins into the fabric of the city would, at this point in time, be highly infeasible. On the other hand, the high cost of construction over water combined with BCDC regulations has made bay filling extremely difficult.

In the future, the urban shoreline will undoubtedly follow the edge established by the Great Seawall as it does today. The physical shape of the urban waterfront will probably only be altered by future modifications of the finger piers, from Pier 45 to Pier 46 at China Basin.

When the Great Seawall was first built, it established a bold line arching from the active maritime center at Yerba Buena Bay to the recreational basin at Aquatic Park. Since it extended the city shoreline out to deep water, ships moored directly along and parallel to the Embarcadero or offshore on moorings. Temporary loading and unloading of goods and materials was accommodated along a bayside quay and transported to warehouses landside of the Embarcadero.

These warehouses created large districts of low brick buildings on filled land at the base of the residential hillsides. This early waterfront was open in character and highly visible, giving views not only to the water's edge but also to the activities taking place there.

Over time, finger piers were built on pilings to gain proximity to even deeper waters and increase mooring area. Fanning out from the Great Seawall, the piers formed an intermittent pattern that facilitated access by rail. Warehouses were constructed on deck to avoid inefficiencies through the transfer of goods across the street. During the Pan-Pacific Exposition, bulkhead buildings were built in front of the piers to improve the appearance of the waterfront and hide what was then thought to be unsightly industrial activities.

The open appearance characteristic of the late 1800s was thus replaced by a concealed waterfront, characterized by a wall of bulkhead arches and frequented mainly by those with business there.

As maritime facilities, the finger piers have not been long-lived. Constructed in the early 1900s, they began to be outmoded in the 1950s when containerized shipping was first developed by Sea-Land. Up to that time, cargo had been handled in substantially the same way as it had been since ancient times. Basically, men moved cargo on boxes by manual labor until first slings and nets were used to hoist cargo, then...
pallets and forklift trucks were introduced to facilitate movement of cargo on the dock. Palletization introduced the use of modular units in cargo handling and thus paved the way for the development of the container. While break-bulk handling utilized small units of cargo transferred from ships to piers, the container created a standard preloaded box suitable for easy transfer into trains and trucks. Because goods are handled less often, they became less vulnerable to risk of pilferage, loss, damage and exposure to the elements. Although the initial capital costs in developing this system were high, the savings in operational productivity and manpower greatly outweighed costs. The time spent in port for loading and unloading was reduced from several days to several hours, enabling ships to be more efficiently used in transport.

Containerization had revolutionized the industry within a short period of 15–20 years, while break-bulk cargo declined to about 10 percent of all shipping. As a result, port facilities have almost entirely shifted away from finger piers to terminals requiring vast backland areas for the temporary storage and transfer of containers from ship to truck and rail for distribution. Ports like San Francisco that had been dominated by finger piers found that it was often easier to develop facilities in new areas through dredge and fill rather than redeveloping existing finger piers for containerization. Developing ports, like Oakland, were built in shallow waters with great quantities of land fill made available from the construction of the Bart tube. The maritime future of San Francisco probably lies in the Central and Southern Waterfronts where adequate backland and more modern facilities are already located and where new ones are being planned.
IN HIS Report on a Plan for San Francisco of 1905, Daniel Burnham proposed an elevated boulevard above the wharves along the north waterfront and around Telegraph Hill. He believed this raised promenade would "be an ideal place to ride or walk. The passerby looking down on the shipping below, and when he tires of watching the activities and listening to the voices of the men engaged in the work of the port, he may note the changing aspects of the sea and study the effects of sunshine and shadow on islands and mountains seen through masts of the ships. This treatment will lend delightful variety to a drive on the boulevard and will add a special charm to the life of the city." Burnham's scheme was among the first proposals for new uses of the San Francisco waterfront. As the maritime value of the old finger piers began to decline after the Second World War, developers, architects and government officials came forward in increasing numbers with suggestions of what to do with the valuable real estate they occupied. In the '50s and early '60s, the typical proposal called for a series of towers along the water's edge fed by a high-speed traffic artery along the Embarcadero. This Miami Beach approach to development eventually gave way to a series of schemes for mid-rise buildings around landscaped open space – The Grand Plaza Era.

Since the early 1970s, the emphasis has been primarily on smaller-scaled projects that re-use the existing finger piers. Throughout the entire period, there have been freeway-related schemes—plans based on finishing the Embarcadero Freeway to the Golden Gate Bridge, burying it, filling it in with offices, or tearing it down. Most of the proposals sought to improve public access to the Bay and create recreational opportunities for all of San Francisco's citizens. (In his 1905 report, Burnham set this tone by calling for public access piers, yacht harbors and bathing areas.)

Here is a look at some of the Unbuilt Projects of the past.
The Megastructure Approach: In 1965, the notion of extending the Embarcadero Freeway to the Golden Gate via the Marina was still alive. Local architect William Duval recommended that the section of this extension from Broadway to Bay Street be a continuous building with a freeway on its roof. This 100-foot-wide building would have offices, warehouses and parking below the eight-lane roadway. The designer advocated this scheme so that "the chaotic left-over spaces and the grizzly concrete underbelly of the regular elevated road are avoided. The ragged west frontage of the Embarcadero would be given a facade which combined with the pier frontage would clearly define the Embarcadero as a street." It would also have been a Great Wall of China visually shutting many people off from the water.

The Freeway Solution: "Attention: Politicians and Planners... There has been enough talk about freeways. Now is the time for positive action." Thus began this proposal by Irvin Baltyer that appeared in San Francisco magazine. It extended the Embarcadero Freeway to the Golden Gate Bridge by looping out into the Bay with the roadway either atop a breakwater or in a submerged tube. It would have created a huge small-boat harbor; unfortunately, it would also have restricted the view of the Bay for the pedestrian walking along the waterfront.
Ferry Port Plaza of 1969:
Would have been a hotel/office/commercial complex just north of the Ferry Building. Skidmore Owings and Merrill planned the offices and shops in two parallel buildings separated by a 50-foot-wide galleria that would have formed an elegant promenade from the Embarcadero to the hotel situated at the end of the new pier. Only 20 percent of the site was to have been used for buildings and the proposed tree-lined Esplanade along the south side would have supplied community access to the water, but the structures themselves would have been three times the height of the existing wharves.

The Miami Beach Approach:
"...Older piers would make way for an esplanade flanked by office towers, hotels, shopping plazas, restaurants [and] convention halls..." reads the caption to this early proposal by the state's San Francisco Port Authority. High speed auto traffic would speed past a series of towers and mixed use complexes built by private developers on leased land at the water's edge.
The International Science Center Proposal of 1961:
Called for a fortyish story tower and low rise use technological facilities to be used, according to the Summer 1961 quarterly newsletter of the International Science Foundation, as "an industry-education-government forum . . . to insure maximum productivity of the scientists and engineers using the facilities . . . " This Brave New Scientific World on the Bay would have occupied the sites of Piers 1, 3, 5 and 7.

The Embarcadero Marina scheme: Would have changed the entire waterfront from Pier 9 on the north to Pier 24 on the south. This proposal by developer Warren Simmons would have had two marinas, a boatel, a passenger terminal, a hotel, a theme park on an island (on the site of Pier 16), a children's village and a promenade. There would even be an aerial gondola offering spectacular views. This 1973 design by Walker and Moody, Architects, was offered by its developers as a counter to the Ferry Port Plaza and the U.S. Steel projects.
What To Do, What To Do?:
The San Francisco Citizens Waterfront Committee published *What to do about the Waterfront* in 1971. It called for a passenger ship terminal on a renovated Pier 35 and assumed Piers 9 through 29 would remain in maritime use. Between these, the Committee and its designers would have removed Pier 31 and cleared Pier 33 of its wharves to create a platform for a public maritime park. At the end of the Pier a restaurant would be built. The rest of the platform would be parkland used for fishing, children's playgrounds, lounging areas and concessions. A new break-water-fishing pier with a small boat harbor like a small boat harbor like a small Aquatic Park. All these recreation facilities would be linked to the rest of the city by a pedestrian bridge over the Embarcadero. . . . Another proposal from *What to do about the Waterfront* would have sunk the Embarcadero Freeway into the Bay mud, forming what was called the Seawall Freeway. There would be a generously landscaped promenade atop this sunken freeway. The Bay would be brought closer to downtown and the Ferry Building, surrounded by a continuous pedestrian plaza, isolated on an island. Livingston and Blayney were the planners for this study. The design studies were prepared by Bull Field Volkman Stockwell and Okamoto/Liskmann. . . .
**The Grand Plaza Era:** The San Francisco International Market Center would have wrapped the base of Telegraph Hill with “the greatest concentration of home, commercial, institutional and decorative furnishings in the world,” according to its architects. The program also included a hotel, shops, and restaurants. Organized around two great exhibition halls, the International Market Center would have bridged Battery and Sansome streets. This Wurster, Bernardi and Emmons design for Developer Henry Adams would have focused on plazas and featured landscaped roofs. There are design elements incorporated in Telegraph Landing, Levi’s Plaza and the other worthwhile projects that were actually built on this site. Although the proposed 4.2 million square feet of the International Market Center would have made it considerably larger than what is there now.

**The Era of Declining Expectations—and Proposals:**
The 1970s saw a series of proposals to redevelop individual piers with developments more modest than those advocated in the Miami Beach and Grand Plaza periods. This Gerald Hines scheme for Pier 45 included a hotel (seemingly an obligatory element in each development program), 224 dwelling units and about 250,000 square feet of office/commercial/retail space. Southern California architects Oxley/Landau envisioned a finished palette that included architecturally finished concrete, smooth trowelled cement plaster, cedar board, green-tinted polished plate glass and plexiglass greenhouse units.
The Need for Variety in Experiencing Our Waterfront

INTERVIEW BY JOHN BURKS & MICHAEL STANTON

On a solution to the Embarcadero Freeway mess and a new design for the Embarcadero itself:

It took years for the Chicago waterfront to be developed. They're just starting in New York.

On the BCDC plan for the waterfront:

WHY SHOULD A hotel be a permitted use on our waterfront and not housing for residents? It doesn't make any sense to us. We would like to see open land, open space, promenading, and a variety of city uses, not exclusive to a hotel or restaurant uses. A whole range of uses integrated with the open space. We think the BCDC plan doesn't do that.

Every city has its unique characteristics, but when you walk along south of the Ferry Building, you are struck by the realization that all the sudden you can be next to the water. I don't think we need sandy beaches or expansive parks. We do need that openness to the water.

On his personal vision for the San Francisco waterfront:

IT IS AN URBAN experience. We clearly recognize it as that. But what we want are changing circumstances of excitement along the waterfront. We're interested in the change that occurs as you walk along. If you walk along the Marina you get a very open view of the Bay. You want the walker to be surprised. The waterfront need not be all like the Marina. There need to be interesting spaces where you can walk out over the water, where you can see the whole panoply of city activities along the waterfront.

We're not looking to one set style along the waterfront. You ought to be able to shop, you ought to be able to see how people can live along the waterfront, you ought to be able to fish off the waterfront, you ought to be able to sit quietly and read a book... all of those things could happen. We've got plenty of room to do it. What we need now is some elbow room to allow these things to happen.

The vision that the Chicago Plan had—the Burnham Plan—was wonderful. Speaking as a planner, I am awed by it. It actually happened. Over the decades, the money was set aside to see that it happened. And it's one of the great waterfronts in the world. It's not a San Francisco waterfront in size, scale and interest, but it's a great waterfront.

On the Chicago waterfront plan:

FTER THE Burnham Plan came out in 1909, the Chicago Plan Commission was established. This was not a "planning" commission, it was a plan commission, established to carry out the Burnham Plan. The first head was Charles Wacker. He prepared a thing that became known as the Wacker Manual,
and it was taught in the school system. It became a civics manual. A lot of people have attributed the Wacker Manual as the force behind the Chicago waterfront, because as the kids grew up, they kept voting the bond issues to make sure that the Wacker Plan happened. It’s a very interesting planning case study. That manual actually committed the generations to seeing to it that the Burnham Plan was developed. It was a public commitment through the generations. I think that’s the circumstance we have here—it’s up to the officials of city government to create the vision with public acceptance and participation to see the San Francisco waterfront develop. I think it’s going to take 20 or 30 years. But the time to do it is now—to set the stage.

On the politics of planning a waterfront:

These long-term projects are going to see four or five mayors. The waterfront is going to see more. The Yerba Buena Center will see several. You have to have faith in the system. I think the amazing thing is that we get the amount of continuity there is to these commitments over time.

We have a unique situation here. You have to remember that our city charter has not been changed since the mid-’30s. I don’t know of any other city government that is operating with principally the same methods that were set out in the mid-’30s. We are a city that jealously guards these traditional ways of doing things. Every time there’s a proposal to comprehensively revamp the city charter, it’s roundly defeated. It’s happened twice since I’ve been here.

People seem to want the government exchange and conflict—whatever creativeness that comes out of all that—and yet, my God, you have to go to three different places to get approval of almost anything in this city... if it’s a deck in the back yard or a waterfront change or whatever. The people seem to think that is an acceptable means of operating here.

BCDC: Tough To Deal With On Purpose

An Interview with Jeff Blanchfield, Chief Planner for BCDC:

Many who have dealt with the Bay Conservation and Development Commission come away groaning. It’s one tough agency to negotiate with, especially when your plans fail to match BCDC’s vision of the San Francisco waterfront. That’s because its vision is backed up by state law.

“We are difficult to deal with,” agrees Jeff Blanchfield, chief planner for BCDC, “in that the commission works from a plan that we believe in, a plan that has the authority of the State of California behind it. Our people consistently stand up for it.”

He cites Ferry Port Plaza as a good example. “There was immediate conflict on that one because that’s exactly the sort of thing the commission was established to prevent. In that situation, yes, we’re very tough.”

A turning point in BCDC’s relations with the city and the port came with the initiation of work on the Total Design Plan, covering Piers 7 through 24, in 1974, culminating with its acceptance by the city, the Port Authority and BCDC in 1981.

“This means,” says Blanchfield, “that we all work from a common set of plans. When it comes to planning for known change we have a meeting of the minds. People coming to us with development plans are less likely to get ‘whipsawed’ between agencies, as the complaint used to go.

“When there’s a proposal now, we bring together all the groups to work on it. The working relationships are good and we present a united front to the prospective developers.”

Asked about his own personal vision of the waterfront, Blanchfield paints a picture remarkably like the BCDC plan—which should come as no surprise: Waterfront uses, such as restaurants and specialty shops, that will draw San Francisco working people to the waterfront. A variety of uses, from fishing to parks to commercial... A good transportation system to move people along—possibly, as is done in Seattle and our own Market Street, historic trolleys... Places where people can watch the maritime activity... Fully developed container-based maritime uses from the Bay Bridge down to Hunters Point, “which really should be developed into our deepwater port,” meeting a fully evolved Candlestick Park State Recreation Area.
Building Tomorrow's
Port Today So the Future
Will Not Escape Us

INTERVIEW BY JOHN BURKS
& MICHAEL STANTON

On the problem of fitting containerization onto the northern waterfront

WE CAN'T GO back to sailing schooners and finger piers. We can't get involved with the idea that some of these old piers built at the turn of the century are someday going to come alive again with major maritime activity. Some of the best piers we have out along the northern waterfront, built as finger piers, structurally sound—are functionally obsolete. You have to recognize that, and concentrate your effort on what the industry's really all about.

Since the late '60s, that's containerization, and it means that if you're going to handle a container vessel, with a thousand units on board, you need 900 feet of linear wharf; you need 24.5 acres of land, asphalt support; you need two gantry cranes; and you need good rail and truck access. Now you tell me where we have 25 acres of backland along San Francisco's northern waterfront to handle container vessels and I'll give you the helm of the Port and you run it. It's not there.

On the future of maritime activity along the waterfront:

THE PROBLEMS that you have with the Port of San Francisco are not much different from what you find in Manhattan.

You take a look at the piers along Manhattan and it's just like San Francisco. What happened was that when they came to containerization, they moved to the railroad, or landward side, Newark, and built the container facilities and made them go. They stayed within the political subdivisions of the New York-New Jersey Port Authority and nobody really cared because it was all going into the same pot.

Look at London. The old dock areas of London have moved away from their historical, traditional locations. Where there used to be port, there's now a variety of housing, recreation, all sorts of things. Containerization is behind that.

What the City of San Francisco has done is basically draw a line at Third Street, and said that everything south of there is going to be involved in major maritime activities. And north of there, let's face it, the maritime activities over the long term are going to go away. By that I mean cargo handling, primarily. We'll continue the passenger handling, but the major cargo access will move to the south. Because that's where available land is.

Highlights from a conversation with Tony Taormina,
Director of Planning and Research for the San Francisco Port Authority.

On the Port's plans for major container expansion:

IN CONJUNCTION with other Bay Area ports, we have just completed a five-year study attempting to look at port facility demands and needs over the next 40 years, to the year 2020. That study is based on basic cargo flow and projections and historical perspectives, and what it tells us is that by year 1990, through year 2020, the Bay is going to have to double the number of container berths it has in order to meet market demands. By year 2020, there will have to be a four-fold increase. The projections indicate there's going to be a massive growth in our Far Eastern trade. The basis of that growth is our friendly relationship with Japan, and emerging China, and the fact that the Southeast Asia trade area has become more and more dependent on full two-way traffic.

I'm not an economist or a futurist; I can't really predict what will happen. But as a port person, somebody's telling me it will happen and if I don't begin planning for that, I'm out the window. So I've got to start planning for it now, and that's what we decided to do, on a Bay Area-wide scale.

Right now, we in San Francisco handle about 10 percent of all the traffic coming into the Bay. Oakland obviously is doing the lion's share. We do 90 percent of the South American trade and a lot from Australia, but very little of what we call Route 29—Southeast Asia—and obviously we must crack into that route if we're to succeed. Our target is for
the Port of San Francisco to be able to handle 25 percent of all container traffic coming into the Bay. Now if we’re successful, we’re going to be upping our market share. Yet we’re not going to be taking tonnage away from the Port of Oakland, in that their 75 percent share is going to grow over where they are today. In fact, everybody’s going to begin growing and expanding. We just want a bigger share than we’ve got now—we think 25/75 is a reasonable split.

We have to construct 14 new container berths by the year 2020. Just to give you an idea of that in dollars: each additional berth is close to $74 million. You’re talking lots of money.

On the need for transportation access:

One thing you need along the waterfront is a very good transportation system. And eventually, the removal of the Embarcadero Freeway. However, I don’t believe the Port will support the removal of the Embarcadero Freeway if the alternative is to make the Embarcadero into a six-lane expressway. In my view, the Embarcadero has to be a waterfront road to service our activities, not a main artery of traffic.

An explanation of why the conservative old business approach no longer applies:

We have a surplus of container facilities in the Bay Area right now—of five berths. That surplus will continue until 1985. So if I built a new one now it would be vacant; but if I start it now and figure it’s going to be finished in 1988, that’s when market demands will assure the need for more facilities. Between 1985 and 1988.

Why did the Port of San Francisco lose out to Oakland on containerization in the 1960s? If you went around and

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An Interview with Tony Tuormina

interviewed most of the presidents of steamship lines of that time, they'd have told you they were more interested in being at the Port of San Francisco than the Port of Oakland. The problem was the Port's view at that time was a very conservative business view: we will build a terminal only when we have a user who signs on the bottom line. Safe. No problem. If APL or whoever says they'll use it, we'll build it.

Today, if I go to a steamship company and ask whether they'll use this berth in 1999, they'll tell me I'm out of my mind: how can they tell me about 1999 when they don't know what to expect tomorrow? You have to build facilities on speculation. That's the nature of our business. There was a time when the Mayor of San Francisco would not take that risk. Our mayor today will take a reasonable risk.

On San Francisco as a "second" port:

S EATTLE AND Los Angeles have great competitive advantages over us. Seattle is one day shorter sailing time to the Far East. L.A. simply has a larger consumer market. I can even make a strong case for you to the effect that the West Coast has in its future two major load centers: Seattle and Los Angeles. You don’t even need a port structure anywhere else.

But the nature of our business is that steamship lines do not necessarily like to find themselves locked in to only one port. When you're moving cargo, if you know the only port you're calling on is Seattle, your vessel's going to be there—and you know the only way your vessel makes money is while it's "on the road," not sitting at the dock—and if that guy's container is late coming to your vessel, are you going to hold your vessel for a container that's late? Hell, no, you're going to move. The lines like to have that much flexibility—that second port. For all intents and purposes, San Francisco will be that second port of call.
I'm often asked: "What is the health of the various aquatic resources of the Bay?" Several state and federal control agencies contend that the Bay's health has improved dramatically in the past 20 years due to stronger wastewater treatment legislation. Environmental groups though point to the decline of the commercial and recreational fisheries as an indicator that not enough is being done.

As population levels have steadily increased, so has the volume of most types of wastes discharged into the Bay over the last 150 years. The overall estimated toxicity of the waste has fluctuated. The huge influx of people and industry caused by the Second World War occasioned the decline of the health of the Bay during that period. Environmental protection was not a national high priority in 1942. The effects of waste discharge into the shallow waters of the Bay from 1940 to 1970 are still evident to the trained observer.

The United States has had water "pollution" laws on the books for nearly a century. The Rivers and Harbors Act of 1890 prohibited the deposition of wastes other than those "in a liquid state" into navigable waters of the United States. The Federal Water Pollution Control Act ("Clean Water Act"), following a major rewrite in 1972, is the main Federal statute protecting the navigable waters of the United States. Under the Act, the Environmental Protection Agency (EPA) is required to issue effluent guidelines, setting discharge limitations for all industrial and municipal dischargers. To limit pollution from municipal sources, EPA administers a multi-billion dollar program of Federal grants to cities and states for construction of municipal sewage treatment systems.

By the mid 1970s the clean-up had begun to take effect. There is ample data to document a general decrease in amounts of pollutants discharged to the Bay. Biochemical Oxygen Demand (BOD) and suspended solids were decreasing and with them much of the toxic load attached or otherwise bound to particles. This particulate matter, a by-product from secondary treatment, is now disposed of by landfill.

Advanced or secondary wastewater treatment has removed much of the toxic material prior to discharge into the Bay. The decreased discharge of pollutants, in conjunction with higher Delta outflow, has allowed the Bay to begin to revert to a cleaner state. This should permit increased recreational and commercial use of the Bay in the future for all. But the Bay's health still must be monitored closely as the population increases and new industries seek to dispose of wastes.

Michael P. Carlin is a Marine Biologist monitoring the San Francisco Bay/Delta Estuary for the City and County of San Francisco. Current projects revolve around the City's new sewage system and its impact on the Bay and Pacific Ocean.
BY DAVID LITTLEJOHN

My Case for a Built-up, Active, Working Water’s Edge

Since the 1960s (in a way, one might say, since 1849), many schemes have been proposed for building or rebuilding the San Francisco waterfront. Some were intended to revive the activity of shipping and ship-related industries, the businesses that built this city in the first place. Others have envisioned seizing semi-abandoned wharves and yards, and converting them to more public, or more tranquil, or more elegant (and in almost every case, more profitable) uses. These have been uses which might benefit from a waterfront location: office towers, hotels and boatels, museums and marinas, conference centers and industrial parks. Before he was fired by the Port Commission in 1977, the last port director complained that “real estate types want the piers and the railroad . . . so they can get some highrise offices in there, and give their clients a view of the Bay.” But his successor insists that “the port’s principal reason for being (is) to serve the shipping industry.”

Plans now in progress are bound to alter the city’s water-edge radically in the next 20 years. For anyone who may be involved or interested in these plans, I offer my thoughts on some things a waterfront—and specifically this waterfront—may mean to citizens and visitors.

From the Phoenician sea traders, through Venetian maritime speculators like Shakespeare’s Antonio (“Thou know’st that all my fortunes are at sea”); thence to the Spanish gold fleet, Samuel Cunard, C. Y. Tung, and the golden Greeks of our day, transocean shipping has always been a tough, irrational, competitive, and high risk business. The port of San Francisco was built by voracious wharf owners who charged all the traffic would bear, and on the backs of underpaid and mistreated sailors and longshoremen.

Its twentieth-century prosperity grew out of international wars (Spanish-American, Second World, Korean) and the only slightly less bloody wars between hardnosed ship owners.
(like William Matson, Robert Dollar, and their successors) and their equally tough labor-leader opponents (like Harry Bridges and Harry Lundeberg). These four men—a Swede, a Scotsman, an Australian, and a Norwegian—all started out in sail as boys or young men, and ended up fighting to the death on the San Francisco Front.

Shippers, ship owners, and port operators are in general oblivious to the “romance” that landsmen pretend to find in their business. They make all their decisions—the design of ships and terminals; when to build, retire and scrap; how to load and unload; routes, speed and cargoes (to them, passengers are just another form of cargo)—on the basis of probable profit. They want maximum speed and capacity, minimum time in port, the smallest number of workmen and the smoothest possible connections to railroads and trucks.

Early shipping men shed no tears over the end of the Age of Sail, or of the great transocean liners. Their successors, high up in California or Market Street offices, decide quite coolly to scrap whole fleets of handsome C-2, C-3, and C-4 freighters for gross new container ships—and then move all of them to Oakland. “We are fond of San Francisco,” said a spokesman for two lines that moved to Oakland last year, “but we have to go by what our clients want.”

For most of the rest of us, though, the appeal of ships and the sea is a deep, abiding and irrational thing.

If the sea is a moving and mysterious world, which both calls to and frightens us—and if a ship seems to us a vessel of escape, of risk and of venture, the perfectly-shaped emblem of our selves set free—then a waterfront, the built intersection of civilized land and open sea, however grubbily utilitarian it may physically be, takes on a similarly high emotional charge.

It is at once an imaginary jumping-off place into danger and romance—the place where adventure begins. And our harbor of safe return: the visible ropes, the invisible anchor, the seamen and dockers scrambling into place; the gangway; *terra firma*. It is a special, a blessed place, the marrying point of our rational and irrational selves.

Most people can feel this instinctively on a tide-washed ocean beach. But a manmade pier is no less freighted with significance. It is here, on the originally wood-planked, now concrete extensions of our cities over water (dark wet pilings, slick and green-bearded, reach down and out of sight below the water’s surface), that our land-selves and our sea-selves are joined. A pier is our first and our last act of building, building *out* from the land we inhabit to the sea that calls and appalls. Our long pre-container port wharves reached out their arms to welcome ships, passengers, and cargoes, and to allow landsmen to meet them halfway.

“The place on earth where the mystery and the magic collect most densely,” architect Charles Moore has written, “is the shore, to which people from the inland flock, to be as close as possible to the excitement along this edge of what was once described as a ‘mental leaning out over,’ the

sensation invoked by a few well-conceived places, which is like looking down on the ocean from a pier, a mingling of wonder and delight and sometimes fear, which is heightened by proximity to the enigmatic vastness in even small bodies of water.”

Much has been made of the soul-settling pleasures of life on a sandy beach. Since we aren’t likely to reclaim many sandy beaches along San Francisco’s waterfront, I would like to build a three-point case for the internal needs that may be satisfied by a built-up, active, working water’s edge—which is something that architects may help to create or preserve.

1 Were most San Franciscans, and most visitors, to lose all sight and sense of this city as a working port (ships arriving and sailing, being built and repaired, loaded and unloaded), however graceless and tacky they might find it, they would, I think, lose a fundamental connection with the past of this city, its fact as a human continuum.

Other cities—Boston, New York, London—have virtually lost this already. They have moved their extensive maritime commerce to new regions upriver, out of sight of most citizens, and converted their historic waterfronts into apartments or offices or tourist attractions. Perhaps this is inevitable. Shipping is a business, business writes its own laws and cities adapt to survive.

And yet entirely to lose the 134-year-old sense of this city as a seaport would be to cut off a life-giving connection to our own past and denature the very fact of the Bay. The deep feelings these old images of ships and shipping touched are, I think, still latent and alive. We are still susceptible to (most of us), even hungry for, all the potential meanings a “waterfront” holds. We love to “look out to sea,” get high on the smells of Fisherman’s Wharf, love the fake-nautical decor of old seafood restaurants, like Alioto’s and Bernstein’s and Spenger’s. We can be thrilled by
the sight of even an elephantine gray bulker moving through the Gate.

Our nostalgia-machinery, for some reason, is strangely satisfied by almost any seagoing craft that sails no more. What could be less romantic than Karl Kortum's collection of old workaday vessels at the Hyde Street Pier (a 1920s transbay ferry; an 1895 lumber schooner; a 1915 steam schooner—now being restored at a cost of $5 million; an 1891 hay scow; a 1907 steam tug; a British paddle tug, with no local connection)? And yet visitors swarm over them, fantasizing happier days.

The Balclutha is our last hold on the "forest of masts," Hunters Point and the Jeremiah O'Brien are vivid gray relics of the War. The Ferry Building, hiding behind the freeway, reminds us of a Bay without bridges, and the millions of people who passed through her. The curve of the Embarcadero is the old Seawall line, the mission façades of the old piers are San Francisco 1930. What of all this we hold onto, and how (is there no hope for an old working ferry? for our own Delta Queen, or a night boat to L.A.?), is for people with money and power to decide. But so much is gone. It matters a great deal to hold on to whatever we can of what's left.

The Bay itself is an asset of inestimable psychic worth—as a setting, as a space for the spirit (even the spirit of traffic-locked commuters), and as a great thing to contemplate, as well as sail or fish in. So too, I think, is its actified surface and its urban edge, its meeting with the life of the city.

The BCDC, I presume, will keep it open and clean. It's up to the city to keep it visible, breathable, lean-over-able on railings, as at Mr. Turnbull's new promenade, or the old chains around Fort Point. Let it forever fill up the ends of our canyon-streets, spread out or flash by for drivers along the Embarcadero (or Third Street, or Illinois, or Marina Boulevard).

The rippled gray-green surface of the Bay is kept alive by waves, its wind and sense of freedom are defined by the flight of gulls and of sailboats—the sailboats which tend to dominate its activity nowadays, along with the tour boats, which give it human aspect and scale. Most of the huge, boxy, graceless new tankers and container ships can be read only in terms of nonhuman power, or commercial profit (you can literally count some of their cargoes); and perhaps a degree of tough-minded cosmopolitanism: the flags and funnels, the line names on their flanks, home ports lettered on the sterns still tell us of faraway places.
In the future, fewer and fewer ships are likely to dock where we can watch them; most of these old piers will probably be torn down. But let whatever replaces them be no less fine.

(When all is said and done, the finest things man has done for the Bay remain our bridges. Nothing added to or subtracted from the waterfront should be allowed to diminish their splendor.)

I’m less convinced that I speak for all San Franciscans and their visitors when I suggest, finally, that the sights, sounds and smells of maritime activity itself—totally unconscious of any possible aesthetic, historic or touristical values—provide us with keen and defensible satisfactions it would be stupid to lose. (Or continue to lose: we’ve already lost a lot.)

I was brought up in a San Francisco shipping family and was allowed to get drunk very early in life on dockside activity along the Embarcadero, the daily life of freighters with their cargoes and crews. My father’s office, two blocks from the Ferry Building (recently torn down for Philip Johnson’s 101 California), was full of world maps and bills of lading and ship models in glass cases. His company’s pier shed (which was torn down in 1978 for Warren Simmons’ giddy folly) was usually piled high with sacks of coffee beans. My brother and I got to buzz among them on forklift trucks long before we were allowed to drive cars; later we got to travel on cargo ships, up and down the coast. My father’s father had sailed to Japan as a boy with his father, who was the captain of an Alaska sealing ship lost in the Bering Sea in 1897.

The bulkhead of Pier 3 around 1906

There is a sentimental “waterfront” image, made up of barrels and ropes and foghorns, of salty bars and boarding houses. It was fostered by literary types who went to sea (like Jack London and Eugene O’Neill), by romanticized plays and movies and by latter-day imitations. Since, for a long time, the facts of most seamen’s life ashore in San Francisco were far more sordid than quaint, no one regretted the demolition of the firetrap dens off the Embarcadero during the 1930s. The nearest current equivalents are things like the Embarcadero YMCA, its fine old “Romanesque” brick front now choked by the freeway, and the scattering of little bars and cafés (The Boondocks, Blanche’s, Red’s Java House) adjacent to the docks.

But to me, the basic appeal of a waterfront has nothing to do with Shanghai Lil dives or net-and-anchor decor. I like foghorns, and the stench of Fish Alley. But what generates the most excitement is the visible reality of a working port, connecting us to the rest of the world by sea. This connection was tangibly present, once, all along the northern piers, and almost as tangibly in places like the longshoremen’s hiring hall, the Merchants’ Exchange, the Matson and Dollar Buildings, J.C. Hendry Co., the pages of Pacific Shipper. As long as one could see break-bulk cargoes being hauled on and off at the very water-lapped toes of Downtown, one had a satisfying sense of where the wealth came from that built all those towers across the street, as well as a personal link to the distant lands from which the jute and copra (or Hondas, or newsprint rolls) had been sent.

There was a fascination in the visible manipulations of international commerce, global interdependence made manifest by black-jeaned, white-capped longshoremen swinging pallets of coffee sacks and crates and machinery out of the holds and onto the cargo booms of freighters from all over the world. It was clear, even to the economically illiterate, that such activity (unlike, say, tourism or international finance) spread into great rings of attendant activity: into trucks and trains, chandlers and suppliers, bars and repair yards, ultimately even
factories and farms. A successful working-port city feels like a richer and more vital place to live.

Many people would probably say today that they would prefer to have parks, or fishing piers, or restaurants (or their own bayview apartments), built around the Bay shore. I must admit that a great deal of maritime activity—like bulk loading and unloading—is less than thrilling to watch, and some docklands can get pretty grotty. Much of San Francisco's waterfront south of China Basin is today a no-man's-land of pitted roads and urban rubble, decaying truck parts, empty acres, and sheds For Lease.

But virtually every waterfront plan published in recent years, by Port or Planning Commission or BCDC, has acknowledged the excitement of living near or passing through an "authentic" working port.

Bay Area maritime commerce is a key factor in the regional economy, but it is also a major contributor to "the colorful way of life we have come to expect on the shores of this romantic Bay." The public should have opportunities to view the activities of a working port. (BCDC, 1968)

Maritime activities are intrinsically interesting and provide much of the character of the Waterfront. Public access, view sites, and recreation areas are desirable additions to maritime districts. (BCDC, 1975)

An authentic maritime character and strong sense of the natural activities of the Bay would reinforce the special identity of the area. (Port of S.F., 1980)

To continue its tourist appeal, the authenticity of maritime activity must be ensured. (Port of S.F., 1981)

ALL THESE PLANS (at least since the bad old Alioto-U.S. Steel days) insist that they want to retain all possible maritime activity along the waterfront "as long as economically feasible"—though no one wants to predict how long that may be. But the major American port cities of the 1980s (which San Francisco would like to join) offer few of the satisfactions I have described.

Allan Temko has called the giant container cranes of Oakland "the greatest architectural sculpture show on the shore of the bay... perfect illustrations of the plain-spoken nobility of industrial design." He finds the sight of them loading and unloading their "strikingly beautiful" container ships "a dynamic technological tableau, thrilling by day, overwhelming by night."

These mammoth cranes, like great Star Wars monsters, are undeniably impressive, perhaps Oakland's greatest monuments. But such ports, and such methods usually bar public view and access by their acres of Cyclone-fenced storage yards. (One's best chance is to watch across a channel—e.g. Oakland Middle or Inner Harbor from Alameda.) Piles of identical metal boxes offer few clues as to their origin or contents. And even when I can get close enough to watch, the semi-automated maneuvering of 24 or 35-foot containers by giant cranes onto long, flat vessels I find about as poignant and evocative as watching a robot doing assembly line chores in a Japanese car plant.

Six years ago, Dick Nolan of the Examiner wrote, "It may be a dumb exercise in nostalgia to think of San Francisco as a port city." If a "real," old-fashioned port can no longer make it, then promenades and fishing piers and harbor tour boats at least acknowledge the historic and watery fact of the Bay. If the only kind of viable commercial harbor we can have is a smaller version of Oakland's, reaching from India Basin to Mission Rock (with as much ship repair work and non-container shipping as possible), then I'm all for it. Because I'm convinced that San Francisco will be a better city for everyone in it and visiting it, if an when it regains its original role as an important world port.

But there are many values, sometimes warring, sometimes non-profit values, to be considered when reshaping the city's waterfront, if we are to give it a future worthy of its past.

David Littlejohn, a professor of journalism at the University of California, was trained as an architect at Berkeley, but became a writer and critic instead. His latest book, Architect: The Life and Work of Charles W. Moore, will be published early next year.
URING THE PAST several years, a number of students at U.C. Berkeley have used sites along the waterfront for their theses in the Master of Architecture program. They have used these projects as opportunities to explore a variety of current issues in architecture, proposing uses and forms that in each case have two sources of reference. They respond to the special opportunities that the waterfront affords and at the same time they explore fundamental propositions regarding what architecture might be and how it may contribute to an expanded sense of the city and its position by the side of the bay. These projects are particularly concerned with the benefits that can be derived from carefully imagined urban form.

The following excerpts suggest the range of sites, issues and considerations that have drawn the attention of these students. They include specific proposals regarding common civic use, poetic characterization of the water's edge and formal studies of both building form and urban structure and they suggest proposals regarding the best use of segments of the Bay/City edge. Collectively they indicate the possibilities for a fundamental restructuring of the waterfront and the conditions under which it can be experienced.

Donlyn Lyndon FAIA is a principal in the Berkeley Architectural firm of Lyndon/ Buchanan and a professor of architecture at UC Berkeley.
The final designation of the area between the Ferry Building and Pier 24 as open space (developed around the Promenade) creates a marked contrast between this area and the piers south of Pier 24 which still function in an original maritime capacity. This situation establishes an unusual context for Pier 24 in that it becomes a structure which faces two different worlds on its north and south elevations.

Similarly, if one considers diagramatically, the pier along an east-west axis, there is a transition to be addressed here as well. To the west the Bulkhead Building sits on the Seawall, its front (west) elevation faces the City in a formal, presentable manner. From behind, the pier and shed stretch eastward, leaving the Seawall to tiptoe above the water on its foundation of wooden piers. Finally, like a giant exclamation point the Bay Bridge Tower finalizes the procession. The assembly, therefore, addresses landbound responsibilities to the west and functions in a maritime context to the east.

The text and design project which comprise this thesis attempt to study a means for designing buildings which are contextually responsive to the history and character of a given area. In this case, I have focused on the pier buildings of San Francisco as medium through which to work with the ideas presented in the first part of this text. The design project has not only been a means of elaborating on the thesis but also a device with which I could further ascertain the critical elements that are essential to the character of the existing waterfront architecture. The three qualities which have emerged paramount in my understanding of these pier buildings are: the elongated, rectangular massing of the structure, the regular and redundant openings along the building’s flanks, and the incorporation, in some form, of a central spine street or circulation path through the length of the structure. Although I feel my design project addresses these aspects with some success, I believe the next step would be an effort to further refine these qualities in order to allow the proposed building to begin to develop a more individual character. The next pass at a pier shed building would examine more liberal approaches to the nonessential elements until the project ceased to be seen as a progeny of existing pier sheds.

The process which one might utilize to determine the essential characteristics to be addressed in any design project might vary with each circumstance, but one universal, if perhaps obvious, step might be taken in all cases. The designer must be willing to observe elements indicative of the context of the site and allow these to help influence his or her design solutions. Perhaps then the unforgivable sin is an architecture of pure ignorance or vanity, beyond a myopic preoccupation with a "different look." The real loss in such an approach is in its disrespect for the shared histories of location and population.
Transformations: The Glass Street

BY KATHERINE WENTWORTH RINNE (1981)

The Pier is a powerful image. It is the last vestige of the built world, perched over the beginning of the vast and unknown sea. Like the thin sheet of water on the beach, it is the in-between realm that participates in both. It is the mediator between them; between land and sea; past and future; order and chaos; stability and flux; where they are united and resolved. It is where reality meets the dream. Underneath the pier a drama of nature is enacted. The tides rise and fall against the orderly rows of pilings. They are an order against which the everchanging sea can play.

One of the most spectacular waterfront events is the arrival or departure of passenger ships. Pulling into the harbor the cruise ship rivets the attention of passersby who might wonder from where she is coming? or to where she is going? This is cause for celebration with streamers and champagne and dreams of distant lands, romance and adventure. It is a personal adventure that becomes a public event. A contained activity which allows outsiders to participate. Thousands of people can wave goodbye from the dock, or focus their binoculars from Telegraph Hill, or click their cameras from nearby downtown. Anyone is welcome at this celebration.

A guiding principle of this project has been to create a public place that would have few economic restrictions on use.

To create a place for secretaries to eat a sack lunch in the sun, for lonely out-of-work dreamers to dream, for romantic couples to dine and dance under the stars, for itinerant musicians to pass the hat, for the well-healed to take a cruise, and for the rest of us to take imaginary voyages. Programmatic emphasis has been placed on relaxation and quiet recreation rather than on consumption. Ideally, the pier would be open at all hours of day and night.

Commercial activities are very restricted. Some relate directly to ship travel: a ticketing agency, florist, small map store, newsstand and last-minute sundries are all tucked into vest pocket stalls along the interior street. Recreational activities are ranged along the entire pier. Two mini-movie theaters and a starlite ballroom act as magnets at the end of the pier for night-time activities. Eating and drinking places are along the south side, with the waterfront, downtown and the passenger ship forming a dramatic backdrop to dining.

A Maritime Place in San Francisco: Conservation and Development

BY KENNETH R. VAIS (1976)

The intent of this design proposal is to maximize the maritime experience inherent at Aquatic Park. The overall ordering of uses coupled with the architectural vocabulary attempts to engage in a sympathetic dialogue with the place, both past and present.

The one important characteristic of the maritime experience is variety. Places should exist that allow for individual invention and interaction yet within an order which speaks of continuity and coherence.

This plan for development covers the entire length of the Aquatic Park promenade, from the Municipal Pier to the Hyde Street Pier. The overall concern was to maximize the potential of the existing; to create a rhythm along the promenade from activity to pause to activity that could somehow express the feelings of San Francisco’s historic waterfront. Landmarks that can identify location and give meaning to place are called out and visually reinforced.
I chose to work with a site on San Francisco’s waterfront, between the Ferry Building and the Bay Bridge. The most recent plan for this area, as presented in the Northeastern Waterfront Survey Plan of 1979, proposes that the Embarcadero roadway be rerouted inland to create new parkland and open space within this transitional industrial district. It is a spectacular site, the one real window to the Bay in this portion of the City.

Current and projected work in the broader redevelopment area includes: completing a new waterfront promenade, rehabilitating the Ferry building and reestablishing a major transportation exchange there, providing a new Muni railway route along the Embarcadero, and constructing extensive new housing in the blocks nearby. These elements, combined with the site’s proximity to downtown and its powerful setting at the water’s edge, suggested that it would be an appropriate place for a public building of the type I had envisioned.

The underlying goal in the BCDC plan is one of water-oriented use and public access. However, I questioned why public access is summarily equated with open space in most of the ensuing planning documents, and whether “commercial recreation”—the one type of development that is permitted—is in the best public interest here. I felt that this was an appropriate place for a truly public facility, rather than entrusting this valuable setting to commercial interests. A gymnasium and pools in this location, open to all on a nominal fee basis, could be used by a broad spectrum of people: financial district workers, residents-to-be from the nearby development housing and the “south of market” district, and the numerous joggers and strollers who use the Embarcadero route even now, despite its current war-torn appearance.

It is the publicness of the gesture, so crucial to this site and so central to my understanding of the gymnasium, which has guided the urban design decisions involved in this project. After trying several preliminary schemes, I decided to work on the southernmost portion of the site and to leave a substantial portion of the property as park land, the first real sun spot in this heavily developed district. The one “sealed” element of the building program—the handball courts—was placed at the ground level along the Embarcadero roadway, since this will be a heavily trafficked route with few pedestrians. But the other three sides of the building are designed to respond to their respective outlooks: the park to the north, the promenade and the Bay to the east, the small plaza at the Fire Boat House to the south. In this way, the building may be seen as public at two levels—in its use, and in its gesture to the surroundings.
Urban and Always Architecture

BY MARCY GAE JONES

THE PROPOSED ANTIDOTES for "loss of place" range from Robert Venturi’s radical \textit{eclecticism} to Also Rossi’s stripped down \textit{typologies}. The eclectic approach recognizes the value of all levels of symbolical and formal expression. For the eclectics, everything in the existing physical, social and cultural context has potential for inclusion in new architectural projects. Symbolic ornament is almost essential.

Rossi and the European Rationalists, as well as their American proponents, argue for "urban interventions" in reaction to the master planning of Modernism. They propose an "architecture" which, while it recognizes the socio-political make-up of the current context, is ultimately an architecture about architecture itself. Rossi strips away ornament and eliminates the mutations caused by circumstances of context and history to reach the elemental forms of architecture which he then re-assembles in a hierarchical and spare organization.

On this continuum of "more is more" to "least is best," one may seek an intermediate position which satisfies the need both for order and for diversity in the urban environment. Order can come from continuity with the immediate environment and the history of architecture, and from the satisfying perception of geometric purity available on the level of the collective unconscious. Diversity comes from the measured chaos of layers and collisions of built form and from references to shared meanings through symbolic ornament.

It is useful to examine how the modern city became the repository of "environmental monotony." Perhaps the most powerful influence on the form of cities in the past 200 years is industrialization and its accompanying rapid urbanization. With the concentration of population in the cities and the multiplication of buildings to contain it, came a growing sense that the process of forming the city was out of control. Nineteenth-century social critics spoke of the "chaos," the "cancer," the "urban mess" of the industrialized city. It is not surprising that architects and planners began to "regularize" the urban landscape to rectify the congestion and unhealthful conditions. Carefully planned swaths were cut through the traditional organic city in order to open up vistas, make space for focal points, and, most important to the nineteenth-century designers, to provide for ease of vehicular passage through the city. This approach was followed in the twentieth century by even wider ranging destruction of large areas of the city to make way for functional, sanitary modern buildings and traffic arteries.

Designing in response to urban context and formal geometry rather than in response to a narrowly defined program has been a useful experiment. The process has forced serious consideration of the typology of the buildings in the context and the morphology of the area. In addition, the responsibility of the new project to the other inhabitants of the area and my conception of the meaning and use of public open spaces at the water’s edge have guided the design decisions throughout. The design has attempted to provide views to the water, ease of access on foot, and enriching spatial experiences for the people living and working in the area. The idea of the waterfront as a place not only for seeing and smelling the water, but also for touching it, and for watching the drama of the movement of the tides, was carried out in the design. The open, almost stark quality of the plaza is felt to be fitting for the emptiness of being at the edge of the expanse of water, but the emptiness also allows for inhabitation in many transitory ways: open-air theatre, markets, maritime expositions, regattas, runs, carnivals, all may be envisioned there.

It is my conclusion that this design method has led to a more aesthetically satisfying, contextually responsive and place-creating design proposal than would have been produced had specific clients, uses, users, and other pressing but temporary requirements been the primary form determinants. Of course, this conclusion cannot be tested, but the experience of working with this design method can be carried into other more realistic design situations with great usefulness.

The exercise of attempting not to consider specific uses, particularly at the level of single rooms, led to a clear understanding of the underlying organization of all buildings. This process has produced propositions, if not conclusions, about generally satisfying formal qualities for these buildings. The needs for access light and air, to views, to proximity to activity centers can also be understood as generic problems, as can the continuum of private to public spaces.

My approach has been formal. It emphasizes the conversations that are possible between new and existing buildings. It emphasizes the spaces between building and building, between building and water, and at the centers of blocks. And yet, I feel, the functional needs are addressed within this approach no less effectively than had they been the primary basis of the design.

Most important is what is gained with this shift in emphasis to the spaces between. A serious concentration on the courtyards, alleys, streets, and plazas is ultimately not simply in the service of urban form, but is in the service of all the people who inhabit the public realm of our cities.
The Review has compiled a list of some of the major projects currently proposed along the San Francisco waterfront. Some of these will, for economic or political reasons, never be built and others will finally emerge in substantially different forms. The eventual resolution of the downtown stadium question and the I-280 Transfer Program may shuffle many projects around. Nonetheless this survey presents a preview of some of the important new elements that will be added to the City's basic fabric in the next ten to twenty years.
1 Project: San Francisco Container Terminal Expansion  
Location: Berths 94-96  
Developer: The Port of San Francisco  
Architect: VZM Corporation  
Program: An extensive expansion and modernization program to bring the total number of berths up to six and greatly improve rail and truck access  
Status: Soils investigation for phase one is under way; final completion of construction is scheduled for late 1990

2 Project: Pier 88 Public Access  
Location: Islais Street along Islais Creek Channel  
Developer: The Port of San Francisco  
Program: 40,000 square feet of wharf with areas for sitting and fishing will be built as part of a new railroad trellis to be built to improve access to the Container Terminal  
Status: Environmental review has been completed; project is awaiting funding

3 Project: Pier 50 Ship Repair Expansion  
Location: Pier 50, the Mission Rock Terminal  
Developer: SFW Corporation  
Program: An extension of ship repair operations on the southern half of the Mission Rock Terminal and the placement of a new floating drydock against the eastern end of the pier  
Status: Approved by the Board of Supervisors; undergoing environmental review

4 Project: Mission Bay San Francisco  
Location: A 195-acre irregular trapezoid bounded by Townsend Street on the north, Seventh Street on the west, Mariposa Street on the south and Third Street on the east  
Developer: Southern Pacific Development Corporation  
Architects of the master plan: I. M. Pei and Partners and Wallace Roberts Todd  
Program: 11.7 million square feet of office space; 500,000 square feet of retail and hotel use; 4.3 million square feet of research and development space; 7,000 residential units; and 40 acres of parks and roadways  
Status: Described by the developer as temporarily on hold pending the decision on the downtown stadium

Research by Richard Brayton, a local architect, and Michael Stanton.
5 Project: Air Exec Heliport  
Location: Seawall Lot 337 inland from Pier 48  
Developer: Air Exec Inc.  
Architects: Jacobs Associates  
Program: Public access heliport on 1 acre with one hot pad for landings, cooling-down area for 3 helicopters, surface parking for 14 helicopters and an administrative building containing lounges, ticket sales booths and repair shops is planned  
Status: Negative declaration initially granted the project is being appealed

6 Project: China Basin Office Building  
Location: A rectangular block bounded by Barry, King, Third and Fourth streets on China Basin  
Architects: Whisler-Patri  
Program: 140,000-square-foot office building  
Status: Building permit is processed and ready but the project's construction is being delayed pending resolution of stadium location

7 Project: Downtown Stadium  
Location: Undetermined; 14 sites including 4 adjacent to the harbor are being studied  
Developer: Undetermined; could be either the City of San Francisco or private sector developers  
Feasibility Study Architects: Crosby-Thornton-Marshall  
Program: A 70,000-seat multi-purpose stadium  
Status: The City is currently reviewing the feasibility study. After this review a five-person Mayor's Task Force will study financing options and report to the Mayor

8 Project: South Beach Small Boat Harbor and Park  
Location: The site of Piers 42, 44 and 46A  
Developer: The San Francisco Redevelopment Agency  
Designers: Winzler and Kelly Engineers with other consultants  
Program: Demolition of existing Piers 42, 44 and 46A will allow for the construction of a new breakwater, a 700-berth marina and the relocation of traffic from Barry to King Streets creating a new park on China Basin  
Status: Construction scheduled to begin this Fall

Note: The reader will notice a conspicuous gap along the Northeast Waterfront from Piers 9 to 35. The options for this important section of the harbor are now being studied by a team headed by the Port with staff assistance from BCDC and the Planning Department. The results of their research will be available next year. Until this study is completed, all bets for this area are off.
Project: Pier 40 Renovation  
Location: Pier 40  
Developer: San Francisco Redevelopment Agency  
Architect: Robinson Mills Williams  
Program: Renovation of the existing pier shed into 100,000 square feet of retain and office support space for the adjacent small boat facilities including a ship's chancellory, restaurants, parking  
Status: Second phase of the South Beach Small Boat Harbor and Park; construction contingent in part on the relocation of the existing ship repair operation now on Pier 40 to Pier 36 and the reconstruction of Pier 34 to receive the uses displaced from Pier 36

Project: South Beach—a Redevelopment Agency Project  
Location: All or part of six blocks along Townsend and Brannan Streets near the Embarcadero  
Developer: Campeau California will build the first 450 units of housing on the lots closest to the Embarcadero and renovate the Oriental Warehouse. Other developers selected by the Agency Commission for the remaining parcels include Forest City Dillon, Grosvenor Properties, General Atlantic and South Beach Properties.  
Architect: IBI are the architects for the Campeau housing, Fisher-Friedman  
Program: The Redevelopment Agency program calls for 2,000 units of housing (including a percentage available for low and moderate income families), office and rental space  
Status: Like other projects around China Basin, South Beach is in a holding pattern awaiting the touchdown to a specific site of the new stadium proposal

Project: Renovation of the former Joseph Magnin Building  
Location: 59 Harrison Street  
Developer: Hillman Properties West Inc.  
Architect: Robinson Mills Williams has done the Preliminary planning  
Program: Renovation of this former warehouse into 125,000 square feet of office and commercial space  
Status: Informal staff review by the Planning Department is under way as are negotiations with the Port to secure a long-term lease on Seawall Lot 321 for parking

Project: Rincon Point  
Location: A half-block west of Howard Street bounded by Spear and Steuart Streets  
Developer: Not yet selected by the Redevelopment Agency  
Architect: Will be chosen by the successful developer  
Program: Approximately 840,000 square feet of total construction including 213 to 426 dwelling units  
Status: The Request for Proposal will be sent out in two or three months

Project: Ferry Building  
Location: On the Embarcadero at the terminus of Market Street  
Developer: Continental Development Corporation  
Architects: I. M. Pei and Partners  
Program: Renovation of the Ferry Building into an office, retail and restaurant complex; conversion of the Agricultural Building (immediately south of the Ferry Building) into food mall; construction of a new World Trade Center on Pier 1; and the construction of new plazas and promenades are all now planned as part of this project
<table>
<thead>
<tr>
<th>Project</th>
<th>Location</th>
<th>Developer</th>
<th>Architect</th>
<th>Program</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 FERRY BUILDING GARAGE</td>
<td>Seawall 331 across the Embarcadero from Pier 3</td>
<td>Continental Development Corporation</td>
<td>Not known</td>
<td>400-car silo parking garage with three levels below grade and five levels above</td>
<td>In early planning; this garage will be required if the renovation of the Ferry Building proceeds</td>
</tr>
<tr>
<td>15 PIER 3 OFFICE COMPLEX</td>
<td>Piers 1½, 3 and 5 and their bulkheads</td>
<td>Not yet selected by the Port Commission</td>
<td>Will be picked by the successful developer</td>
<td>The RFP will call for the removal of Pier 5 and the renovation of the bulkheads into offices and the construction of 100,000 square feet of office space on Pier 3</td>
<td>Under construction and scheduled for completion in June of 1984</td>
</tr>
<tr>
<td>16 PIER 7 PUBLIC ACCESS</td>
<td>Pier 7</td>
<td>The Port of San Francisco and the Open Space Committee of the Recreation and Parks Department</td>
<td>ROMA</td>
<td>1½ acres of promenade space on the water with places for fishing and sitting</td>
<td>Under review by BCDC, the City Planning Department and the Open Space Committee; final implementation will be linked to the development of Piers 1½, 3 and 5; construction of this public access may be required of the developer selected for the Pier 3 Office Complex</td>
</tr>
<tr>
<td>17 EMBARCADERO OFFICE TERRACE</td>
<td>Seawall Lot 321 bounded by Front Street, Green Street and the Embarcadero</td>
<td>Michael Blumenthal</td>
<td>The Munselle/Brown Partnership</td>
<td>140,000 square feet of office space on four levels (the first level will be depressed below existing grade) and extensive underground parking</td>
<td>In final design with environmental review proceeding</td>
</tr>
<tr>
<td>18 ROUND HOUSE PLAZA</td>
<td>Seawall 318 bounded by Lombard Street, Sansome Street and the Embarcadero</td>
<td>Round House Investors</td>
<td>DMJM</td>
<td>46,000 square feet of retail and office space in the renovated roundhouse and two new infill buildings</td>
<td>Under construction and scheduled for completion in June of 1984</td>
</tr>
<tr>
<td>19 NEW HYDE STREET PIER AND PIER 45 DEVELOPMENT</td>
<td>North end of Hyde Street and Pier 45</td>
<td>Not yet selected by the Port Commission</td>
<td>Will be selected by the successful developer</td>
<td>The new Hyde Street Pier will be 3½ acres of active fish handling (not processing) industry including an ice plant, auction hall, temporary accommodations for industry and 50 berths for trawlers; after this, construction Pier 45 will be redone to include 450 condominiums, a 250-room hotel, 50,000 square feet of offices, 40,000 square feet of local service commercial and 60,000 square feet of an as yet undecided institutional use</td>
<td>Under construction and scheduled for completion in June of 1984</td>
</tr>
<tr>
<td>20 FISHERMAN'S WHARF BREAKWATER</td>
<td>North of proposed Hyde Street Pier, opposite the curving Pier that shelters Aquatic Park</td>
<td>The Port of San Francisco</td>
<td>Bechtel</td>
<td>A breakwater to protect the fishing fleet at the proposed Hyde Street Pier</td>
<td>In final design with environmental review proceeding</td>
</tr>
<tr>
<td>21 FORT MASON CENTER</td>
<td>Fort Mason</td>
<td>Golden Gate National Recreation Area</td>
<td>Robinson Mills Williams</td>
<td>Renovation of existing pier buildings into multi-use community cultural facilities</td>
<td>Building renovations are under way; the resurfacing and relighting of the parking lots is scheduled to begin in October of 1983; fund-raising efforts to find $5 million to finish the master plans are in progress</td>
</tr>
</tbody>
</table>
The I-280 Transfer Program

THE I-280 Transfer Concept Program is a lengthy study of potential ways to improve transportation along the Embarcadero corridor in San Francisco. Improvements would be funded in part by rerouting the $87 million originally set aside to link Interstate 280 to the Bay Bridge to other transportation uses. The program is under the overall direction of a Policy Control Committee composed of Norman Kelley of CALTRANS, William Lucius of MTC and Richard Sklar and Dean Macris for the City of San Francisco.

Last October this group unanimously approved six alternatives and sent them to a Technical Advisory Committee for study and evaluation. The Technical Advisory Committee consists of representatives of the City, the Federal Highway Administration, MTC, UMTA and CALTRANS who are assisted by seven consulting firms led by Parsons, Brinkerhoff, Quade and Douglas. The alternatives range from studying what will happen if nothing is done to elaborate changes costing over $400 million. All alternatives that involve new construction require additional funding beyond the unused $87 million. Most of the schemes include some combination of the following elements:

- Modifications to the stub of I-280;
- Possibly a new touchdown off the existing end or cutting it back to Sixth Street.
- Demolition of the Embarcadero Freeway and construction of new on and off ramps.
- Improvements to the Embarcadero Surface Roadway.
- A new Muni “E” line from Fort Mason to either the SP Station or to a link with the proposed Market Street “F” line.
- Extension of the Muni Metro from the Embarcadero Station to the SP Station.
- Extension of the SP tracks underground to a new downtown terminal near the Transbay Terminal.
- Intercept parking at the terminus of I-280 to discourage auto traffic downtown.
- Introduction of Transportation Systems Management techniques to improve the efficiency of existing facilities.

The draft of the Technical Advisory Committee’s evaluation of the six alternatives should be available in early October, and public hearings are planned for January of 1984. After the public hearings, the Policy Control Committee will select a preferred alternative, and a final EIS/EIR will be submitted to federal transportation officials for their approval. Barring unexpected problems, preliminary engineering can then begin as sources for the rest of the construction funding are sought.
Some Thoughts on the Future

SAN FRANCISCO'S waterfront together with its dramatic topography, present an incomparable setting for a city. The amphitheater of surrounding hills frames the water's edge, creating numerous vistas to the water. As a flat, expansive plane, the Bay acts as a stage whereupon one may witness the drama of ever-changing activities and environmental conditions. It defines the city's edge, gives structure and orientation to the urban experience and creates visual amenities, recreational opportunities for urban dwellers and serves the needs for transportation, trade and commerce. It is a diverse waterfront. Portions from the Presidio to Fort Mason are in natural shoreline and are under the jurisdiction of the Golden Gate National Recreation Area. The Central and Southern waterfronts in San Francisco are the primary areas of maritime growth and expansion. The Northeast Waterfront, adjacent to the most urbanized area, is in transition and is the subject of this article.

San Francisco is unique as a community in that waterfront planning and design issues have long engaged the active interest and concern of a diverse public. Even as early as the 1880s, public sentiment was aroused over the degree to which the waterfront had become controlled by private speculative interests. These concerns led to the transfer of the waterfront to public control under the State Harbor Commission. In the 1960s, citizen activists halted the construction of the Embarcadero Freeway in one of the first freeway revolts in the country. At about the same time, they also stopped enormous development projects on filled land in the bay, such as the U.S. Steel and Ferry Port Plaza. The role of the public in the waterfront has not always been reactive or negative in character, but citizen groups have also helped to formulate larger concepts and plans. The Northeastern Waterfront Advisory Committee had tremendous success in reaching community consensus and developing a plan for the waterfront from the Ferry Building to China Basin. More recently, an Ad Hoc Waterfront Committee has been formed, consisting of concerned citizens, environmentalists, public leaders, business persons, architects and planners, to establish a long-range vision for the future. Many of the ideas discussed in this article have evolved from interaction with this group.

In the Northeast Waterfront the future of many of the inland areas has been fairly well decided. Either development has already proceeded as in Levi's Square or definitive plans have been drawn such as in South Beach. The major issue in the Northeast Waterfront is the future of the finger piers and the treatment of the shoreline band. Many cities such as New York, Seattle, Boston and Baltimore face the question of the future reuse of underutilized finger piers. Each place has taken a different tack, from New York—experimenting with inflatable structures—to the development of condominiums in Boston and commercial recreational shops in Seattle. However, difficulties have been experienced with each approach. Piers, although well suited to break-bulk cargo handling, are not easily adapted to new uses and they often need extensive structural improvements, making redevelopment difficult and costly.

In Seattle, where many piers are privately owned and developed for commercial recreational shops, different problems, primarily related to authenticity, have surfaced. There, the argument is made that preserving the piers and developing them for shops and restaurants maintained the overall maritime character of the waterfront. However, maintaining a physical facility without its rightful activity often produces an empty shell devoid of intrinsic meaning. When piers and sheds are used for commercial uses that market the most trivial of items, they cheapen the integrity of the waterfront under the guise of authenticity. The central Seattle waterfront, once the focus of maritime activity, today is characterized by stores selling ashtrays made from shells, statuary of sailors and fishermen, salt water taffy and nautical nick-nacks.

Here in San Francisco, a wide array of uses may be contemplated for the finger piers. Commercial recreational development is not likely to be a prime candidate right now, especially with the recent development, after a long public battle, of Pier 39. Besides, demand is limited, and commercial recreational development planned for many other parts of the city is likely to absorb the demand for several years. Hotel development is the only tourist-oriented use that may be more attractive than others, particularly when combined with maritime activities. Cities such as Miami, Vancouver, Honolulu and New Orleans have successfully combined cruise ship facilities with hotel development. However, even if a hotel were developed on this portion of the shoreline, it would be a discreet case, probably in the area of Pier 35, and would not deal with the overall character of the area.

BY BORIS DRAMOV AND BONNIE FISHER

The Embarcadero E Line along the Waterfront with the...
San Francisco's Urban Waterfront

Residential uses have also been considered a possibility for reuse of the finger piers. However, to privatize the waterfront for only a relatively few high-priced units would show extreme disregard for an important public resource. The issue of exclusivity is what rightfully motivated BCDC and the State Lands Commission to prohibit the development of housing over the water. Offices would be another exclusive use and would create a dead area on evenings and week-ends. Interim uses have also been proposed for the piers, like motion picture films studios which don't generally locate in the center of the city but are large employers, and could be basically subsidized, paying low rents to the port for pier sheds. However, being inward-oriented in nature, they would be an inappropriate waterfront use. What we are seeking is a larger vision which will give direction for the future use of a very important public resource.

In many cases, the best solution for the finger piers may be not to reuse them, but instead to remove them altogether. Since the finger piers no longer serve a real maritime purpose nor contribute greatly to the visual coherency of the city, their removal would help to bring the city into closer contact with the Bay at the street scale, would express the shoreline, create a dramatic cityfront unequalled throughout the world, and restore the open waterfront of the past. In certain key locations, however, a clustering of piers would reinforce the significance of special portions of the waterfront. For example, the piers in and around the Ferry Building, from the Agriculture Building to Pier 7, give emphasis to the symbolic value and maritime activities of the site. In addition, a few bulkhead buildings, selecting those which are the most architecturally interesting, could be retained as an example of a particular moment in waterfront history. Finally, Pier 45 marks the westernmost terminus of the Great Seawall and is unique as the only landfill pier on the waterfront. It creates special opportunities for redevelopment and should therefore be retained.

To create a publicly accessible waterfront in the broadest sense involves peeling back the layers of built history to expose the last extension of constructed shoreline where land and water meet along the line of the Great Seawall, capped by The Embarcadero. It means reinforcing the water's edge and restoring meaning to the significance implied by the Spanish word, Embarcadero. By revealing the shoreline and directly juxtaposing the opposing forces of land and water, a sense of immediacy will be gained. Thus, getting to the water will be enhanced not only in physical terms, but also in the most profound aesthetic manner, eliciting qualities which inspire the experience of the waterfront and powerfully evoke diverse meanings.

A major seawall quay should be built as piers and bulkhead buildings which presently hide the waterfront at street level are removed. It should emulate those in the best Mediterranean tradition, accommodating in a very simple fashion a wide variety and mixture of activities, including promenading, fishing, jogging and other linear activities, viewing, boating mooring and loading and unloading of passengers. The concept for the quay would build on the precedent already established by the Embarcadero promenade, but would differ in that it would encompass not only pedestrian and landside activities, but would also include those taking place on the waterfront as well. The quay, more than any other element in the city, will thus reinforce the maritime nature of the water's edge. It would open the city up to view the great drama of ocean-going ships moored alongside the water's edge and would give greater visibility to ships passing in and out of the navigation channels on route to port facilities in the Central and Southern Waterfront and also to those in the active ports of Oakland and Richmond. By making the Bay more visible and maritime activity more observable, the public would gain a better appreciation of Bay Area maritime commerce and trade.

The quay would be of heroic scale and at least 80 feet in width. It should be rough in nature, reflecting the strong features of the water's edge and the powerful forces which continue to shape it. To preserve flexibility and enhance a sense of immediacy, the quay should be developed without a railing along the edge. At present, there are no railings along the waterfront in the characteristic maritime manner. There are precedents in the U.S. and abroad that show that a barrier-free water's edge can be safe. In traditional Mediterranean harbors, such as in Hvar, Yugoslavia, the water's edge was entirely open and unobstructed to allow the greatest flexibility in loading and unloading passengers and goods. Further, many cities have recently built quays without railings to enhance scenic beauty and accommodate loading and unloading of vessels, such as the new esplanade encircling the Inner Harbor in Baltimore. The Embarcadero, inland of the quay, would transition the city to the city's edge. It should be a simple open space that frames the waterfront and expresses
the line of movement along it. Instead of emphasizing regional through-movement, the Embarcadero should accommodate local circulation along the waterfront. As now contemplated by most alternatives being considered in the I-280 study, the roadway could become an attractive waterfront boulevard with a landscaped median.

A Lesson to be Learned

Aquatic Park has long been established as one of the oldest recreational areas along San Francisco’s waterfront, dating from the early 1800s. In the 1930s, its recreational use was augmented through the development by the WPA of a water park that would serve the recreational needs of thousands of people. This is one part of the urban waterfront whose use is well established and not likely to change, particularly now that it is under the jurisdiction of the GGRNA. The water’s edge is diverse in character, including the only sandy beach along the urban waterfront, a hard-edged promenade and a pier which extends the line of thrust suggested by Black Point to create a protected water basin that is safe for swimming, fishing, rowing and a variety of other water-oriented sports. The water’s edge is also totally public and recreational in character, carefully transitioning to inland uses. Inland of the public beach and promenade is an amphitheater which makes up the grade change to street level and a grassy public park overlooking the Bay. Further inland and across the street is public-oriented Ghirardelli Square, one of the first and most successful waterfront specialty centers developed within a historic building in the country. Residential neighborhoods frame adjoining hills and enjoy spectacular views to Aquatic park and the Bay beyond. The careful mixture of uses is violated only by the high-rise Fontana Towers, whose only redeeming feature is that, by the gravity of its assault on the waterfront, it helped to institute the 40-foot height limit along the entire waterfront.

Aquatic Park illustrates how an urban waterfront can be truly democratic, accommodating a wide range of water-oriented activities that are inclusive, not exclusive in character and that build on one another to create a well-balanced environment. Each layer of activities in this cross-section of waterfront exists not at the expense of, but in support of, each other and gradations between uses allow the amenity of the Bay to be fully shared by a great number of people.

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