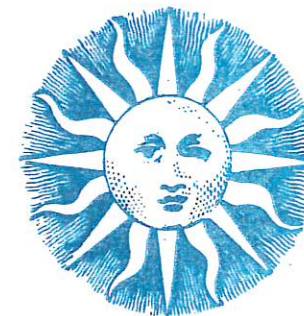
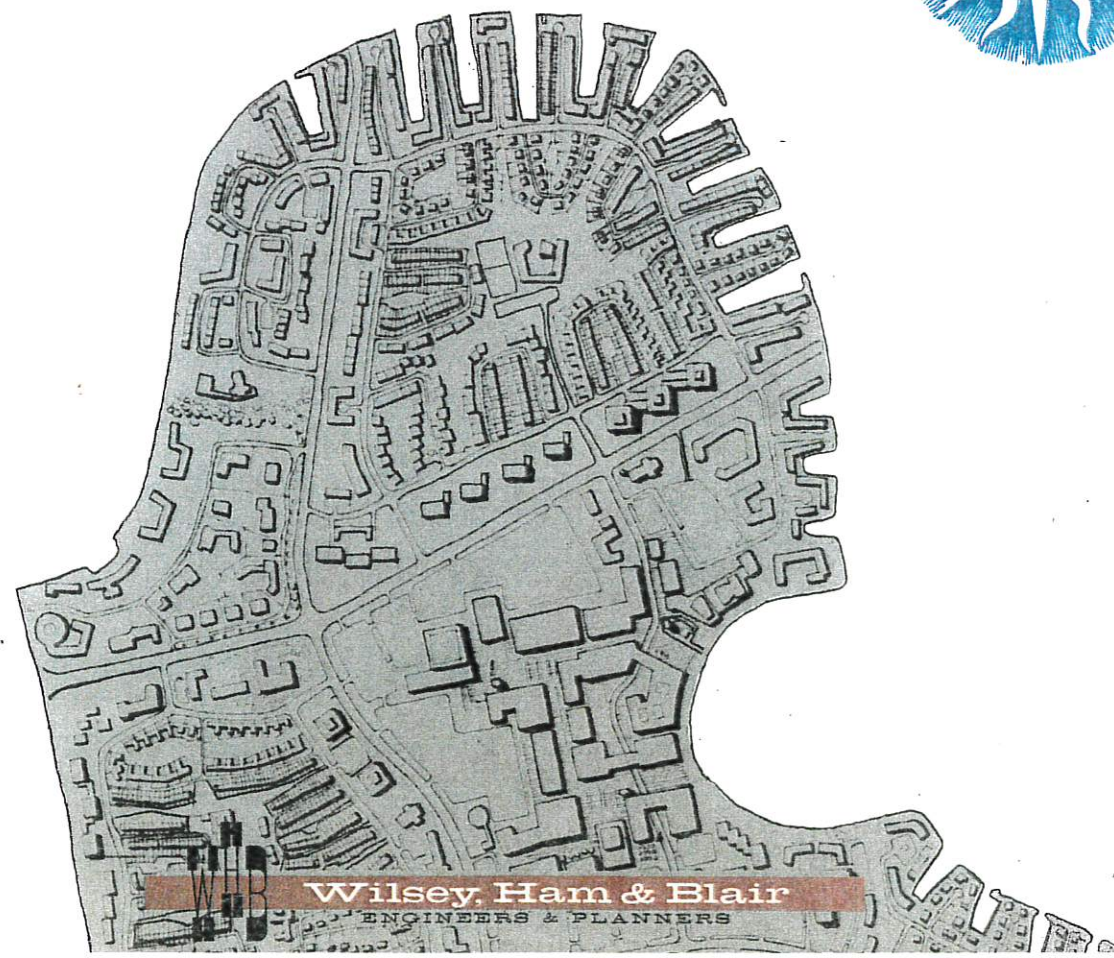


*Brewer Island today*



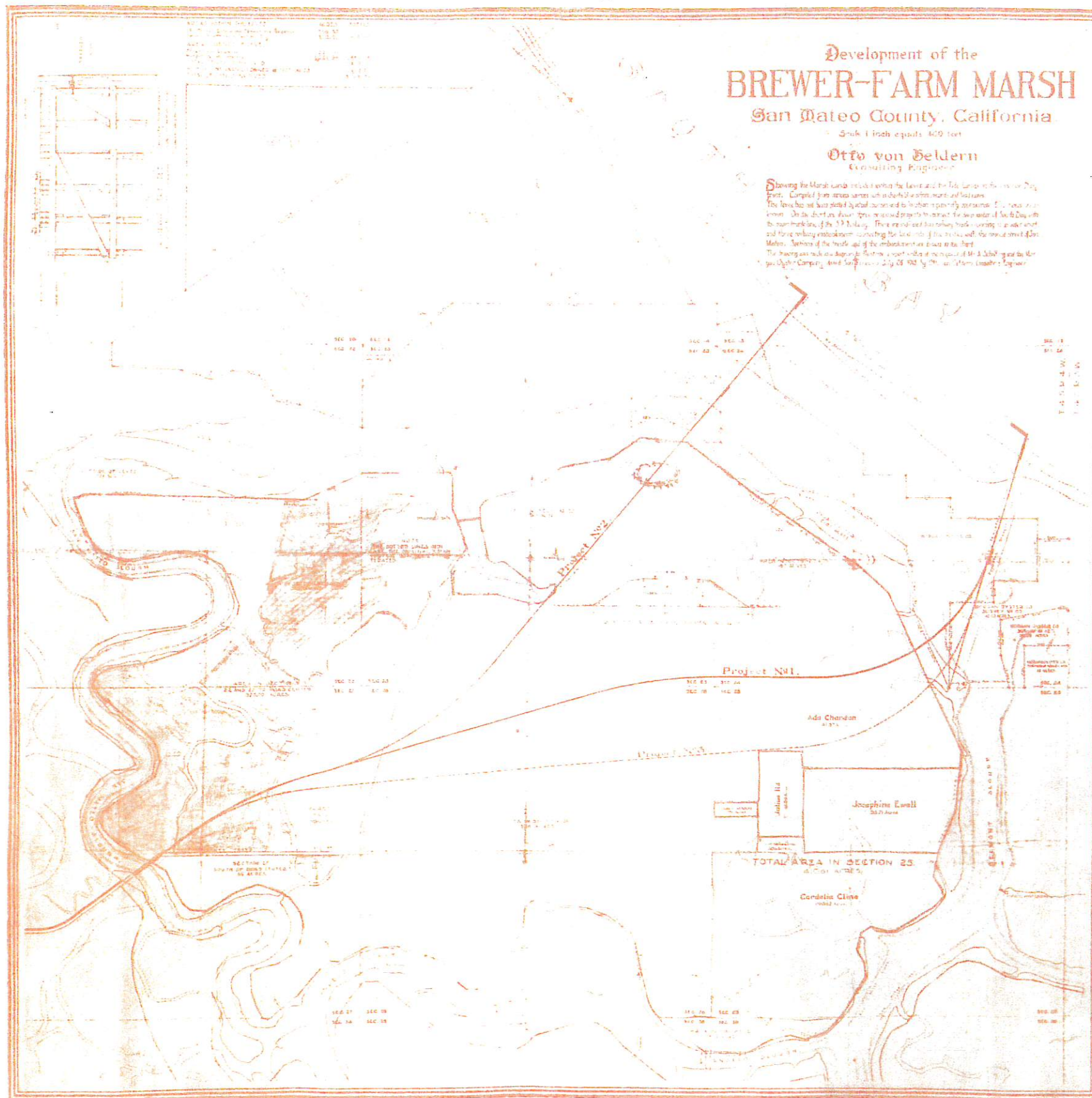
**FOSTER CITY** *tomorrow*





# Development of the BREWER-FARM MARSH San Mateo County, California.

Otto von Seldern  
Consulting Engineer

[illegible]

*This is a feasibility report and General Development Plan for the unique new town of Foster City on the shores of San Francisco Bay. This plan represents the first attempt in the West to create a city in toto, complete with employment and all community facilities and services and designed as a single, balanced composition. It represents a logical breakthrough in scale from the shopping centers, industrial parks and housing projects of recent decades, to an integrated union of all these elements. It rests in part upon fourteen years of British experience in this field, but is tailor-made to California standards and expresses the indigenous contemporary culture of the San Francisco Bay Area.*

*This is the first of several reports on Foster City. Subsequent issues will deal with the detailed site planning and design of individual neighborhoods and other elements.*

GENERAL BACKGROUND OF ISLAND & REGION 3- DEVELOPMENT POLICY FOR FOSTER CITY 4- MARKET ANALYSIS, Industry, Local Service, Boats & Berthing, Housing, Commuters 8- ACREAGE ALLOCATION 18- DESCRIPTION OF THE GENERAL PLAN 20- ENGINEERING CONSIDERATIONS, Fill & Dredging, Streets & Highways, Drainage, Other Utilities, Community Facilities, Contingencies 27. APPENDIX A, Distribution of households by income and family size i.

July, 1960







## GENERAL BACKGROUND OF ISLAND & REGION

The aerial photo shows Brewer Island in its regional setting. The Island lies adjacent to the west shore of San Francisco Bay about 12 miles south of San Francisco immediately adjoining the City of San Mateo. It is 11 miles west of Hayward, at the end of the San Mateo-Hayward Bridge.

The island covers some 3000 acres of reclaimed land, of which 2600 acres is held under purchase agreement by the developers.

The neighboring City of San Mateo has over 70,000 people, separated from Brewer Island by a narrow strip of water called Marina Lagoon. The people of the area enjoy the highest income in the Metropolis, and about 35% of the breadwinners commute to cosmopolitan San Francisco each day. The congestion of commuting facilities was one of the factors leading to the decision to offer housing accommodations to all but a few of those who will be employed in Foster City, so that while they may enjoy the cultural advantages of San Francisco, they will be relieved of the expense and trouble of trying to reach it during commuting hours.

The market analysis indicated that, during a 15 year development period, there would not be sufficient employment prospects to provide jobs for all who could live on the Island at full development. Therefore, a number of waterfront and adjacent fine residential sites will be provided for well-to-do suburbanites who may be retired or

who may fill executive positions in nearby cities on the Peninsula, in East Bay and in San Francisco.

The County of San Mateo Master Plan projects a 1975 population of about 700,000, an increase of 250,000. The number of jobs in the County is expected to increase from 106,000 to over 200,000 during this period, of which 11,000 will be located in Foster City (see below).

The U.S. Dept. of Commerce has projected a population increase in the 2nd District of San Mateo County (including Belmont, San Mateo, Hillsborough, San Carlos and Brewer Island) of about 58,000 between 1960 and 1975. This is considerably lower than the County's own planned increase. Foster City will contribute 35,000 to this number.

The major elements of the County Master Plan which will affect Foster City are the new Bayfront Freeway running from San Jose to San Francisco; the new 19th Avenue Freeway, running from the Central Valley to the Coast; large water recreation areas to the north and south of the Island; several hundred acres of local industry and regional recreation; and a residential density of around 15 persons per gross community acre (or about 35,000 people for the Island Community).

## DEVELOPMENT POLICY FOR FOSTER CITY

1. Brewer's Island is a choice location for a new City. It is central to Metropolitan San Francisco, and deserves to be developed at high quality and high intensity, to maximize its contribution to *metropolitan living*.
2. Since it will be developed as a whole, in accordance with modern planning principles and unity of control, it can be relatively more *self sufficient* than other Peninsula communities.
3. Since surrounding communities have failed to provide themselves with adequate employment area, Foster City will offer a closer *balance between work space and residential area*.
4. Full and adequate provision will be made for all *community facilities* and services required by the resident population, including schools, parks, playgrounds, clinics and sanitariums, churches, libraries, swimming pools, community center, communications, shopping facilities, exhibits, parking and maintenance and operating facilities.
5. *A full range of housing types* will be provided for single people and families of the range of income, social characteristics, and family size indicated by adjacent employment opportunities and the local housing market; such housing to include single family detached houses, single family attached houses, garden apartments, high-rise apartments, houses for the elderly, and hotels and other transient and recreational quarters.



6. Consideration is being given to establishing the following special features:

Yacht Harbor and Marina with residential keys,  
 A Permanent Regional Exhibition and Amusement Park,  
 Planting of mature trees,  
 Placing transmission lines underground  
 A jitney system, water buses for internal circulation,  
 A heliport,  
 A convention center, and  
 A small-scale "TV City" for offices, recording studios, and  
 TV production.

7. *The Community will be designed in toto*, according to advanced contemporary urban design and architectural principles, and each part of the community will be designed to integrate harmoniously into the whole. New features will include: visual composition of all elements in the townscape; carefully inter-related variety of housing types around common-core super-blocks; organization into architectural complexes clustering into neighborhoods; spacing for discontinuity of residential sprawl and monotony; custom-made street furniture for compatibility of style throughout all visible man-made features; arrangement of building masses and landscaping around squares and plazas to promote neighborly identification and a sense of enclosure, security, and urbanity; private patios or gardens for all families located on the ground floor; a grand canal for recreation and transportation as well as drainage.

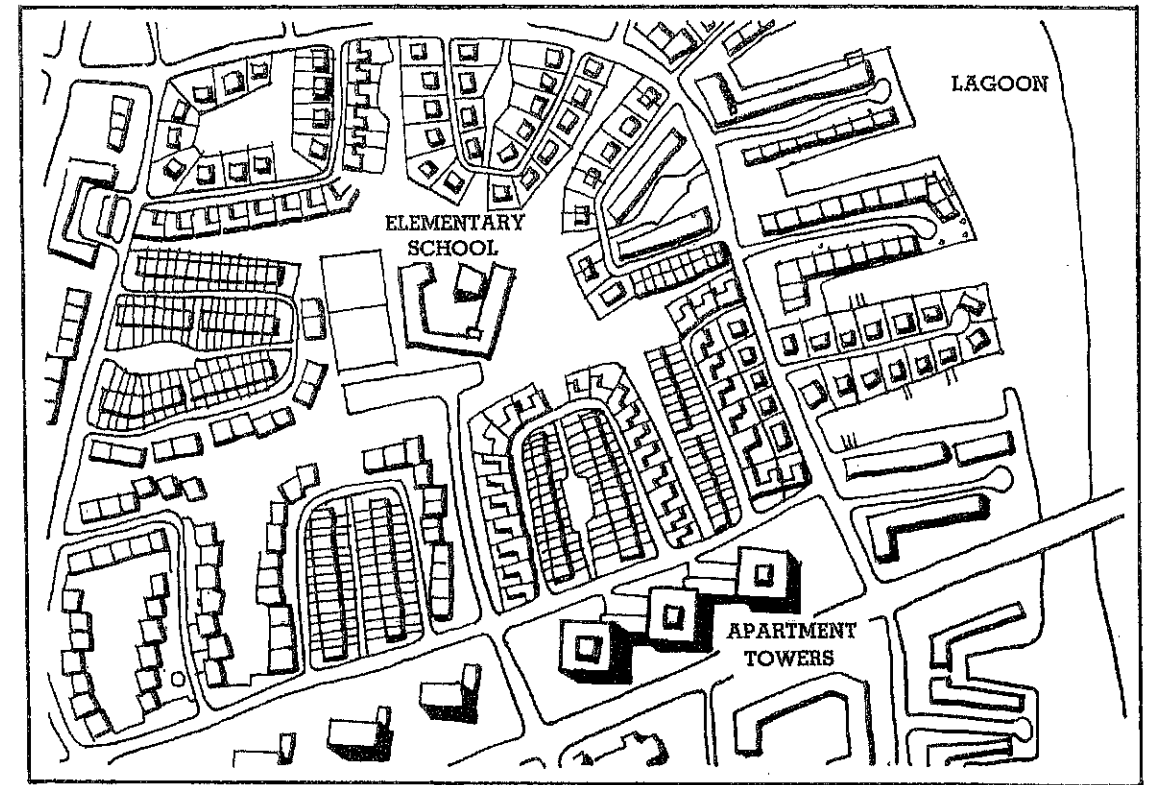




8. A unique and outstanding *Town Center* will be developed, comprising a designed composition of stores, offices, public buildings, churches, cultural facilities, recreation and amusement services, hotels, service establishments, banks, restaurants, theater, malls, squares, landscaping, parking structures, and a water front promenade.

9. In order to maximize efficient location and *reduce commuting*, houses and places of employment will be developed concurrently, so that a newcomer finding a job may also find a vacant and available dwelling at the same time, and so *prospective industries can be offered housing* for their employees. This is expected to provide added inducement to industrial development, reduce private and public commuting costs, and foster social stability and civic pride.





10. Individual lots for single family houses will be provided, with *minimum design controls allowing full expression of each family's individual taste* within an over-all framework of compatibility. Clusters of buildings, such as in multiple dwelling areas, community and neighborhood centers, and industrial parks, will be built in accordance with over-all *site plans* to exploit the many advantages of orderly and harmonious arrangement.
11. All *elementary schools will be located at the center of neighborhoods*. With arterial streets generally bounding neighborhoods, and with moderately higher population density, all youngsters will be within 2000 feet of their school and neighborhood playground and may reach them without crossing major traffic thereby eliminating need for an expensive bus system.



**MARKET ANALYSIS**

The areas required for industrial and other employment are not only justified by the balanced community objective, but must be related to the market ability of land during a fixed period of time. Land can be sold on Brewer's Island for industrial and office activities because of the future growth of population and economic activities in the San Francisco Bay area and in San Mateo County in particular.

The County Planning Department of San Mateo prepared estimates on this future growth of the county to the year 1990. For a twenty year span, 1960-80, the following levels of population and jobs in the county were projected:

<i>Year</i>	<i>Total Population</i>	<i>Jobs in the County</i>
1960	450,000	106,000
1970	625,000	178,000
1980	750,000	217,000

Upon these estimates, plus data and information on the current rate of industrial and office development, estimates on the likely amount of industrial and office acreage in Foster City were made.

INDUSTRY. It is estimated that 330 acres can be utilized for industrial activities on Brewer's Island within the next ten to fifteen years. At an average employment density of 15 workers per gross acre, employment for 5,000 workers would be provided. The estimate was checked by two methods.

Under the first method it was found that 72,000 new jobs were projected in San Mateo County during the 1960-70 decade. If 20 per cent of these jobs were in manufacturing, assembly, fabrication, wholesaling, and related activities, then there would be approximately 14,400 new industrial jobs in the next ten years.



At an employment density of 15 workers per acre, 960 would be required. An additional 265 acres would be required to 1975.

An inventory of existing industrial lands developed with access and utilities showed a total of approximately 760 acres. This total is subject to considerable change as sales are made and as other land is placed on the market, but until a major change or land transaction occurs, 760 acres of developed industrial property describes the existing situation. In addition, there are some 330 acres of undeveloped industrial land and extensive acreage in the tidelands which require fill. Considering only the existing developed industrial land in the County, there would be a demand for 200 more acres of developed industrial land to meet the anticipated future 10 year county needs, or 465 acres for 15 years. It is believed that Brewer's Island is well situated to supply most of this demand for 465 acres, and that it has unique competitive assets over any other potential developed industrial acreage.

At an estimated rate of industrial development of 20 plus acres per year, 330 acres could be disposed of in Foster City for industrial activities in 15 years, conservatively. As a check on this estimate, the rates of sale for industrial activities were examined. Rates varied from industrial park to industrial park, and were dependent on location, price, industrial activities permitted, and general business conditions. In Millsdale, which is closest to Brewer's Island, 140 acres were disposed of in 5 years, or an average rate of 28 acres per year. Other industrial parks had faster and slower rates. If Brewer's Island should have the same rate as Millsdale, the proposed 330 acres could be disposed of in less than 15 years. Therefore, an additional 70 acre reserve can be made available within the Plan.

Based upon this industrial employment potential of 5,000 primary jobs, an additional secondary work force of at least 5,000 is indicated. The breakdown of employment among these additional jobs was based upon comparable communities in the area, adjusted for special features of the Plan, and checked back against the expected number and wealth of the planned population (see below). In this manner the following categories of employment were estimated and their acreage requirements calculated.

**RETAIL TRADE AND SERVICE EMPLOYMENT.** An estimate of 1,850 jobs in retail trade is based on the requirements of the population of 35,000. Data on the ratio of retail jobs to total population were examined from selected counties and cities in the San Francisco metropolitan area. Five per cent plus was selected for Foster City. This may be compared with San Mateo County where the ratio was 4.8%; San Bruno, 4.2%; Belmont, 3.2% and Redwood City, 7.9%. For the 6 county San Francisco metropolitan area it was 5.8%. Cities show greater variation due to the irregularities of municipal boundaries. Counties with core cities (San Francisco and Alameda County) have higher percentages.

The estimate of service employment (which includes business and repair service, personal service, hotels and entertainment) was also based on a ratio to population and the observation that service employment was approximately one-half of retail trade employment. With retail employment calculated at 5 per cent plus of population, service employment was set at 2.5 per cent plus of population, or 950 jobs.

The space required for these activities can be divided between the town center and neighborhood units in Foster City. A grand total of



50 acres is estimated, based on a formula of 1.4 acres per 1,000 persons. This ratio includes not only floor area but also parking. Of the total of 50 acres, 15 acres are subtracted from the Town Center and allocated to the neighborhood units.

In the 35 acres retained in the town center, space for a department store, variety store, furniture and appliance store, apparel shops, restaurants, theaters, bowling alley, business and repair services and other similar stores and establishments will be provided. The total acreage includes parking facilities.

The acreage allotments were checked by examining floor area data of small and large planned shopping centers. After adding parking, it appears that a 35 acre area in the town center is sufficient for major retail and service activities, and 3 to 5 acres provides adequate space for one convenient retail and service facility at the neighborhood level.

EMPLOYMENT OCCUPYING OFFICE SPACE. The estimate of office employment is 1500. This total is broken down as follows:

NUMBER	ACTIVITY	SOURCE OF ESTIMATE
400	Finance, insurance & real estate	A fraction over 1 per cent of total population
800	Professional (legal, medical and other—except educational)	Twice the number of jobs in finance, insurance and real estate
150	Manufacturing and wholesale office workers	San Mateo County ratio of 20,000 industrial jobs to 650 related office jobs
150	Miscellaneous	Provides office space for other categories of employment. Permits expansion in itemized categories.

A density of 80 workers per acre was selected to determine total acreage, allowing for buildings with landscaping and parking. The density is based on an allowance of 550 sq. ft. per employee. Of this 550 sq. ft., 200 sq. ft. is for office floor area, 300 sq. ft. for parking, and 50 sq. ft. for landscaping and miscellaneous uses.

At an average employment density of 80 employees per acre, approximately 20 acres is required. This, of course, can be combined with shopping areas, except for the parking requirements.

OTHER OFFICE SPACE. If a municipal or special district governmental organization is established, then additional office space is required for this occupancy.

For a city of 35,000 a civic center of 5 acres would provide space for governmental and related activities. The government offices would be located in the Central Park shown on the Plan.

The estimate of employees in public administration (including State, County, Federal) is 350 and is based on a ratio of one employee for approximately each 100 to 110 persons.

EMPLOYMENT IN TRANSPORTATION, COMMUNICATION AND UTILITIES. The estimate for these workers is 350 based on prevailing ratios in comparable cities.

Space for their operations is provided in the space allocations for any transportation terminals or stations, sewage treatment plant, bridge toll plaza, utility rights-of-way, and areas set aside for heavy commercial activities such as boat repair, used cars, gas stations, etc. Should additional space be needed, such as a ticket office or a record or accounting office, there is a margin in the estimate of office space which can be allocated for these functions. An additional reserve

of 20 acres is provided in the Plan to allow for a possible large expansion of office space should there be a trend to decentralization of downtown offices in the future. The town center containing major retail and service activities, offices, with a reserve area and a civic center, would have a total of 80 to 90 acres. This includes off-street parking facilities, without allowance for streets. Other facilities such as the town center park, or high rise apartments, will take additional space.

**EMPLOYMENT IN EDUCATION.** It is estimated that 20 per cent of the population, or 7,000 children will attend school over the long range, and somewhat more during the early years.

Based on a ratio of one employee per 23 students, it is estimated that 300 employees will be engaged by the school system for instruction, supervision and plant maintenance.

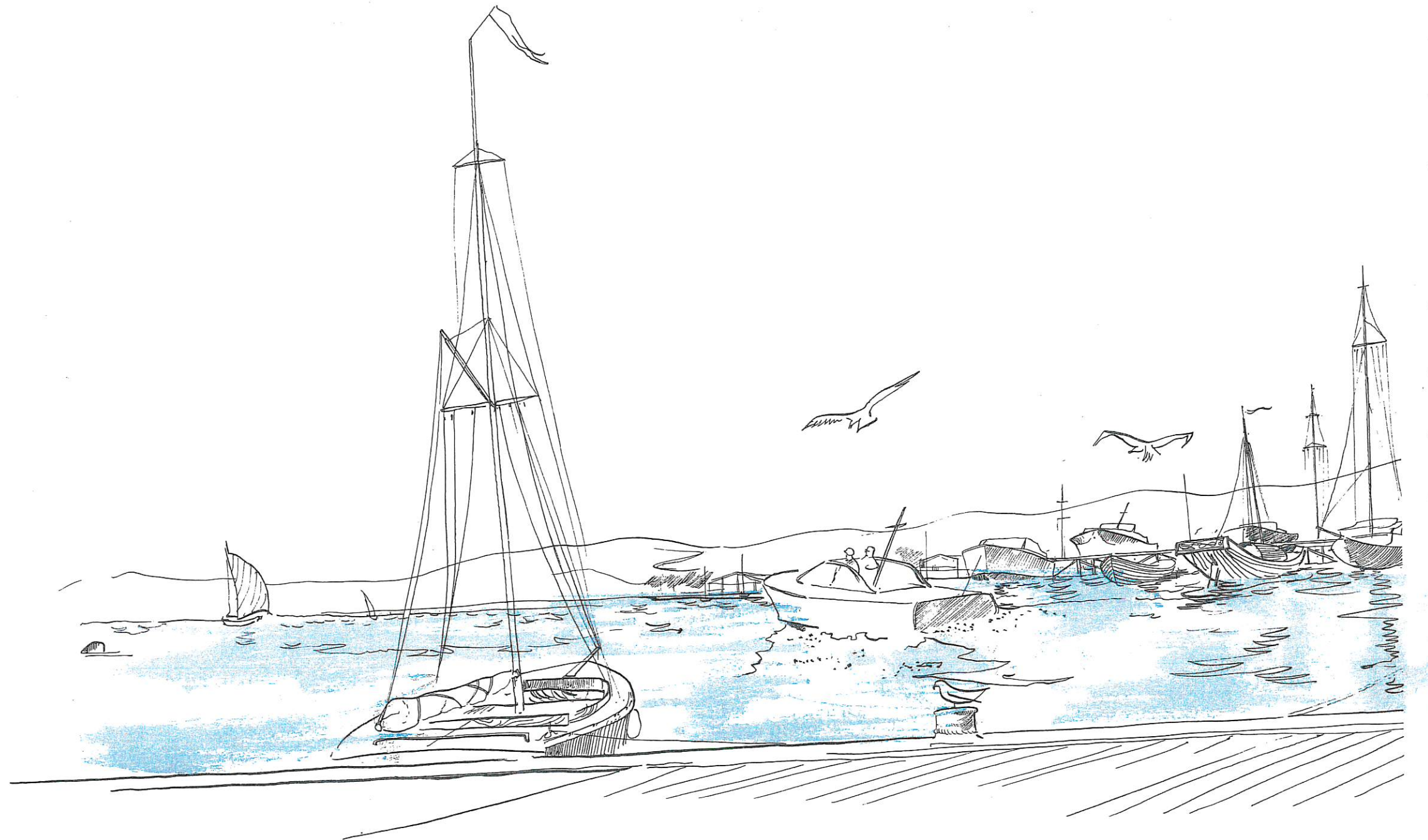
It is also estimated that there would be another 100 jobs in the educational field. These jobs include private and commercial instructors, librarians, and others engaged in related educational endeavors.

It is estimated that Foster City will require 8 to 9 elementary schools at an average size of 13 acres each, plus two 20 acre junior high schools, and a 45 acre high school. An additional 13 acres should be reserved for unexpected demand or a private school.

Enrollment in each elementary school could go as high as 1,000 (requiring a 15 acre site), or as low as 500 (requiring a 10 acre site). Thirteen acre sites would provide for an average enrollment of about 800, allowing for future population expansion as a result of additional property acquisition, land reclamation or increasing family sizes.

SUMMARY OF EMPLOYMENT	
<i>Town Center</i>	<i>3700 (with space for 5000)</i>
<i>Industry</i>	<i>5000</i>
<i>Transportation, Utilities, etc.</i>	<i>350</i>
<i>Heavy Commerce (boat repair, used cars, gas stations, etc.)</i>	<i>450</i>
<i>Schools</i>	<i>400</i>
<i>Construction</i>	<i>500</i>
<i>Recreation (yacht club, etc.)</i>	<i>25</i>
<i>Total</i>	<i>10,425-11,000</i>
<i>Commuters (see below)</i>	<i>4000</i>
<b>GRAND TOTAL</b>	<b>14,000-15,000</b>



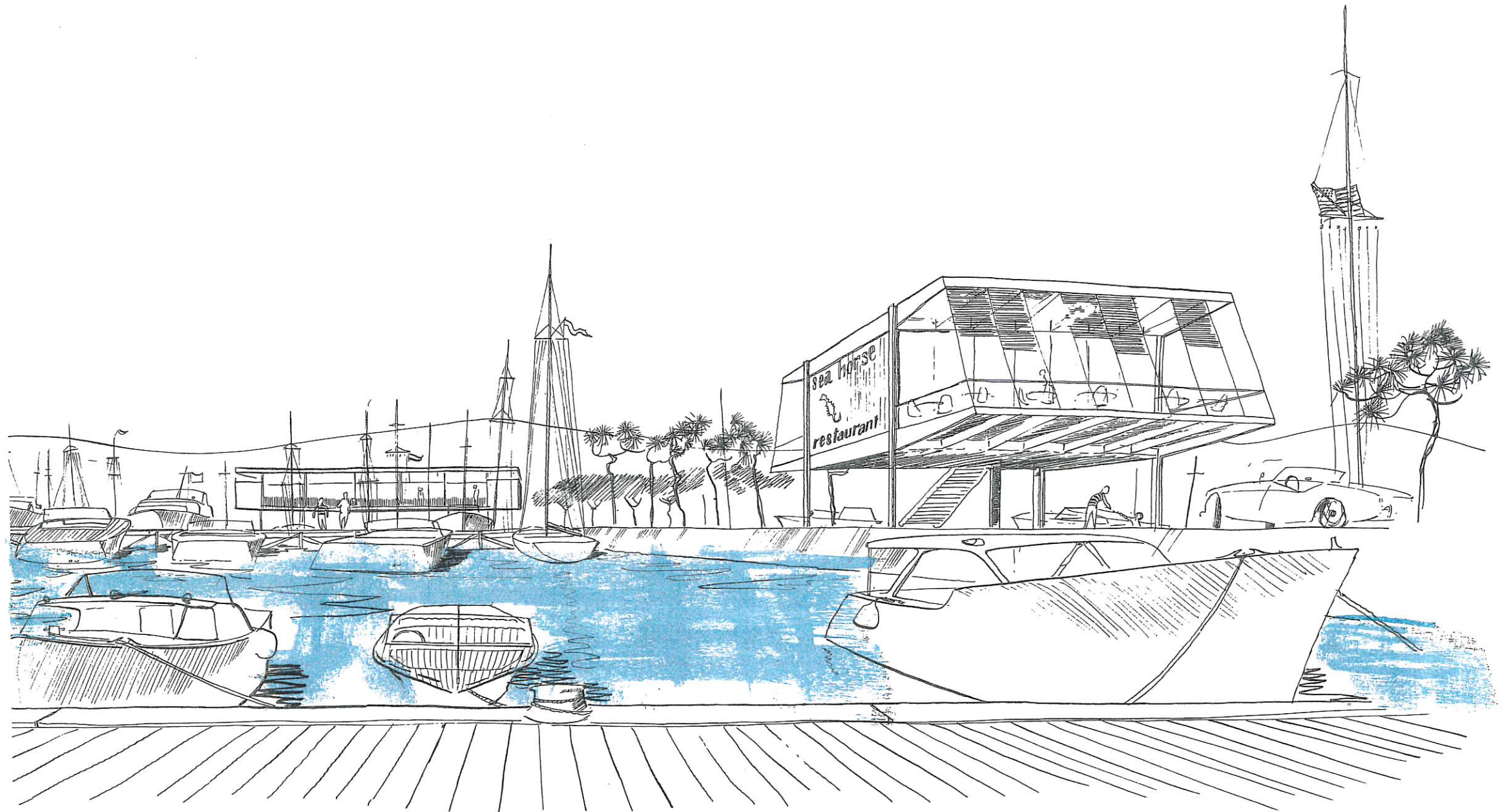


BOATS. One of the outstanding features of Foster City will be its Grand Canal and linking water ways, providing wonderful opportunities for water recreation and waterfront living.

At the present time there are 9 registered boats per 1000 people in the County. During the first six months of 1959, boat sales in California exceeded that of automobiles. The trend is continuing unabated, and it is reasonable to predict 12 boats per 1000 during the development period. This would translate into 420 boat owners in

the City, were it not for the fact that there are no other Bay-front lots in the entire County at the present time. Consequently some portion of the 8400 County boat owners of 1970 will also be looking for living space at the water's edge. Add to that the fact (in Belvedere Lagoon) that most inland-waterway lot owners have small boats (not registerable) and the market for water-front lots appears practically limitless. The limitation is that of income, rather than present number of boats. A minimum water front lot and house will sell for about \$26,000. The proportion of the locally employed popula-





tion in that price range of detached houses is only 6.2%, or about 500 families. Among the 3400 commuting families, at least one-third might be expected to fall in the price range, so that 1200 water-front lots would be a reasonable and conservative provision, while an additional 500 ought to be available if needed. Further, several hundred apartment units ought to have water access as well, making a grand total of 17 miles of residential water front as shown on the Plan.

**BERTHING.** About 60% of the boats registered with the U.S. Coast Guard are moored in the water and 40% on trailers or elsewhere. This indicates a future need for about 5000 berthing spaces from which should be subtracted the number of water-front lots. There are 300 berths in the County in 1960, with known plans for additional 2,000. A conservative estimate of the market for spaces therefore, would be about half the remainder, or 500, with expansion area for an additional 250. The Plan has space for 8 points of public access to the water, with 300 berthing spaces at the Yacht Club alone.



HOUSING. Over ten thousand new residents arrive in northern California each month. San Mateo County estimates an increase of 250,000 by 1975. These facts, plus the scarcity of developable land, especially in desirable locations, and an already existing acute housing shortage provide reason enough to believe that Foster City's homes will fill as fast as built. The only question is that of price versus income.

A careful study of the kinds of people and incomes likely for the community's industrial potential revealed some wide ranges. Out of the 11,000 anticipated job-holders, 9,350 can get homes on the island. About 8,000 of these job-holders, the heads of households, represent the 8,000 housing units planned for on the accompanying chart. Unavoidably, about fifteen per cent of the jobs call for unskilled labor paying too little to command housing on the newly created lands of Foster City without public subsidy.

The average commute trip in San Mateo County now amounts to twenty miles a day. At the conservative figure of eight cents a mile, commuting costs the commuter in actual cash outlay \$1.60 each day, or upwards of \$400.00 a year. The job-holder living *and* working in Foster City won't have to journey over a mile to work. Even with the conservative estimate of a \$300.00 a year saving per employee, the residents of Foster City could realize an annual saving of \$2,400,000.

For those locally employed who choose not to live in the city, it can safely be assumed that their place will readily be filled by others, since Foster City will offer advantages not to be found elsewhere in the County. Some of these would be:

1. Waterfront lots.
2. All family requirements, including employment opportunity, shopping, and all community facilities and services within a 1½ mile radius.
3. Low price of mass produced housing.
4. Full range of choice in price and type of houses.
5. Virtual elimination of traffic hazard for school children.
6. A better looking, carefully planned and designed community, free of blight, disorder or "gasoline alleys."

The number of hi-rise apartments indicated by the accompanying chart would require 19 acres of land at a density of 70 dwellings per gross acre.

The garden apartments would require 95 acres at 25 dwellings per acre.

The row houses would require 164 acres at 10 per acre, and the single family detached houses would need 460 acres at 5.8 per acre, as shown on the Plan.





COMMUTERS. Not quite everyone who moves into Foster City will work there. The attractive amenities and yachting possibilities are so great that families will want homes there even though they must commute elsewhere for employment. To provide for such persons—without unbalancing the opportunity for the many who want to live within walking distance of work—492 additional residential acres are provided.

Fifty of these acres would handle 1500 dwelling units at 30 per acre. That makes room for some 3800 people. The remaining 442 acres would contain single family upper income housing. Most of these will orient on waterways, and so an average 6500 square feet should prove adequate per home. At 4.9 dwellings per gross acre we would have 2170 dwellings for an expected 7,000 people.

QUALITY HOMES. With uniquely fine living conditions and close proximity to the financial and cultural center of western America, San Mateo County naturally has one of the highest percentages of high income families in the state and in the nation. The table indicates that 8.7% of the families coming to San Mateo County can afford the upper-income housing of above \$26,500.00. With an expected 75,000 additional families in the next fifteen years, the development period for Foster City, San Mateo County will gain some 6,500 families with incomes sufficient to afford upper-income homes. Most of today's higher income families have found pleasure in boating. Because Foster City offers a most desirable setting for the quality home appropriate for the ever increasing numbers of families with pleasure craft, it seems quite reasonable for Foster City to attract a half of the County's new 6,500 upper-income families. In-

deed, the amenities of Foster City justify at least 400 homes valued at over \$50,000.00 each.

APARTMENTS AND TOWN HOUSES. The trend in San Mateo County, as seen on building permit records, suggests that not less than 30% of the new residents will live in apartments by 1970. That means the county needs some 35,000 apartment units—far more than can be provided with known plans of the present time.

Not everyone wants to live in a single family detached home. Many people don't need so much space or don't want the bother of maintaining a large house and grounds. Yet, many of these same people would prefer some other alternative than apartment living. They want and can afford something "in between"—something with the advantages of single family privacy and, at the same time, the advantages of apartment convenience.

The town house fits the bill. It has proven quite satisfactory, when built to competent design standards, in offering an individual family garden, a patio, a garage, plus more privacy at lower cost. The town house concept looks like the best answer to middle income housing needs. And places such as Georgetown, D. C., and Pacific Heights in San Francisco indicate how attractive town houses can be for upper-income families as well. For exciting townscape design, the town house arrangement is much more in keeping with an urban atmosphere than are detached houses—it permits more interesting building groupings and street vistas.

Foster City provides 1,640 town house units varying in price from \$11,000.00 to \$30,000.00 (at 1959-60 prices) to satisfy the full income range demand.

CHOICE OF HOUSING BY PRICE RANGE

TYPE OF DWELLING	Under \$7500	\$7500 8750	\$8750 11,250	\$11,250 13,750	\$13,750 18,750	\$18,750 26,250	\$26,250 31,250	Over \$31,250	TOTAL
High Rise Studio	193	46	92	73	37			6	447
Garden Apartment	193	46	92	184	92	19	19		645
High Rise 1 Bedroom		238	138	110	46	37	46		615
Garden Apt. 1 Bedroom		285	138	110	100	92	46		771
Row House 1 Bedroom			193	92	46	46	46		423
High Rise 2 Bedroom			92	92	46	9	9	9	257
Garden Apt. 2 Bedroom			184	92	55	55	9		395
Row House 2 Bedroom			92	184	230	46	9		561
Single Family 2 Bedroom					615	460	138	56	1269
Garden Apt. 3 Bedroom			238	266	46	46	9		605
Row House 3 Bedroom				221	147	83	9		460
Single Family 3 Bedroom					423	248	83	55	809
Row House 4 Bedroom				37	65	37	19		158
Single Family 4 Bedroom					138	129	92	37	396
Single Family 5 Bedroom						19	55	19	93
Single Family 6 Bedroom							19	9	28
TOTAL	386	615	1259	1461	2086	1326	603	191	7932



**ACREAGE ALLOCATION**

*\* Not accounted for are 1650 (15% of employment) non-resident commuters, or jobs off the island.*



SUMMARY OF ACREAGE ALLOCATION, JOBS, DENSITY AND POPULATION

	<i>Jobs</i>	<i>Density</i>	<i>Population</i>	<i>Acres</i>	<i>Reserve in Acres</i>
Industry	5,000	15/A		330	70
Town Center	3,700				
Offices	1,500	80/A		20	20
Civics	350			5	
Retail & Services	1,850			35	
Other Services, including medical, culture and entertainment	(950)			10	
Neighborhood Shops				15	
Transportation, Communications and Utilities	350 (scattered)			7	
	Sewer Plant, Transport Terminal, Utility Easements, Heavy Commercial (Automotive, storage, etc.)			120	15
Schools	300-400				
Elementary (8 or 9 at 13A each)				120	13
Junior High (2 at 20A each)				40	
High				45	
Recreation					
Neighborhood Parks and Playgrounds				40	
Lagoon				100	
City Parks				30	
Yacht Club and Basin				20	
Streets					
Freeways and Arterials				230	50
13 miles at 120' avg. plus interchanges					
Local streets, included in gross acreages (Approx. 550A)					
Miscellaneous Facilities					
Offices, semi-public uses, etc.				20	
Housing					
Locally employed residents			24,000 (8,000 dwelling units)		
High Rise		70/A gross	1,320 dwelling units	19	
Garden Apartments		25/A gross	2,370 dwelling units	95	
Town houses and duplexes		10/A gross	1,640 dwelling units	164	
Single family detached		5.8/A gross	2,670 dwelling units	460	
Resident Commuters					
Single family					
Apartment		30/A gross	(2,170 dwelling units) 3,800	50	15
TOTAL		13 pers./A gross	(1,500 dwelling units) 34,800	2,417	183

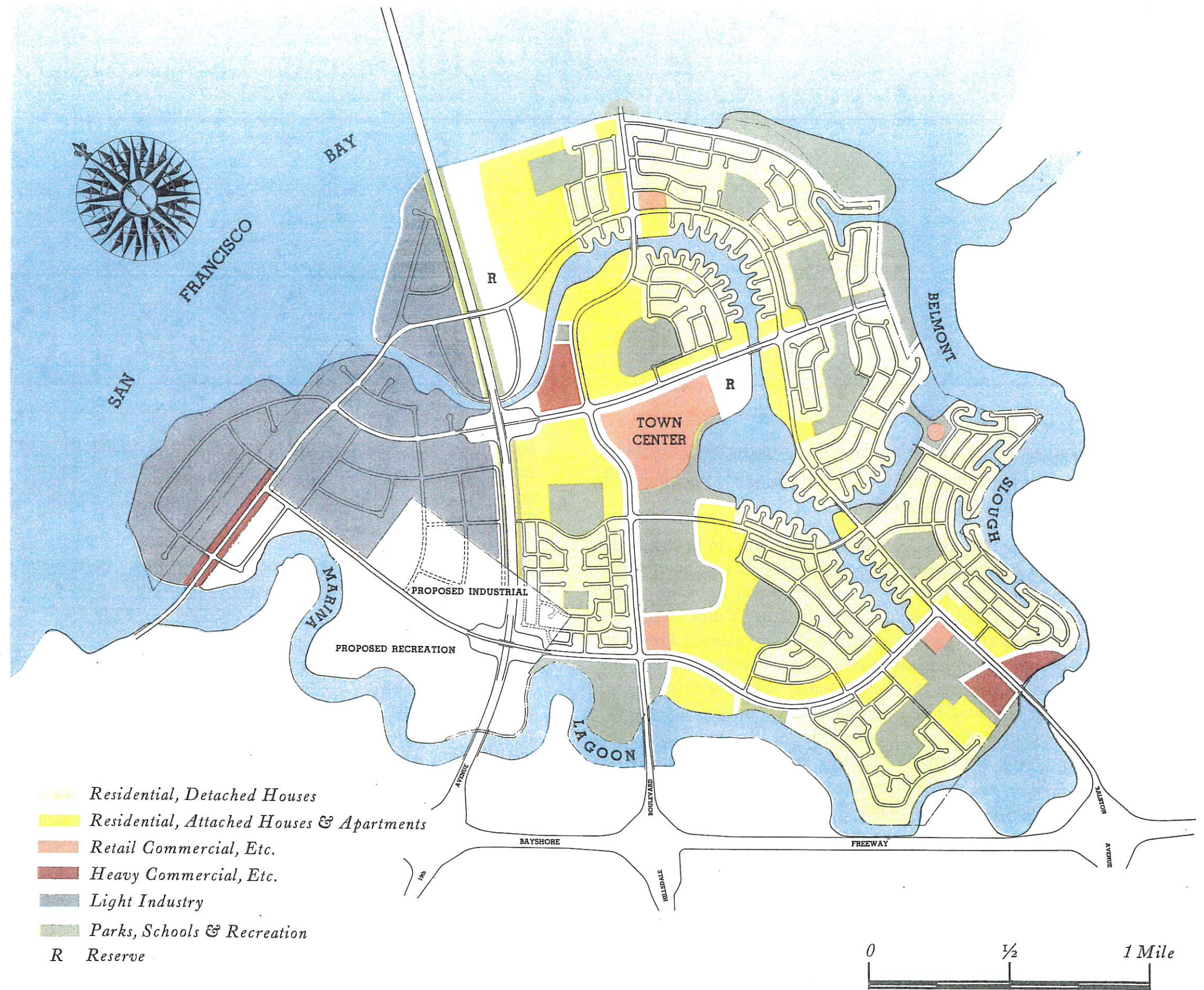


## DESCRIPTION OF THE GENERAL PLAN

Perhaps the Plan's most interesting feature is the Grand Canal winding through the entire town from the Yacht Club, past houses, through the Town Center and its Lake, across the industrial park and back to the Bay, north of 3rd avenue. This water body occupies about 100 acres of space, and serves the multiple purposes of recreation, transportation, and drainage. It will be linked with Belmont Slough and San Francisco Bay with boat transfer facilities at the Yacht Club. Tide water will be let in at the Yacht Club and flushed by gravity and pumping at the north, or 3rd avenue end, some 3 miles distant.

At the Town Center there will be located boat docks for visitors, and space for boat massing to listen to outdoor concerts at the water front civic auditorium. Reflected in the 40 acre Lake at the Town Center, will be the glass towers of downtown office buildings, and the fountains and bunting of a bustling but elegant market place. Nearby will be found the medical clinic, a resort hotel, specialty shops, heliport, cultural center, out-door cafes on the water-front promenade, and all the urban features of a full-sized modern City. Surrounding the Town Center except in the north quadrant, will be the nine neighborhoods into which the residential areas are organized — each a great "superblock" with its school in the green core, housing an average of 4000 people at densities ranging from quarter-acre yacht lots to 12-story downtown apartment. For each three







neighborhoods there will be a Center with super-market, drugstore, shops, churches, branch library, recreation areas and facilities for all the daily needs of 12,000 people.

Across the new 19th Avenue Freeway to the north (to be completed in 1964) lies 300 plus acres of prime industrial park land, with water-front access to rail barge lines, 6 miles from San Francisco International Airport, and 10 minutes from East Bay Cities, South San Francisco and Palo Alto by one existing and two planned Freeways. The Bay Area Rapid Transit District plants a station stop between this industrial park and the Town Center, 500 yards to the south. This transit stop would be little more than a convenience for the Island population, with its small proportion of commuters, but would provide a ready link between plants on the Island and headquarter offices in downtown San Francisco, as well as a night-time entertainment and cultural tie with the big city.

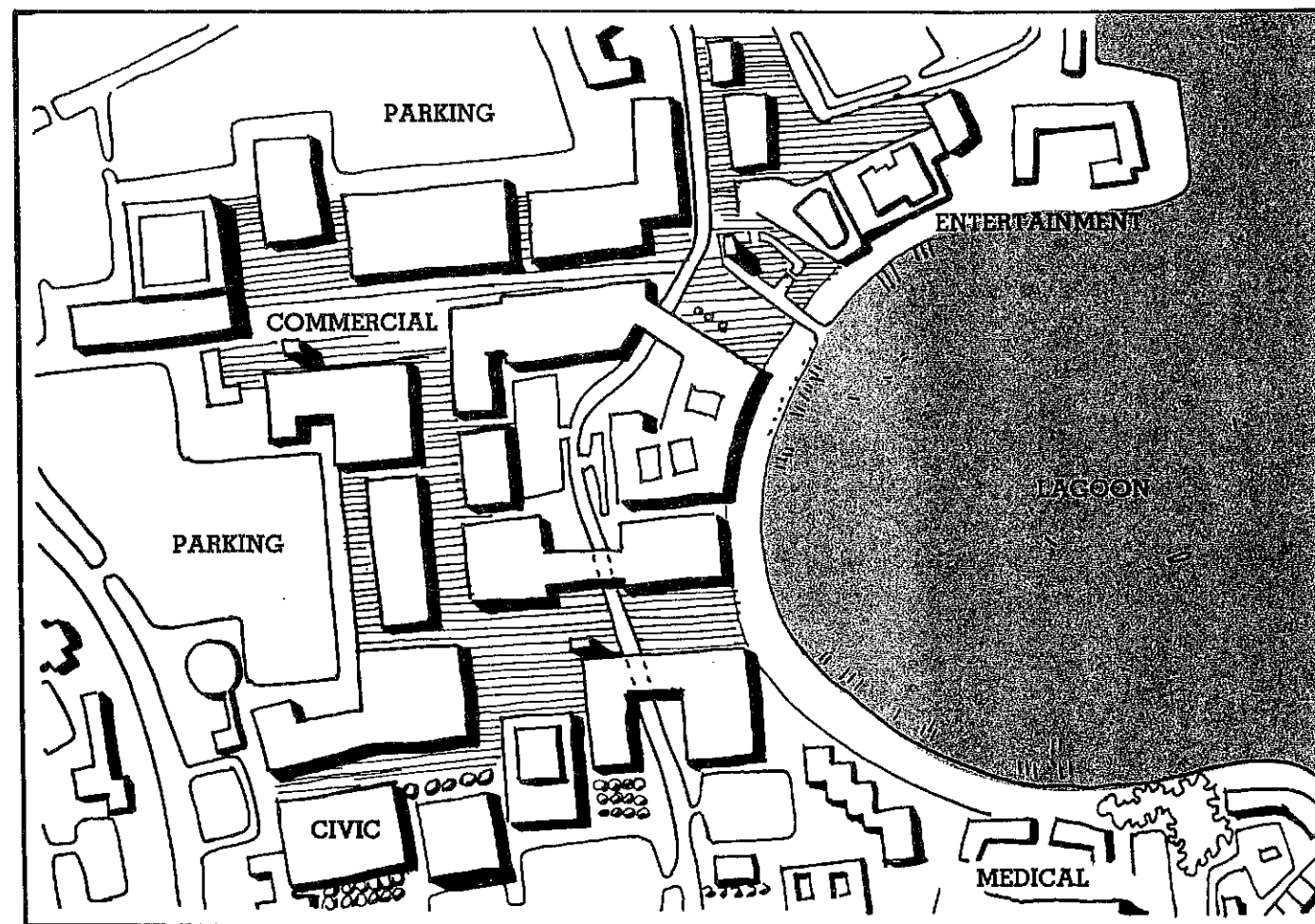
A reserve of about 70 acres would be held for industry along the south side of the 19th Avenue Freeway.

Along the south shore of the Island, facing southeast across Belmont Slough, would be the "Gold Coast" of beaches, boating, a Yacht Club, and water-front lots for large houses with moorage space for

boats up to 75' in length. At the mouth of Belmont Slough where it enters the Bay would be a 100 acre Public Park with shell beaches, swimming, and boating facilities. Another Park would border the Town Center Lake.

The outstanding characteristic of the community would be its unique (for the Peninsula) cosmopolitan atmosphere, created by the multi-use Town Center and its interwoven, surrounding apartment house complexes, housing a wide range of income, family size and social groups, most of whom could walk to work nearby. An unusual amount of social stability is expected to develop over the years as a result of the wide choice of housing accommodations, making it possible for a family to live out its entire life-cycle in Foster City instead of moving every few years to gain status or meet different space requirements. Further, the expensive problem of school planning is mitigated, because each neighborhood starts out with a balanced spread of age groups, and does not experience the violent cyclical fluctuations in enrollment of the typical suburban subdivision.

In sum, the flavor of Foster City will be "urban" instead of "suburban." It takes a long step forward from the faceless suburbs of the 40's and 50's.



*Sketch of Town Center*



*A preliminary artists conception of Foster City.  
Detail designs are now in process.*







## ENGINEERING CONSIDERATIONS

The site for Foster City is underlain by soft compressible organic silty clay to a depth varying from 30 feet to 90 feet. Over a large part of the area the surface crust has been used for many years as fine pasture and farm land. Although the average elevation is at mean sea level, a system of levees or dikes has reportedly kept this area drained and prevented the encroachment of bay tides for about 100 years.

In the orderly development of this area to its ultimate urban character a complete program of land fill, channel dredging, street and highway construction, sanitary and storm drainage installations, electric power, water supply, natural gas and telephone facilities are being developed. An adjacent area also on Brewer Island comprises about 400 acres and may logically become part of Foster City in the future. Development data for this area is noted herein as "Future Development Area." In addition to the basic land development program, provision has been made for the inclusion of various community facilities such as might be required for administrative purposes.

Miscellaneous items have been considered which are not a part of the Basic development or facilities program. These items will so enhance the desirability and character as well as increase the property valuations of Foster City that they are included herein. Specific recommendations for each item in this category will be made in the final report after comprehensive studies are completed.

The following paragraphs discuss briefly each stage of the improvement program.

**LANDFILL AND DREDGING.** Estimated fill depths to provide for foundation support, drainage facilities and to compensate for expected settlement will average three to four feet in residential areas and six feet in industrial commercial and apartment areas. The proposed industrial area north of third avenue which is presently submerged will require considerably higher fills as will also the lots adjacent to Belmont Slough on the south side of Foster City.

Areas to be dredged include the interior lagoon or Grand Canal; Marina Lagoon and marina facilities along Belmont Slough. Belmont Slough will be dredged to provide a boat channel.



The primary source of overall fill is anticipated to be sand from San Francisco Bay. This sand will be pumped hydraulically over the island. Alternate fill sources are being investigated with regard to quality, availability and cost.

Dredged mud will be used to make up the balance of required fill material and will be used primarily in the areas of deeper fills along Belmont Slough and north of third avenue. Prior to the placement of fill over the island, it is proposed that approximately 500,000 cubic yards of existing surface loam be stripped and stock piled for future use as top soil.

**STREET SYSTEM.** Streets have been classified into 6 categories; Major arterials, commercial, arterials, minor commercial and major residential, residential and minor residential. Pavement widths vary from 64 feet plus center island maximum for major arterials to 30 feet for minor residential cul-de-sacs. Costs include flexible pavement and base, concrete curb, gutter and sidewalk, street lighting and roadside tree planting.

Five bridges across the "Grand Canal" are proposed to provide for interior traffic movements within Foster City. These bridges will be designed for ten feet clearance over high water level for a center span width of 100 feet, thereby providing for free movement of small boats and improving the flow characteristics of water through the Canal. Two additional bridges are proposed across Marina Lagoon providing access to Foster City from the mainland. The 19th Avenue Freeway (route 105) with its included interchanges and structures will be built by the State Division of Highways. Because of unknown factors regarding the tentatively proposed Bay front freeway no provision has been made for it at this time.

**STORM DRAINAGE, COLLECTION AND DISPOSAL SYSTEM.** The finished ground surface in Foster City is below the highest tide levels in San Francisco Bay and is separated from tidal flooding by a levee system. An effective drainage system consisting

of three basic elements will be designed to drain storm runoff from Foster City, dispose of same in San Francisco Bay and also prevent flooding of the area during highest Bay tides.

The first of these basic elements, a local area collection system of catch basins, drains, and outlet structures (open channels or ditches have not been used in any residential or commercial areas) will be provided to give complete protection from a storm with a return frequency of 10 years. Secondly, an interior lagoon or ponding area is provided to receive water from the collection system serving approximately 2230 acres including a portion of the future development area. Runoff from the remaining 770 acres including the balance of the future development area is received in the existing Marina Lagoon ponding area.

The third element in the drainage system will provide protection against the flooding of the lagoon. This element, a combined pump station and tide gate system will dispose of excess storm water from the lagoon by pumping at high tide levels and tide gate operation at low tide levels. The lagoon, pumping and tide gate facilities will be provided to give complete protection from storm with a return frequency of 50 years. Emergency alternate power will be provided to the pump station to insure continued operation of the system under all conditions. This system will also provide protection from a 100 year return frequency storm with localized street ponding.

**SEWAGE COLLECTION, TREATMENT AND DISPOSAL SYSTEM.** Because of flat terrain sanitary waste collection will be composed of a system of gravity sewers, lift stations and force mains. The sewage treatment plant will provide primary treatment by means of clarifiers and digesters preparatory to disposal of effluent and sludge.

Alternate power sources will be provided for all lift stations and the treatment plant to insure continued operation of the system under all conditions.

**OTHER UTILITIES.** Electric Power and natural gas supply and distribution, including the design and construction of facilities will be accomplished by the Pacific Gas & Electric Company.

Prior to the installation of natural gas distribution system, the developer may be required to deposit with the Pacific Gas & Electric Company the estimated cost of improvements. This deposit is refundable under California Public Utility Commission rules and regulations. During the stages of development of this project, it is anticipated that several deposits and refund agreements will be desirable.

Certain advantages to properties are obtainable through the installation of an underground power distribution system. If such a system is installed, the developer will be required to pay for installation of all underground duct work, splicing boxes, transformer vaults, etc. The utility agency will then provide all operative equipment such as cables, transformers, etc. An additional cost to the developer for an underground system will be a payment to the Pacific Gas & Electric Company to cover increased capitalization costs.

Pacific Telephone and Telegraph will design, furnish and install an overhead telephone distribution system. If construction of the distribution system is underground the developer must provide all the underground duct work for the Telephone Company. The Pacific Telephone and Telegraph Company will provide and install all operating material and equipment.

Domestic water supply and fire protection will be provided.

**FUTURE COMMUNITY FACILITIES.** The influx of a population group of the magnitude proposed herein, into a single well defined area, with its integrated industrial, commercial and recreational aspects may involve a number of community facilities and service items connected with the administration and physical maintenance

of the area. The following items involve sums of capital expenditure and are listed for information and possible inclusion in the project.

Police Station	Fire Stations
Administrative Buildings	Corporation Yard
Boat Lock	Incinerator
Public Parks	Library

**MISCELLANEOUS ITEMS.** The following items of contingency construction are presently being investigated in conjunction with the Pacific Gas and Electric Company and various railroad interests. It is felt that inclusion of these items will considerably increase the desirability of ownership in Foster City with an accompanying increase in land and improvement valuations.

Pacific Gas & Electric Company power transmission tower lines presently pass across Brewer Island. The existing right-of-way plus additions required for proposed new tower lines will require a total of approximately 150 acres of right-of-way which will in effect become unusable for community purposes. It is proposed that all overhead tower transmission tower lines be placed underground in residential and commercial areas. It is further proposed that all power distribution and telephone facilities in the residential and commercial areas be located underground.

An informal appraisal indicates that an underground system of power transmission and distribution combined with underground telephone facilities will result in an increase of approximately 20% in valuations of land and improvements.

Discussions are in process with Railroad interests to determine the feasibility of providing railroad service to the industrial area by barging freight cars across San Francisco Bay to the railroad terminals, or as an alternate barge, truck trailers to the rail terminals for "piggy back" truck service. A plan of this nature probably would involve the construction of docking facilities and an interior rail line to serve Foster City.





APPENDIX A

ESTIMATED DISTRIBUTION OF 1,000 HOUSEHOLDS BY INCOME LEVEL AND FAMILY SIZE

<i>Income</i>	<i>Total</i>	<i>1 Person</i>	<i>2 Persons</i>	<i>3,4,6 Persons</i>	<i>5 Persons</i>	<i>7 or More Persons</i>	<i>Anticipated Monthly Housing Expenditure</i>	<i>Equivalent House Price</i>
\$20,000+	20		3	11	5	1		\$35,000+
12,000-19,999	46		14	27	5		\$187-210	31,250
11,000-11,999	18		6	T	2	1	176-197	28,750
10,000-10,999	34	1	9	19	4	1	165-184	26,250
9,000- 9,999	42	2	14	19	6	2	153-170	23,750
8,000- 8,999	64	2	20	33	8	2	141-157	21,250
7,000- 7,999	86	4	26	42	11	2	128-143	18,750
6,000- 6,999	112	6	32	56	14	3	116-129	16,250
5,000- 5,999	155	8	44	80	19	4	106-116	13,750
4,000- 4,999	148	10	46	70	16	5	90-100	11,250
3,000- 3,999	98	12	32	42	8	4	71- 83	8,750
2,000- 2,999	75	13	20	33	7	2	49- 55	6,250
Under 2,000	102	42	23	28	6	3	26- 28	4,750
TOTAL	1000	100	290	470	110	30		
<p>NOTES: Due to rounding, sub items may not add up to Total indicated. Monthly housing expenditure includes principal and interest payment on loan, local taxes, mortgage insurance, maintenance and utilities. Table based on San Francisco and San Mateo County Wage Rates, Family Sizes and Income Distribution. Of the families who will be employed in Foster City, 15% cannot afford to live there. These are the families represented by the colored area of the chart.</p>								



