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Yerba Buena Center: Environmental Impact Report. Final. Volume I

San Francisco City Planning Commission

San Francisco Redevelopment Agency

DEPARTMENT OF CITY PLANNING 100 LARKIN STREET · SAN FRANCISCO, CALIFORNIA 94102

SAN FRANCISCO CITY PLANNING COMMISSION
AND SAN FRANCISCO REDEVELOPMENT AGENCY

FINAL ENVIRONMENTAL IMPACT REPORT

YERBA BUENA CENTER

VOLUME I

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VOLUME I

● CHANGES FROM THE TEXT OF THE DRAFT EIR ARE INDICATED BY SOLID DOTS. A DOT TO THE LEFT OF THE FIRST LINE OF A PARAGRAPH INDICATES A NEW OR REVISED PARAGRAPH. A DOT TO THE LEFT OF A PAGE NUMBER INDICATES A NEW PAGE. A DOT TO THE LEFT OF A SECTION TITLE INDICATES AN EXTENSIVELY REVISED SECTION.

S. SUMMARY

INTRODUCTION

As a result of voter approval of a policy declaration to construct a convention center including an exhibit hall in Yerba Buena Center (YBC), the City of San Francisco has initiated a program of preliminary design of the convention center facility. Because the site, configuration, and method of financing are different from previous proposals, and because many other features and uses in the YBC redevelopment area are being reconsidered and may be changed from the approved Redevelopment Plan, this Environmental Impact Report (EIR) has been prepared in compliance with the California Environmental Quality Act (CEQA). This EIR discusses and evaluates four alternative plans (concepts) for YBC in similar detail. None of the alternatives is singled out as "the project". The final project will probably be a combination of the elements discussed in the various alternatives. Using data developed in the definition and analyses of the four alternative plans, the San Francisco Redevelopment Agency made a tentative proposal to the U.S. Department of Housing and Urban Development (HUD) for changes to the approved Redevelopment Plan. This Redevelopment Agency November 1977 tentative proposal is an example of such a combination of elements and is described in Section IV-H (p.58) of this EIR (Volume 1).

Each alternative consists of existing, committed and "discretionary" land uses. Discretionary uses are those proposed land uses that vary among the four alternatives; in fact, they tend to define each alternative. The following description of the alternatives refers to the discretionary uses unless otherwise noted.

Alternative A is based on the official Redevelopment Plan for YBC, which was first adopted in 1966 (Figure S-1, page S-3). This alternative would provide for about 6 million square feet of office space in high-rise buildings; about 700,000 square feet of retail uses; a hotel; indoor

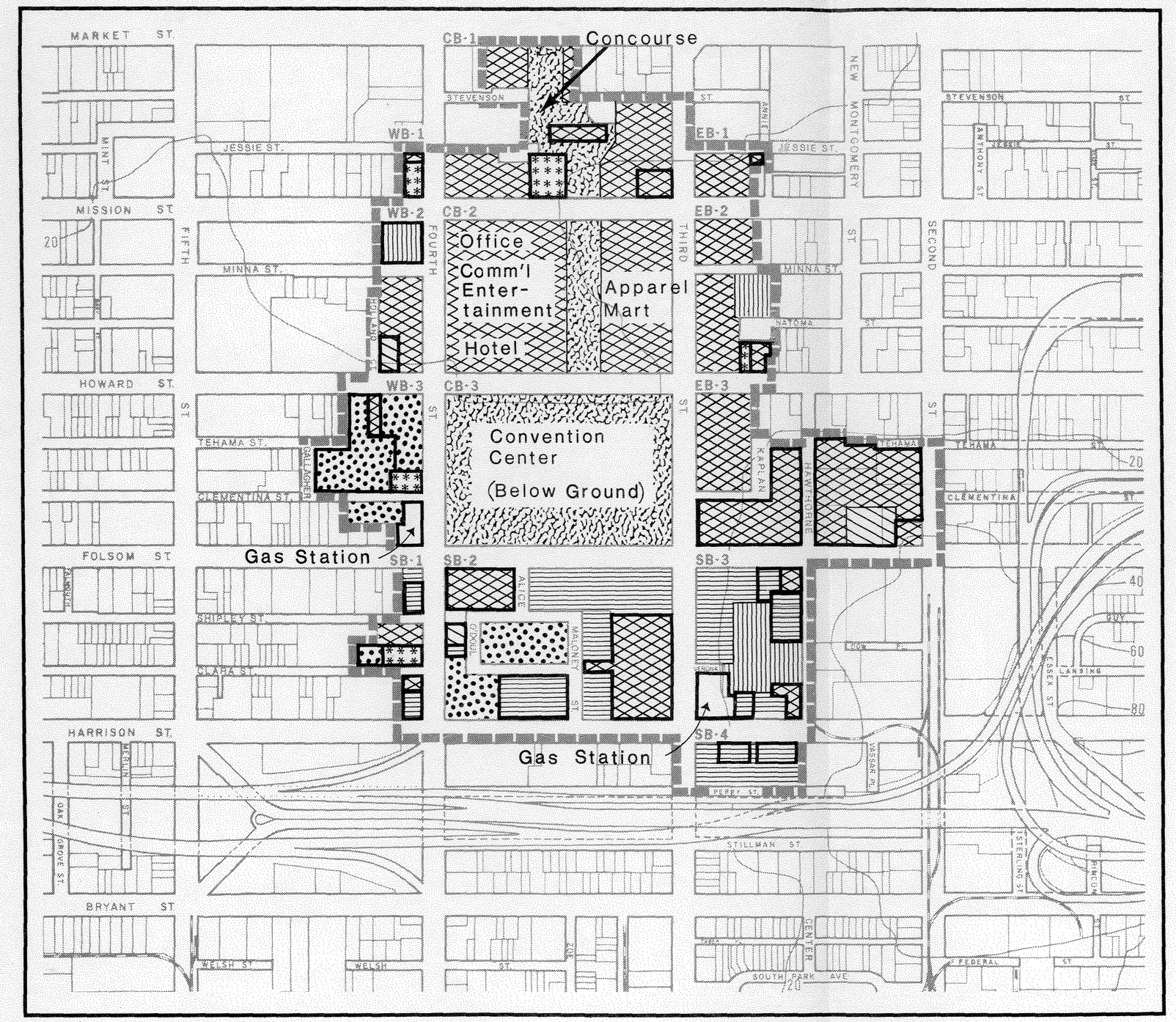
commercial entertainment facilities; the convention center; a pedestrian concourse and urban plazas extending from Market St. to Howard St.; four (committed) sites for subsidized housing for the elderly (602 dwelling units) and one market-rate housing development (50 dwelling units) atop a proposed office building (apparel mart); light industrial uses (about 1 million square feet); and two public parking garages.

Alternative B (Figure S-2, page S-5) is based on recommendations of the Mayor's Select Committee on Yerba Buena Center, which were submitted in August 1976. This alternative would provide for about 3 million square feet of office space; about 300,000 square feet of retail uses; the same subsidized housing for the elderly as in Alternative A (602 dwelling units); subsidized-family housing (300 dwelling units); additional market-rate housing (650 dwelling units total); the convention center; a commercial recreation/entertainment park; and about 350,000 square feet of light industrial uses.

Alternative C (Figure S-3, page S-7) is based on a concept derived from public suggestions and comments made on the original redevelopment plans and on an earlier EIR and Federal Environmental Impact Statement (EIS). It would include a two-block, 21-acre public park and contain no convention center nor recreation/entertainment park. It would include more market-rate housing than Alternative B (1,000 dwelling units total) and about half the office and retail space of that alternative, as well as about 350,000 square feet of light industrial uses.

Alternative D (Figure S-4, page S-9) is a "no action" alternative for YBC as a whole. It is based on the revocation of the redevelopment plan and the sale of all uncommitted parcels on the open market for private uses which would comply with zoning laws. A variant of this "no action" alternative is one in which no further action of any kind would be taken and the vacant parcels would remain in their present state.

The Redevelopment Agency November 1977 tentative proposal combines components of Alternatives A and B. Alternative A is taken as a base, with components of Alternative B replacing some of A's components.



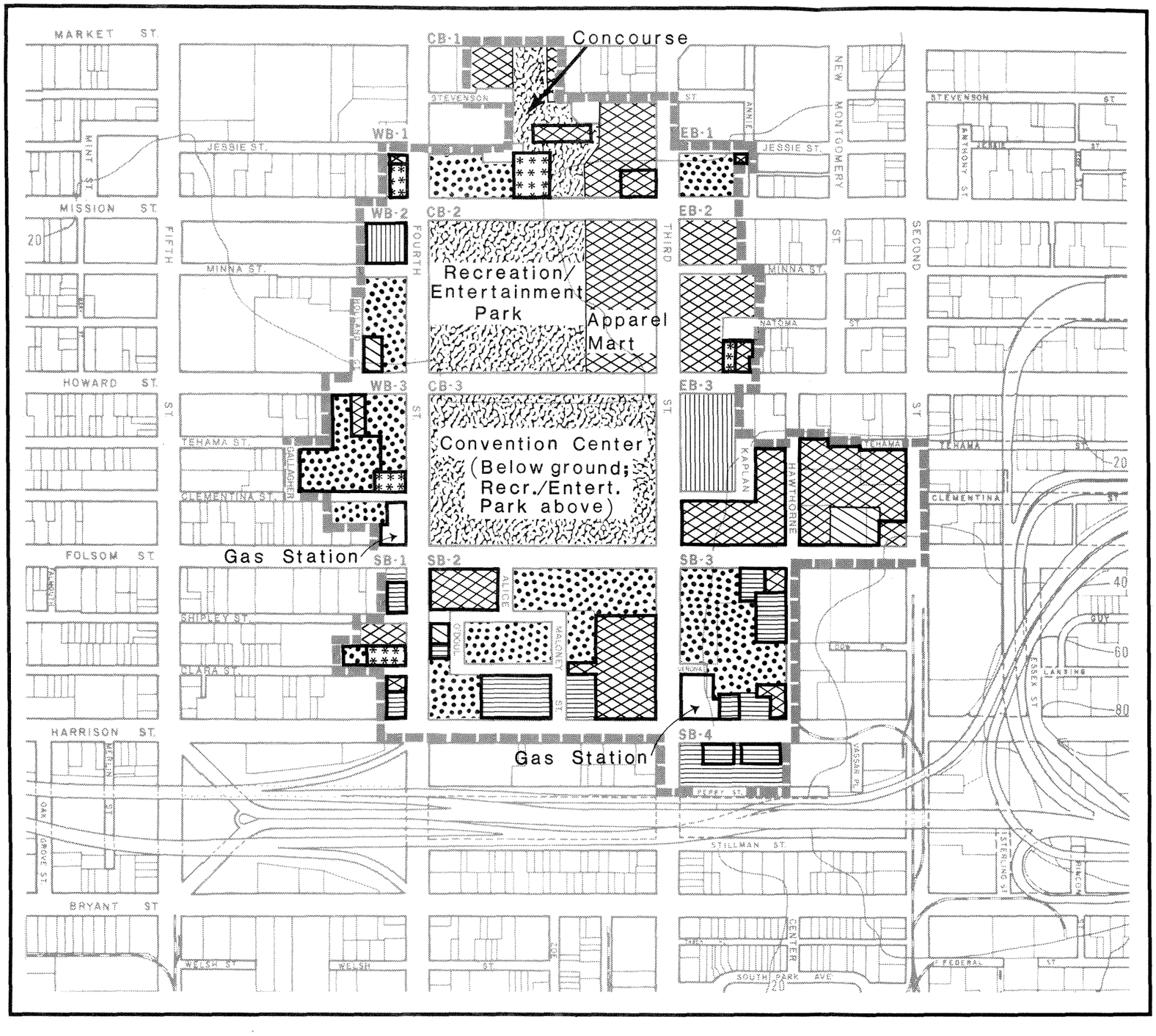
LEGEND

- Housing
- Office & Retail
- Downtown Support
- Light Industry
- Parking
- Community Service
- Park
- Existing, to Remain

0 0.5 Kilometer

0 1800 Feet

ALTERNATIVE A	S-1



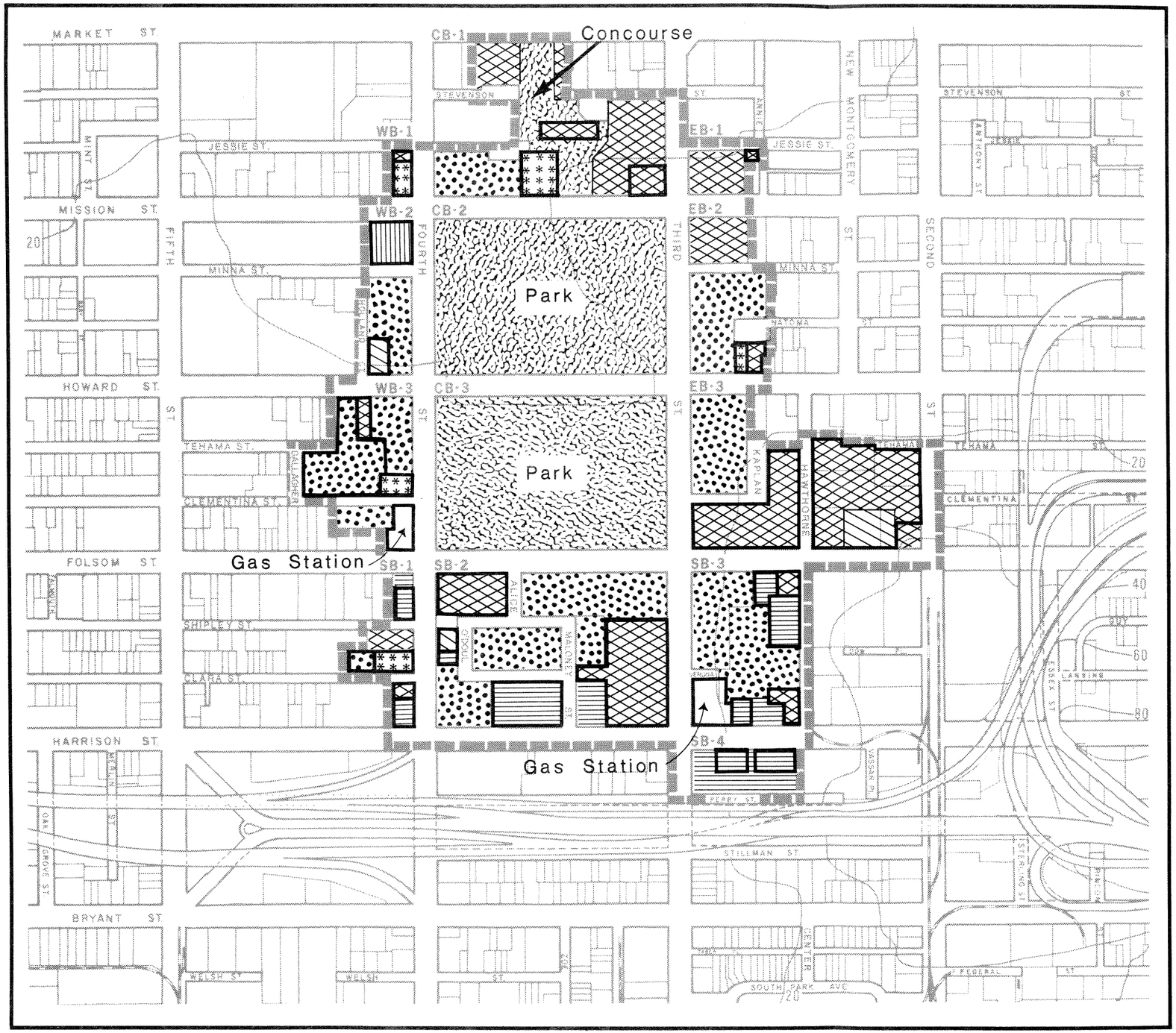
LEGEND

- Housing
- Office & Retail
- Downtown Support
- Light Industry
- Parking
- Community Service
- Park
- Existing, to Remain

0 0.5 Kilometer

0 1800 Feet

ALTERNATIVE B	S-2



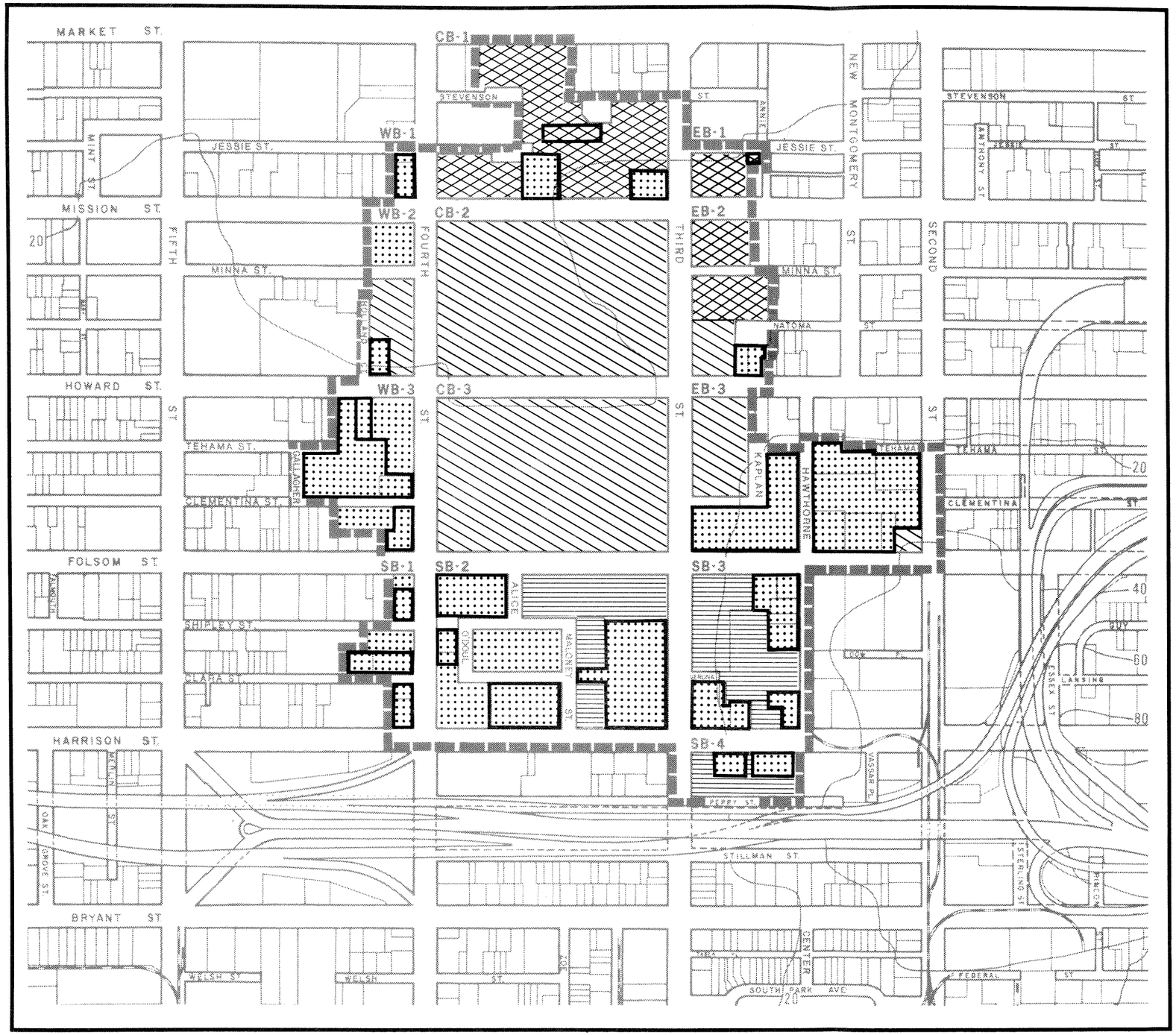
LEGEND

- Housing
- Office & Retail
- Downtown Support
- Light Industry
- Parking
- Community Service
- Park
- Existing, to Remain

0 0.5 Kilometer

0 1800 Feet

ALTERNATIVE C	S-3



LEGEND

- Office & Retail
- Downtown Support
- Light Industry
- Existing, under construction, or committed*
- Existing, to Remain

*See Figure S-1, S-2, or S-3 for actual use.

0 0.5 Kilometer

0 1800 Feet

ALTERNATIVE D | S-4

IMPACTS AND MITIGATION MEASURES

Potential environmental impacts related to construction and operation of the alternatives include impacts in the following categories: transportation; climate and air quality; noise; resource use; land use (including social characteristics); economic impacts (employment, general economic impacts, and financial impacts on several levels of government); community service demands; housing; visual aspects; geology/seismology; hydrology; history/archaeology; and ecology.

● These effects are described briefly in Table S-1, which ranks the alternatives under each impact and lists the relevant mitigation measures. In the ranking of alternatives, the one with the largest impact is listed first; the other alternatives are then listed in diminishing order of impact. Where the stated impact does not occur under an alternative, that alternative is not shown in the table.

● The impacts of the Redevelopment Agency tentative proposal generally would be between those of Alternatives A and B. For those impacts for which Alternative D lies between Alternatives A and B in the table, the location of the tentative proposal should be taken as between Alternative D and Alternative B. For Land Use (housing compatibility) impacts, the tentative proposal would have the same impacts as Alternative B.

TABLE S-1

SUMMARY OF IMPACTS (WITH RANKING OF ALTERNATIVES) AND MITIGATION MEASURES*

PREDICTED IMPACT	RANKING OF ALTERNATIVES**	POTENTIAL MITIGATION MEASURES
TRANSPORTATION		
Pedestrian Flows: Congestion on concourse and sidewalks during peak hours.	A > B > D > C	Widen sidewalks; remove sidewalk obstacles; set back buildings; improve traffic signals to accommodate pedestrian flow.
Congestion after special convention center and/or recreation/entertainment park events		Prohibit on-street parking; provide, via barricades, pedestrian space in streets. Assign traffic-control officers.
1980	A = B	
1988	B > A	

*At full development (1988), unless otherwise noted.
**Greatest impact first.

TABLE S-1 (Continued)

PREDICTED IMPACT	RANKING OF ALTERNATIVES	POTENTIAL MITIGATION MEASURES
TRANSPORTATION (Continued)		
Transit: Certain routes approaching or over capacity.	A > D > B > C	Muni Metro will increase Market St. corridor capacity. Provide additional Muni buses; shift equipment among routes during peak hours. Provide additional commuter bus and train capacity.
Sidewalk blockage by users awaiting transit after special convention center and/or recreation/entertainment park events.		As under pedestrian flows above.
1980	A = B	
1988	B > A	
Street Traffic: Peak-hour congestion at 4th and Market and at 3rd and Mission in 1980.	A = B > C = D	Implement staggered working hours, especially for largest employers. Encourage use of transit (toll subsidies and transit fast passes) and formation of car pools and van pools; provide preferential lanes for buses. Assign traffic-control officers during peak hours. Use shuttle buses for peak-producing events. Locate driveways for minimum interference with street flows. Investigate pedestrian streets, people movers.
Worse (Level F)* peak-hour congestion at 4th and Market and at 3rd and Mission in 1988.	A > D > B > C	
Lesser congestion at five other YBC area intersections in 1988.	A > D > B > C	
Parking: Deficiency in parking spaces to meet YBC and external demand.	A > D > B	Regulate parking price structures to discourage long-term commuter parking. Use "street-traffic" mitigation measures (above) that would reduce auto use.

*Level of Service F--several signal cycles required for an individual vehicle to clear an intersection.

TABLE S-1 (Continued)

PREDICTED IMPACT	RANKING OF ALTERNATIVES	POTENTIAL MITIGATION MEASURES
CLIMATE AND AIR QUALITY		
Local turbulence and shadowing effects produced by high rises, leading to reduced comfort in open space and on streets.	A > B > D > C	Reduce building heights. Orient buildings to reduce turbulence. Use landscaping and barriers to provide protection of open space against wind. Provide bus shelters.
Dust from construction activities.	A > D > B > C	Use watering to stabilize soil during excavation and construction. Wet and/or cover soil in haul trucks.
Generation of air pollutants from traffic and from building heating systems		Reduce vehicular traffic by methods outlined above under TRANSPORTATION. Alternative C inherently solves many of the air quality problems, but does not affect background levels due to sources upwind of YBC. Adopt fuel-conservation measures of RESOURCE USE, following.
Carbon monoxide (CO)	A > D > B > C*	
Sulfur oxides (SO_x)	A = D > B > C**	
Nitrogen oxides (NO_x)	A = D > B > C**	
Suspended partic.(SP)	A = D > B > C**	
Exposure of proposed housing to carbon monoxide from James Lick Freeway and local streets under some air and wind conditions.	A > D > B > C	Recirculate air in housing developments, or keep buildings under slight positive pressure, particularly at times of high pollutant levels. Adopt one or more specific measures from HUD list of techniques for protection of residents.

*Reflection of traffic volumes. 8-hour CO standard exceeded (more frequently than at present) in all alternatives in 1980 and 1988.
**Reflection of building heating, primarily. Standards exceeded as follows: SO_x (standard is for sulfur dioxide--SO_2): standard exceeded with higher frequency for Alternatives A, B and D in 1988 than at present; NO_x (standard is for nitrogen dioxide--NO_2): no future violations of standards; SP: standards still exceeded in 1988--highest YBC-generated levels would be lower than current San Francisco levels.

TABLE S-1 (Continued)

PREDICTED IMPACT	RANKING OF ALTERNATIVES	POTENTIAL MITIGATION MEASURES
NOISE		
Doubling to tripling of perceived noise levels along haul routes used by trucks transporting excavation spoils (Third, Fourth, Folsom and Howard Streets.)	A > D > B > C	Require that all trucks be muffled and maintained. Develop haul routes that avoid residential areas as much as possible.
Startle reaction from pulse-type construction noise (riveting, pounding)	D > A > B > C	Follow Noise Ordinance requirements. Adopt additional noise limits of City's Limit construction hours.
Effects of existing and future traffic noise on YBC existing and proposed housing.	C > B > A > D*	Plan sites and design housing to minimize noise levels in exterior and interior spaces. Follow HUD and California noise mitigation standards.
*Ranking is in diminishing order of number of new housing units (traffic noise levels for all alternatives roughly equal, within limits of perception).		
RESOURCE USE		
Energy (After development):		
Vehicles (gasoline, diesel fuel)	A > D > B > C	Adopt traffic-limiting measures of TRANSPORTATION above. Alternative C would inherently minimize this impact.
Buildings		Adopt mitigation measures that go beyond California Energy Commission requirements. Additional measures include design and operation measures. The major improvement could come from total-energy systems.
Electricity	D > A > B > C	
Natural Gas	C > D > B > A	
Fuel Oil	A > D > B > C	
Total (Vehicles Electric Natural Gas=Fuel Oil)	D > A > B > C	

TABLE S-1 (Continued)

PREDICTED IMPACT	RANKING OF ALTERNATIVES	POTENTIAL MITIGATION MEASURES
RESOURCE USE (Continued)		
Energy (Construction): (Equivalent to 3-5 years of operation)	D > A > B > C	Selection of nearby spoil disposal sites; reduction of building height and bulk.
Water (After development)	D > A > B > C	Use low-flow water fixtures, drought-resistant plants, drip irrigation. Water obtained from dewatering should be used for irrigation if possible.
LAND USE (INCLUDING SOCIAL CHARACTERISTICS)		
Extension of Retail and Financial Districts.	D > A > B	Mitigation not appropriate. Choice of alternative determines density.
Insufficient number of housing units to support variety of commercial services.	D > A	Provide more housing (as in Alternatives B and C).
Juxtaposition of housing and industry.	A = D	Replace industrial sites with housing (as in Alternatives B and C) or with other uses.
Citywide and regional day and night activity center.	B > A	Alternative C would reduce day activity and minimize night activity. Alternative D would reduce night activity.
Pedestrian amenities provided in concourse and park.	C > A > B > D	Mitigation not appropriate.
ECONOMICS		
Meet anticipated San Francisco demand for new office, retail and downtown support space.	D > A > B > C	Mitigation not appropriate. Choice of alternative would determine degree of satisfaction of demand.

TABLE S-1 (Continued)

PREDICTED IMPACT	RANKING OF ALTERNATIVES	POTENTIAL MITIGATION MEASURES
ECONOMICS (Continued)		
New convention/recreation/ entertainment center would compete with other centers of tourism.	B > A	Choice of Alternative C or D would mitigate impact.
Increase in employment.	D > A > B > C	Mitigation not appropriate. Choice of alternative would determine job opportunities.
Need to provide local one-third share of redevelopment costs.	A > B > C > D	Choice of Alternative D would minimize this requirement.
Existence of Redevelopment Agency funding surplus after costs.	C > B > A > D	Mitigation not appropriate. Choice of alternative would determine amount of surplus.
Requirement for public agency acquisition and improvement costs to complete development (including the convention center in Alternative A or B).	B > A > C > D	Choice of alternative would determine the costs.
San Francisco general-fund obligations for acquisition and improvement of public open space.	C > A > B	Choice of alternative would determine costs. Alternative D would have no public open space.
Requirement for general obligation bonds (public park)	C	A, B, and D would not be dependent upon general obligation bonds.
Maintenance costs required (public open space -- general fund)	C > A > B	Choice of alternative would determine costs.
Increased taxable value	D > A > B > C	Mitigation not appropriate. Choice of alternative would determine taxable value.

TABLE S-1 (Continued)

PREDICTED IMPACT	RANKING OF ALTERNATIVES	POTENTIAL MITIGATION MEASURES
COMMUNITY SERVICES		
Sewage: contribution to load to treatment plants and to overflows into the Bay.	D > A > B > C	Use low-flow water fixtures. Comply with Bureau of Sanitary Engineering recommendations for discharge of dewatering wastes. Complete City's wastewater management program. Select alternative with minimum sewage production.
Solid Waste: contribution to shortening the life of the existing disposal site.	D > A > B > C	Stockpile excavated soils for use on site. Use waste compactors in buildings when possible.
Police: Demands for police protection.		
As based on proposed developed floor space (daytime population)	D > A > B > C	Choice of alternative would determine demand.
For surveillance of public open space.	C > A > B	Choice of alternative would determine demand.
Fire: hazard to persons in underground convention center.	A = B	Follow agreed-on recommendations for convention center, including alarm systems, emergency egress, Fire Department access, employee training.
HOUSING		
Replacement of substandard, overcrowded housing with standard housing.	C > B > A > D	This impact would mitigate existing conditions. Choice of alternative would determine level of mitigation.
Shortage of low- and moderate-income housing would be reduced.	C = B > A > D	As immediately above.
VISUAL ASPECTS		
Provision of works of art in public view.	A > B > C	Mitigation not required.
Views of historic buildings.	C > B > A	Mitigation not required.

TABLE S-1 (Continued)

PREDICTED IMPACT	RANKING OF ALTERNATIVES	POTENTIAL MITIGATION MEASURES
GEOLOGY--SEISMOLOGY		
Earthquake Hazard: (proportional to number of people in YBC at a given time)		Follow Building Code requirements and Community Safety Plan policies. Investigate soil conditions in detail for each building site. The required soils studies for the convention center have been made.
Daytime	D > A > B > C	
Nighttime (overnight)	C > B > A > D	
HYDROLOGY		
In storms of intensity greater than that of the five-year storm, raw sewage could continue to flow in streets.	D > A > B > C	HUD-recommended mitigations (self-contained pressure systems, separate discharge or bypass lines) are unacceptable to the Department of Public Works (DPW). There is no history of health problems resulting from this impact in the YBC area. The financial burden of these mitigation measures would be difficult for the City to bear and would produce doubtful benefits, according to DPW.
ECOLOGY		
Destruction of old sewer laterals would force existing rat populations into adjoining structures.	D = A > B > C	Increase rat-control efforts by Public Health Department during construction.
ARCHAEOLOGY AND HISTORY		
Cultural materials from the pre-1906 and post-1906 periods of American occupancy may be found during excavations. At least four historic or architecturally significant buildings would be retained.	A = D > B > C	Pre-construction archaeological testing will be done in the convention center block. Qualified archaeologists would be retained to monitor all excavation.

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I. BACKGROUND

A. REASONS FOR THIS REPORT

On November 2, 1976, the voters of the City and County of San Francisco approved, by a vote of 119,611 to 85,081 (58%), a declaration of policy that "the City construct a convention exhibit hall at Yerba Buena Center (YBC) using a four percent hotel room tax to finance lease revenue bonds." The policy further declared that the exhibit hall be "underground if financially feasible" and "otherwise above-ground." Responsibility for implementation of the policy was placed by the Mayor on the Chief Administrative Officer (CAO). A Convention Center Coordinator was appointed by the CAO on April 1, 1977, and on May 2, 1977, the architectural firm of Hellmuth, Obata, and Kassabaum was selected to design the new convention center to be located on a vacant one-block site bounded by Howard, Third, Folsom, and Fourth Sts. The development schedule as of December 1, 1977 calls for construction to start in February 1979 and for completion in July 1981.

The convention center is in the YBC redevelopment area. A redevelopment project plan for the area was the subject of an Environmental Impact Report (EIR)[1] (footnotes appear at the end of each chapter) issued by the City and County of San Francisco in May 1973, and of an addendum published in July 1973, under the provisions of the California Environmental Quality Act (CEQA). A final Environmental Impact Statement (EIS)[2] was issued in October 1974 by the San Francisco Area Office of the U.S. Department of Housing and Urban Development (HUD) under the provisions of the National Environmental Policy Act (NEPA).

The EIR and EIS were written in terms of a three-dimensional design plan for the 25-acre, central portion of the Yerba Buena Center area which was specific regarding concepts, uses, and design details, and a less-detailed description of proposed development of the periphery of the area. Because of delays in implementation of the redevelopment plan, including changes caused by litigation and resultant settlement agreements, some uses have been changed, some development agreements have been rescinded, and new concepts and uses are under consideration for various parts of the redevelopment area. In 1976, the Mayor's Select Committee[3] on YBC submitted further recommendations for changes in the earlier plan, which are under consideration by the San Francisco Redevelopment Agency.

● Because the site, configuration, and method of financing of the projected convention center are different from those described in the 1973 EIR and the 1974 EIS, and because many of the other proposed features and uses in the YBC redevelopment area are being reconsidered and may be changed, the Department of City Planning, in consultation with the City Attorney and the Redevelopment Agency, have determined that a new EIR is needed for the convention center and for the entire redevelopment area in order to assure compliance with CEQA. It is intended that this EIR replace the 1973 document as the current EIR complying with the provisions of CEQA.

● This new EIR, which is intended to replace the earlier document, discusses and evaluates four alternatives and possible variants in as close to equal detail as possible or appropriate, to assist in the final decision-making process. None of the alternatives is singled out as "the project". The final project will probably be a combination of the elements discussed in the various alternatives. The Redevelopment Agency staff tentative proposal of November 22, 1977, described in Section IV, is an example of such a combination of elements. The alternatives have been selected so as to present the range of potential development alternatives and the range of potential impacts from various potential development proposals.

● Although the impetus for this EIR is the projected construction of the convention center by the City, which is an underlying activity, the scope of the EIR covers the entire YBC redevelopment area in which the convention center would be located, because a redevelopment plan amendment is probable as a second underlying activity. Environmental reviews must cover the entirety of a project, even when only a part of a project is proposed to be implemented in the immediate future.

● The first definitive actions to be taken arising out of the EIR process would be the consideration of proceeding with development in Yerba Buena Center as a whole and approval of the proposed convention center as a public component. The EIR discusses the environmental impact of the convention center and provides a framework for identifying what other options would be foreclosed or limited by a decision to build the convention center.

B. HISTORY OF REDEVELOPMENT IN THE SOUTH OF MARKET AREA

1. OFFICIAL DESIGNATION UNDER THE CALIFORNIA COMMUNITY REDEVELOPMENT LAW

The California Community Redevelopment Law was adopted by the California legislature in 1945 as a basis for fostering new building and development programs after World War II in urban areas identified as blighted under terms of the law. In 1946 the San Francisco Board of Supervisors established a Redevelopment Agency and subsequently designated redevelopment study areas within which redevelopment project areas were designated.

Area "A", in the Western Addition, was designated in 1946 primarily for clearance and redevelopment for residential and related uses. Two projects were subsequently designated: Area A-1 is completed and Area A-2 is approximately 60 percent complete. Federal financial assistance for redevelopment became available through Congressional enactment of the National Housing Act of 1949. In 1950, Area "B" was designated in the undeveloped San Miguel Hills (an old name for the Mount Sutro, Twin Peaks, Diamond Heights, Mount Davidson hills) for the purpose of revising the pattern of streets and lots so that new residential development could occur. This Diamond Heights project area will be built out by 1978. In 1951, Area "C" was designated in the John McLaren Park area but was rescinded after further study.

In 1953, the Board of Supervisors acted upon recommendations of the Redevelopment Agency, with the concurrence of the City Planning Commission, and designated 19 blocks as Redevelopment Area "D" in the South-of-Market district.[4] The official policy was twofold. One purpose was to remove residential uses from the area which, because of the mixture of industrial and commercial service uses, and because of their location on narrow alleys and small lots, were considered to provide a substandard and blighted living environment. The second purpose was to create larger parcels of land for industrial and downtown support uses, to improve the industrial environment, and to improve the supply of industrial land.

In 1955, four blocks were added to the Area for additional study, in response to a privately initiated scheme for clearing entire blocks for a large-scale Rockefeller Center type of development with office buildings, a hotel, a convention center, and retail shops. Faced with demand by groups opposed to total clearance to rescind the designation of Area "D" altogether, the Board of Supervisors reduced the area covered by the designation, but retained the designation on twelve and one-third blocks which were eligible for federal capital grants under the Housing Act of 1954.[5] A subsequently developed project proposal and an application for renewal funds in September 1958 was unacceptable to the federal Urban Renewal Administration; the area was later dedesignated as a blighted area in order to encourage private development.

2. REDESIGNATION

By 1960 the conceptual thrust of planning in the area was changed from an emphasis on industrial and support uses, many of which were moving to outlying and suburban locations, to a broader spectrum of uses which could be attracted to the area and contribute to the employment base of the City. The primary focus of this concept was a convention center, a sports arena, and related public facilities. In 1961 Area "D" was redesignated by the Board of Supervisors,[6] with different boundaries which encompassed the area north of the Bay Bridge Skyway, between Second and Fifth Sts., up to Market St. In 1962 the Redevelopment Agency received a federal grant for survey and planning activities.

3. THE DOWNTOWN PLAN

In 1963, the Department of City Planning published General Plan proposals for Downtown San Francisco.[7] The proposals represented the first time that the South-of-Market area was tied directly to Market St. and the area north of Market in an officially sponsored conceptual plan. Prominent in the features of the plan was a network of pedestrian ways including a Grant Avenue Mall and a "New Grant Avenue . . . beginning at Market St. and continuing over Mission, Howard, and Folsom Sts.,

using moving sidewalks, or other similar forms of shuttle . . . to link the core area with new developments and uses in the redevelopment area." The plan map indicated a park in the central half of the block between Howard and Folsom Sts. A conceptual "design plan" published concurrently broadened the park area to two blocks and suggested a sports arena and convention center south of Folsom St.

4. THE FIRST PLAN FOR YERBA BUENA CENTER

In early 1964, the Redevelopment Agency and its planning consultants, Livingston and Blayney, completed a preliminary conceptual and design plan for Yerba Buena Center, the name given then by the Agency to the project area. It provided for a generally open pedestrian space in the central blocks between Third and Fourth Sts. leading to a convention and exhibit hall between Howard and Folsom Sts., and hotels, offices and retail space on either side. A preliminary project plan, indicating the public facilities under the category of special use, and designating Project Area D-1, was adopted by the Board of Supervisors in 1966.[8]

5. THE KENZO TANGE DESIGN PLAN

A federal urban renewal grant reservation was authorized by HUD in 1966, after which more detailed planning was undertaken. In 1967 the Redevelopment Agency assembled a consultant design team whose principal member was Kenzo Tange of Tokyo; principal local assistant was Gerald M. McCue & Associates. Based on guidelines established in the first conceptual plan of 1964, a design plan was produced which provided for a 350,000 sq. ft. exhibit hall, a 14,000-seat sports arena, an 800-room hotel, a 2,200-seat theater, 4,000 parking spaces, office buildings, shops, and pedestrian malls and plazas, all of which met the Redevelopment Agency criteria to integrate large-scale public uses with economically productive private development and to provide a "satisfying environment for business and pleasure." Emphasis was given to ease of pedestrian movement and quality of pedestrian environment.

6. SELECTION OF DEVELOPERS

In mid-1969, proposals were solicited internationally by the Redevelopment Agency for the central blocks of YBC. In October 1970, Schlesinger-Arcon/Pacific, headed by Albert Schlesinger and Lyman Jee, was designated by the Redevelopment Agency to develop the public and private facilities in the central blocks.[9] In mid-1971, the City chose to develop the public portions of the central blocks directly, and Arcon/Pacific, Ltd. remained the designated developer of the parcels in the central blocks slated for private ownership and use. Some parcels acquired by the Redevelopment Agency in the peripheral blocks were programmed for sale to private purchasers. Property owners in the peripheral blocks were given the option of bringing their buildings into compliance with the standards of the redevelopment plan under owner participation agreements with the Redevelopment Agency or of rebuilding in a manner consistent with the redevelopment plan. On March 2, 1976 the Redevelopment Commission (Resolution No. 38-76) approved a disposition agreement (land-sales contract) with Arcon/Pacific for an apparel mart in the block bounded by Mission, Howard, Third and Fourth Sts. and a Market St. tower in the block bounded by Market, Mission, Third and Fourth Sts.; the Agency also affirmed Arcon/Pacific as the developer of all private sites in the central blocks.

The principal new developments in the peripheral blocks which were completed or substantially completed by October 1977 consist of the Pacific Telephone Company accounting and computer service building at Hawthorne and Folsom Sts., the General Electric Company at 55 Hawthorne St., the United California Bank at Hawthorne and Folsom Sts., the Pacific Telephone Company northern regional headquarters building at Third and Harrison Sts., the American Telephone Company long-lines building at Fourth and Folsom Sts., a Chevron automobile service station at Third and Harrison Sts., a Union automobile service station at Fourth and Folsom Sts., an addition to the Fifth and Mission parking garage at Fourth and Mission Sts., and the Downtown Center of the San Francisco Community College at Fourth and Mission Sts. Also completed were the Clementina Towers, a public housing complex for the elderly, and a portion of the Silvercrest Residence, which is a housing complex owned by the Salvation Army, also for the elderly.

7. LITIGATION

When planning and implementation of the plans for YBC reached the point of property acquisition and relocation of businesses and residents, several suits were filed in local and federal courts. Some involved prolonged litigation and resulted in substantial delays to the scheduled property acquisition, disposal, and construction programs. Currently, all suits but two have been settled. Settlement agreements have resulted in changes in the plan, the implementation program and the schedule. The principal cases and their results are described below.

a. Silver vs. Board of Supervisors. A validation suit was filed in Superior Court in 1967 by Louis Silver, owner of the Milner Hotel at Fourth and Mission Sts., charging that there was insufficient evidence to support the findings of Ordinance No. 98-66 which designated the South-of-Market Area D-1 project boundaries and adopted a preliminary plan. The Court initially found the Redevelopment Plan to be valid; this judgment was affirmed on appeal. A petition for hearing in the California Supreme Court was denied in 1969.

b. TOOR vs. HUD. In 1970, Tenants and Owners in Opposition to Redevelopment (TOOR) filed an action in the U.S. District Court against the Redevelopment Agency and HUD relating to the displacement and relocation of persons living within the YBC redevelopment area.

On July 19, 1973, a final order and judgment was entered dismissing the complaint with prejudice and approving a settlement agreement dated May 15, 1973. Under that agreement the Agency agreed to provide four additional housing sites and re-affirmed its commitment to provide 1500 new or rehabilitated low-income housing units within the City and County of San Francisco. The agreement also established procedures for the relocation of remaining project residents.

c. San Francisco Tomorrow et al. vs. Romney. On January 13, 1972 two groups filed an action in the U.S. District Court alleging that HUD failed to file an environmental impact statement for YBC. That action was dismissed on the grounds that the federal act required to bring NEPA

into play, i.e., the Loan and Grant Agreement between HUD and the Agency, was taken prior to the adoption of NEPA in 1969. The U.S. Court of Appeals affirmed the dismissal on January 18, 1973.[10]

d. Duskin vs. Alioto, and Williams vs.City and County of San Francisco. In 1972, a group of taxpayers filed actions against the City and County of San Francisco in Superior Court challenging the execution of the original 1972 financing agreement on several grounds. These actions were subsequently consolidated with an action brought by the Agency (Redevelopment Agency vs. All Persons Interested) and were dismissed with prejudice on November 12, 1974, on the basis of a settlement agreement dated August 28, 1974, which placed restrictions on the financing of the planned public facilities and dropped the sports arena complex. The settlement also obligated the Redevelopment Agency to amend the Redevelopment Plan to add housing on up to eight sites and to "take all steps necessary to induce the development of up to a maximum of 900 units of market-rate housing". The financing arrangement on which this settlement was premised was based on a bonding program for public facilities which is no longer valid in the light of other subsequent plan and program changes.

e. C. Starr, et al., vs. City and County of San Francisco. In 1975, the Board of Supervisors adopted ordinances authorizing the City to enter into a project lease and execute a repayment contract. The lease provided that the Agency would issue bonds not to exceed $210,000,000 for constructing facilities for YBC and that the Agency would lease the facilities to the City.

● The project lease provided that the City would pay a base rental which essentially covered the debt service on the construction costs and incidentals for the convention center. The project lease provided also that the City would pay additional rental to cover any taxes, administrative costs, and insurance premiums. The repayment contract between the Agency and the City provided that tax increments derived from the increased development in the YBC area would be diverted to HUD, for a period of time, to repay the outstanding loan to the Agency from HUD. The repayment contract also required the City to make up from "legally

available funds" deficiencies in such tax increments from the City's general fund.

A suit was filed to void the project lease and the repayment contract. The trial court upheld the validity of both the project lease and the repayment contract and that judgment was appealed. On July 29, 1977, the appellate court upheld the validity of the project lease, but voided the repayment contract as being in violation of constitutional debt limitation provisions. No further action is anticipated.[11]

8. HISTORY OF THE SPORTS ARENA

Included in the plan for the central blocks that comprised the "project" considered by the 1973 EIR was a multipurpose 14,500-seat sports arena of approximately 390,000 gross square feet located in the block bounded by Howard, Third, Folsom, and Fourth Sts. With a main interior space eight stories in height, the arena was designed to accommodate movable grandstands and portable seating to accommodate up to 17,500 persons for basketball and 19,500 persons for assembly events. The major revenue-producing sports were expected to be ice hockey and basketball. It was intended that the arena would also be used for various shows and entertainment programs, and serve as an adjunct to the convention center.

The hockey team, which at the time of initial planning was expected to use the arena, was later transferred to Oakland, and subsequently to Cleveland. The basketball team expected to use the arena was transferred to Oakland and became statewide in its geographic affiliation. These moves resulted in a decrease in expected overall tenancy. The arena was originally scheduled to be financed as a part of the public facilities in the central blocks. The sports arena as a private development was the subject of a Redevelopment Agency resolution in 1975. The terms were not fulfilled by the private developer, who did not pursue the design to the required stage. Such a facility is not considered in any of the alternative plans analyzed in this report.

9. HISTORY OF THE CONVENTION CENTER

Inclusion of a convention center with exhibit halls and meeting rooms became an intrinsic part of planning for YBC after the redesignation of a redevelopment area in the South-of-Market district in 1961. The Kenzo Tange plan which was the basis for developer bids in 1969 contained a 350,000 sq. ft. underground exhibit hall in the western half of the two blocks enclosed by Mission, Third, Folsom and Fourth Sts., with a 50,000 sq. ft. complex of meeting rooms above. The facility would have extended under Howard St. and would have provided major access from the mid-block pedestrian concourse as well as Howard Street. Public parking was planned to the west of the exhibit hall in above-ground structures on Fourth St. The parking was placed underground in modifications to the plan made in 1972, and reduced from 4,000 spaces to 1,800 spaces. In these plans the convention center was linked to the sports arena, in the eastern half of the block bounded by Howard, Third, Folsom and Fourth Sts., for combined use by large conventions.

Delays in implementation of the convention center and related public and private facilities caused by litigation and cost inflation led to subsequent modifications in the convention center location and configuration and the removal of public parking from the block bounded by Howard, Third, Folsom and Fourth Sts., as described in Section IV.

10. MAYOR'S SELECT COMMITTEE, 1976[3]

In March 1976, the Mayor announced the formation of a Select Committee, made up of supporters and opponents of the Redevelopment Plan, to formulate a number of different plans for possible development of the YBC area, to obtain public comments and criticism, and finally to submit recommendations for a new plan. Based on staff and committee review and analysis and a series of public meetings, six alternative plans were presented in July 1976 for public review and comments. In August 1976, the Committee published a draft final plan and subsequently reached a majority consensus on a 17-point series of recommendations which were submitted to the Mayor (See Appendix B for the complete list).

The Committee's "preferred plan" included strong preference for an underground convention center on the site which was subsequently selected. It recommended retention of the Mercantile Building, St. Patrick's Church and the Jessie Street Substation as historical and/or architectural structures of landmark significance. It recommended development of an urban theme ("activity") park, preferably by a private developer. It recommended retention of the allocated apparel mart site, in conformity with the current land disposition agreement with the Redevelopment Agency. If the apparel mart were not built, it recommended inclusion of its site in the urban theme park. It also recommended that 300 units of subsidized family housing be built within the area and that sites for 400 to 600 units of market-rate housing be set aside north of Howard St.

Policy affirmation or implementing action has been taken on some of the recommendations by the Redevelopment Agency and by the Yerba Buena Convention Center office of the Chief Administrative Officer. Official consideration of the other recommendations pertaining to features of the plan is expected to follow the official review of this EIR. These pertain to the amounts of office space, off-street parking, family housing, and market rate housing, and to the recreation-entertainment park. The Select Committee's "preferred plan" is the basis for Alternative B which is considered in this report and described in Section IV.

11. TENTATIVE PROPOSAL, 1977

On November 22, 1977, the Redevelopment Agency made a tentative proposal which could result in plan amendments incorporating some of the Mayor's Select Committee recommendations into the Redevelopment Plan. This is described in Section IV. H, page 58.

C. DECISION-MAKING PROCEDURES

In order to implement Alternatives A, B, or C, the tentative proposal of the Redevelopment Agency staff made on November 22, 1977, or variants to any one of these alternatives, the official Redevelopment Plan for YBC will have to be amended. Such action would be initiated by the Redevelopment Agency and would be subject to review and recommendation by the City Planning Commission and adoption by the Board of Supervisors. However, some specific projects within the YBC area would not require a plan amendment because they are already authorized by the presently approved Redevelopment Plan. Examples include the convention center, which is an authorized use under the category of Special Use in Central Block 3, and the four housing developments sponsored by TODCO (Tenants and Owners Development Corporation), as their sites have already been the subject of amendatory action in 1976 and 1977.

Prior to further plan amendment actions, this EIR, in final form including comments and responses, must be certified as complete by the Redevelopment Agency and City Planning Commission, These two decision-making bodies have acted as joint lead agency in processing this EIR.

Subsequent to the amendment of the Redevelopment Plan, the responsibility for implementation is vested in the Redevelopment Agency which is authorized to sell land parcels, establish conditions of use, and review and approve building and landscaping plans.

Public uses must be reviewed by the City Planning Commission and a report must be rendered on the conformity of each public project with the Master Plan, the General or Comprehensive Plan of the City. Such reports are prepared by the staff of the Department of City Planning, and may be acted upon by the City Planning Commission. The Redevelopment Plan was subject to such a process; any future amendment would also be subject to this procedure.

Public uses must also undergo a Charter-mandated design review and approval process by the Art Commission. Action by the Board of Supervisors would be required on any public project or program requiring the appropriation of City funds.

Some private uses, as specifically indicated in Section VI.A, would be subject to a rezoning or conditional use authorization by the City Planning Commission. Applications would be initiated by the Redevelopment Agency or the private owners of the parcels involved.

Proceeding on the convention center would entail the following actions by the Board of Supervisors: 1) review of the EIR; 2) approval of a lease between the City and the Redevelopment Agency; and 3) authorization to the Redevelopment Agency to issue bonds. Actions by the Redevelopment Agency would be required as follows: 1) approval of the lease with the City; and 2) authorization, by resolution, of the sale of bonds. Following these actions, final design and construction plans would be processed for design approval by the Art Commission and for permit processing and approval through the Bureau of Building Inspection.

FOOTNOTES

[1]Arthur D. Little, Inc., URS Research Company, 1973, Yerba Buena Center Public Facilities and Private Development, Draft Environmental Impact Report.

[2]U.S. Department of Housing and Urban Development, 1974, Yerba Buena Center Final Environmental Impact Statement.

[3]A citizen group composed of varied geographic, citizen, and professional interests: Hon. Leland Lazarus, Judge, Superior Court (ret.), Chairperson; John Blayney, American Institute of Planners; Eugene Coleman, Canon Kip Center; Mike Davis, Citizens Committee on YBC; Flora

Douglass, S.F. Labor Council; Steve Dutton, Tenants and Owners Opposed to Redevelopment; Doug Engmann, Coalition for San Francisco Neighborhoods; Morris Evenson, S.F. Building Trades Council; Hon. Dianne Feinstein, Board of Supervisors; Tony Grafilo, Human Rights Commission; John Jacobs, SPUR; Doris Kahn, Dept. of Social Services; Gordon Lau, President, S.F. Planning Commission; Henri Lewin, Hilton Hotel Corp., S.F. Chamber of Commerce; Thomas Mellon, Chief Administrative Officer, City of San Francisco; Jack Morrison, San Francisco Tomorrow; Rick Sorro, San Francisco Coalition; Dan Gardner, Committee Staff Director.

[4]Resolution 13180, April, 1953.

[5]Resolution No. 17269, November 28, 1956.

[6]Resolution No. 78261, December 15, 1961.

[7]San Francisco Department of City Planning, 1963, Downtown San Francisco.

[8]Ordinance 98-66, April 29, 1966.

[9]Bounded by Market, Third, Folsom, and Fourth Streets.

[10]Later in 1973 the Redevelopment Agency submitted a series of proposed changes to the Redevelopment Plan to HUD. It was the determination of HUD that approval of the changes would constitute a "major federal action" under NEPA and would require a full EIS. Such a document was subsequently prepared (HUD, 1974).

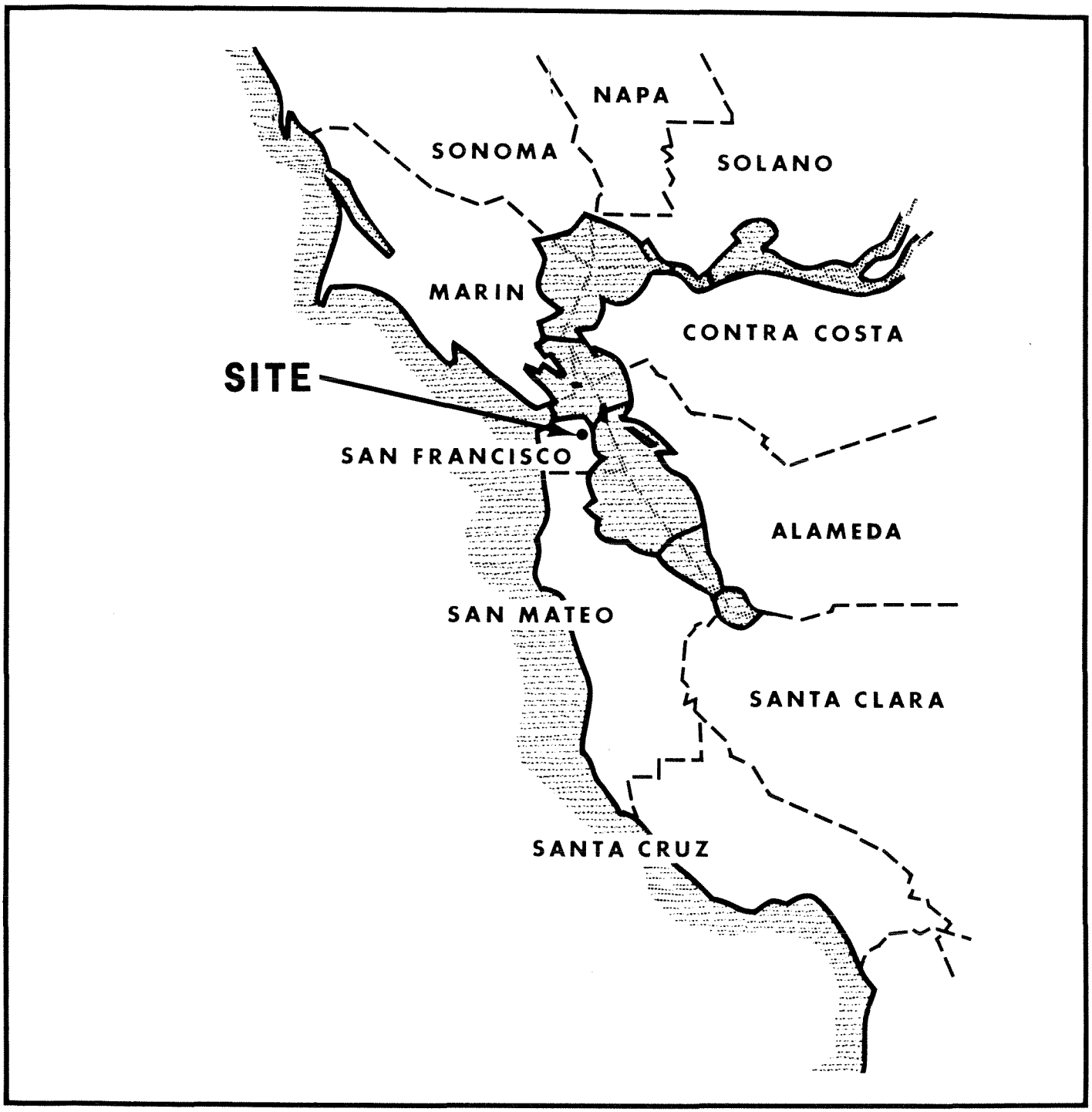
[11]The fiscal impacts of the four alternatives discussed in this report are described in Section VI. D.4.

II. GENERAL AREA DESCRIPTION

A. REGIONAL AND LOCAL CONTEXT OF THE REDEVELOPMENT AREA

● YBC (see Figures 1, 2, and 3, Pages 15, 17, and 19) is a part of the larger South-of-Market district of San Francisco, which extends generally from The Embarcadero on the Bay shore to Eleventh St. on the west, and from Market St. on the north to China Basin and Townsend and Division Sts. on the south (Census Tracts 176, 178, 179, and 180). The South-of-Market district is different from other parts of San Francisco in several respects. The street pattern is skewed approximately 45 degrees from the typical north-south and east-west orientation of most of the San Francisco grids. (For ease of description, and in line with local custom, the northeast-southwest oriented streets such as Mission, Howard, and Folsom are considered as east-west streets in this report, and the northwest-southeast oriented streets such as Third and Fourth are considered as north-south streets.) The area is generally flat; only the cut-down remnants of Rincon Hill,[1] centered in the area between First and Second Sts., provide topographic variety (see Figure 24, page 193). Block lengths are the longest in the City, measuring 825 feet on the east-west streets and 550 feet on the north-south streets. When originally laid out in 1849, the parcels were twice the size of those in the blocks north of Market St. Subsequent subdividing of the large, 11-acre blocks resulted in alleys 40 feet in width or narrower, and lots measuring as little as 25 by 70 feet.

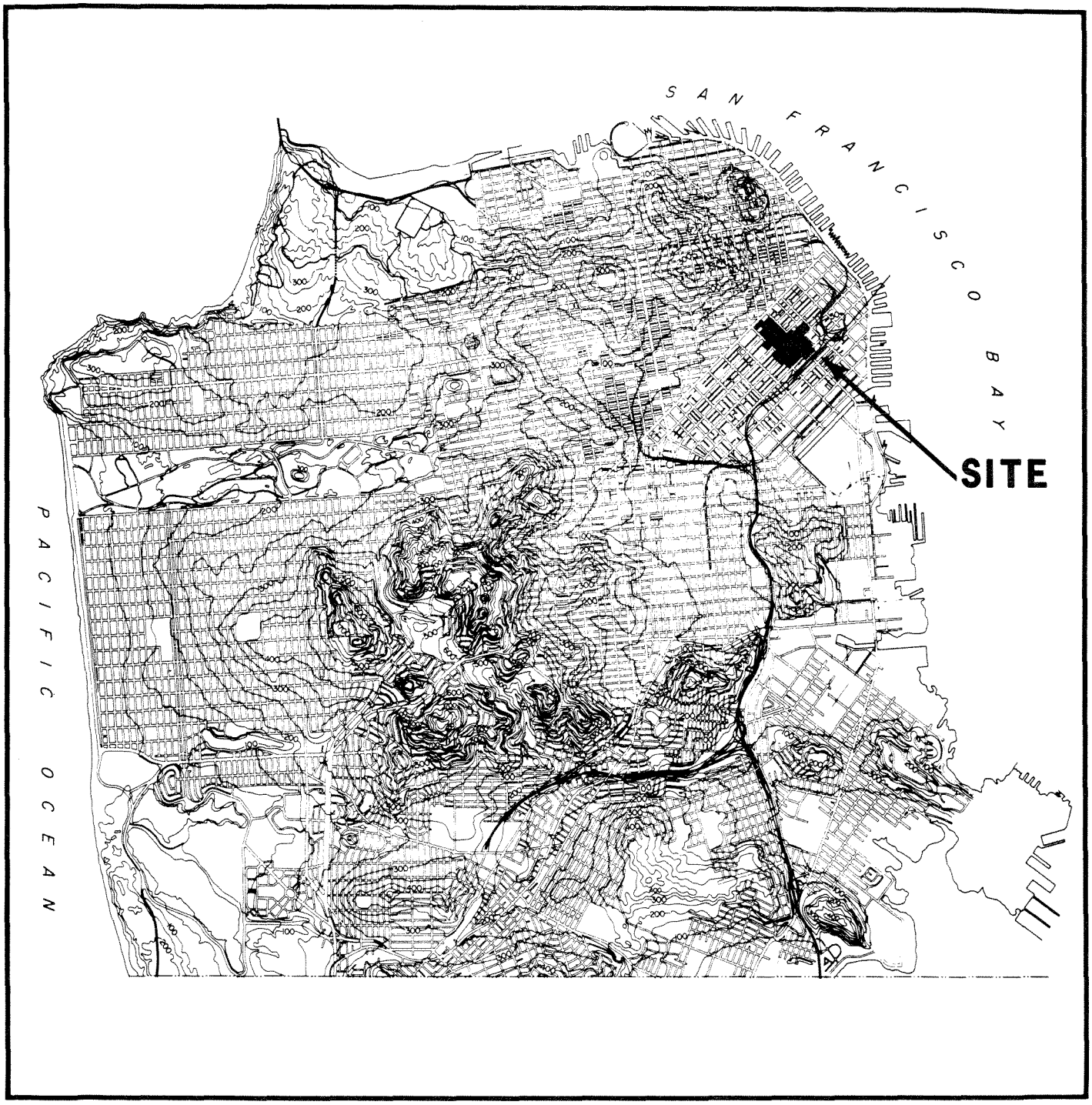
● The South-of-Market district serves as the entrance to downtown San Francisco for persons coming from the east or south. It is the western anchorage of the San Francisco-Oakland Bay Bridge and contains its connecting freeway linkages. It is the terminus of the Southern Pacific



0 10

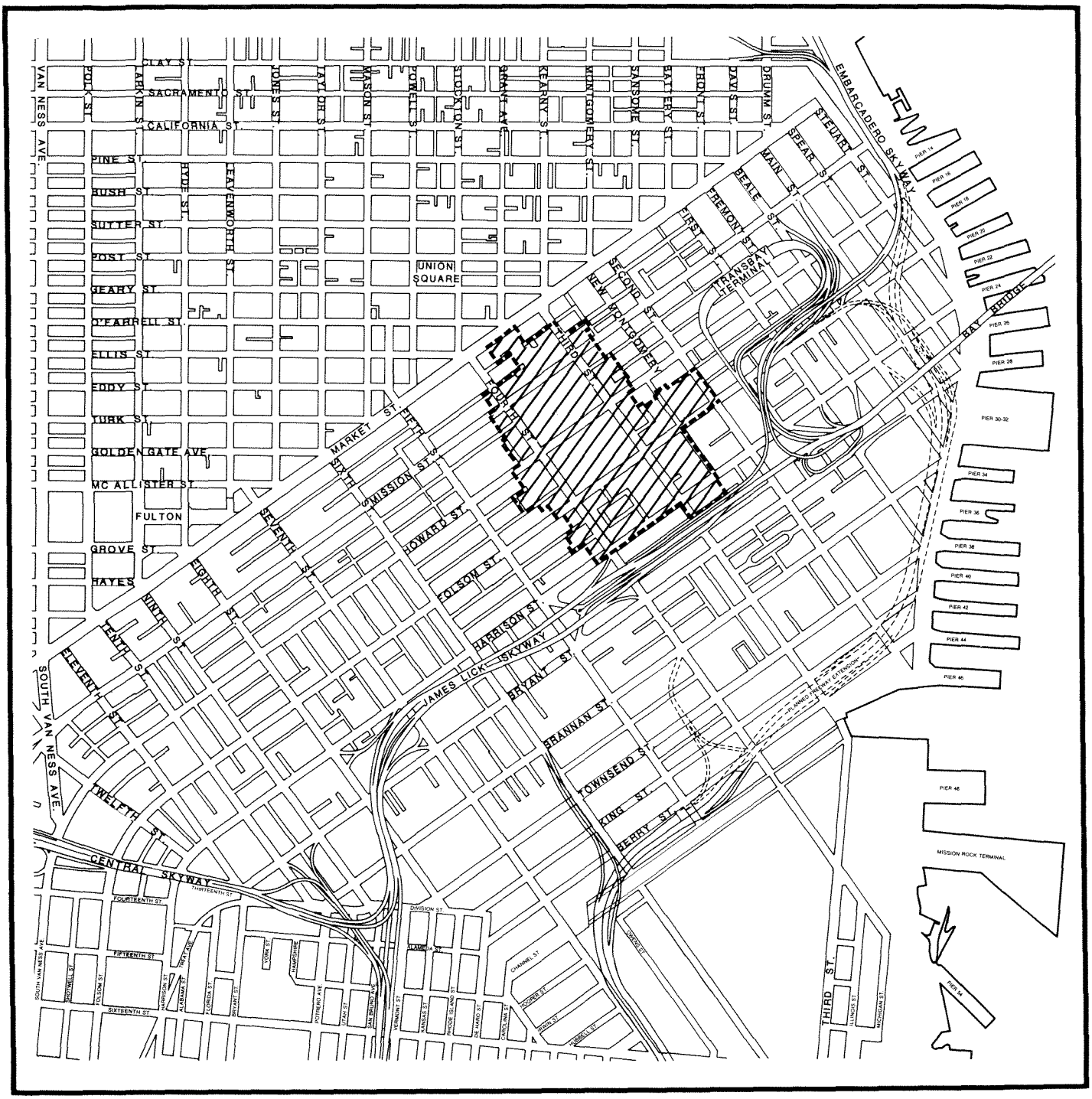
Miles

REGIONAL LOCATION	1



0 4000 Feet

AREA LOCATION 2



LEGEND

▬▬▬ Yerba Buena Center area boundary

0 0.5 Kilometer

0 1800 Feet

N

YERBA BUENA CENTER BOUNDARIES | 3

Railroad and its commuter lines serving the San Mateo Peninsula. It was once an important segment of the San Francisco waterfront and the site of many backup or port-related industries, but this aspect has diminished in recent years. By their physical dominance, the remaining industries and warehouses characterize the South-of-Market district as an important warehousing and distribution center in the Bay Area. The District is also a residential district, particularly west of YBC where hotels, flats, and apartments are located on the interior streets and alleyways and to a lesser extent on the principal streets (the principal streets in the YBC area are defined as Market, Mission, Howard, Folsom, Harrison, Second, Hawthorne, Third, Fourth, and Fifth). The South-of-Market district also contains a number of service uses related to the Financial and Retail districts north of Market St, and serving as specialized activity centers for the entire Bay Area.

B. HISTORY OF THE YERBA BUENA CENTER AREA

The site of YBC was originally a series of windblown sand dunes typical of much of early San Francisco. Its early settlement resulted in a mixture of residential, commercial, and industrial uses. It was destroyed by the earthquake and fire of 1906, except for St. Patrick's Church, but was rebuilt with a mixture of uses, including residential. When the first zoning ordinance was adopted in 1921, most of the area was placed in a light industrial classification, except that portion nearest to Market Street which was classified as commercial. Residential uses were not specifically recognized by the zoning pattern but were permitted in the commercial and light industrial zones.

The mixture of uses resulted in problems for both the industries and the residents of the area. As trucks increased in size, the narrow alleys and lack of off-street loading facilities caused increasing congestion. The alleys were the playgrounds of the children of the area, and became increasingly hazardous for them with the increase in industrial traffic. As residential uses gradually decreased, some of the institutions and facilities

which served them moved from the district or ceased to exist. Findings of blight in 1953[2] led to the designation of the area as a redevelopment area and to the subsequent establishment of the YBC project area.

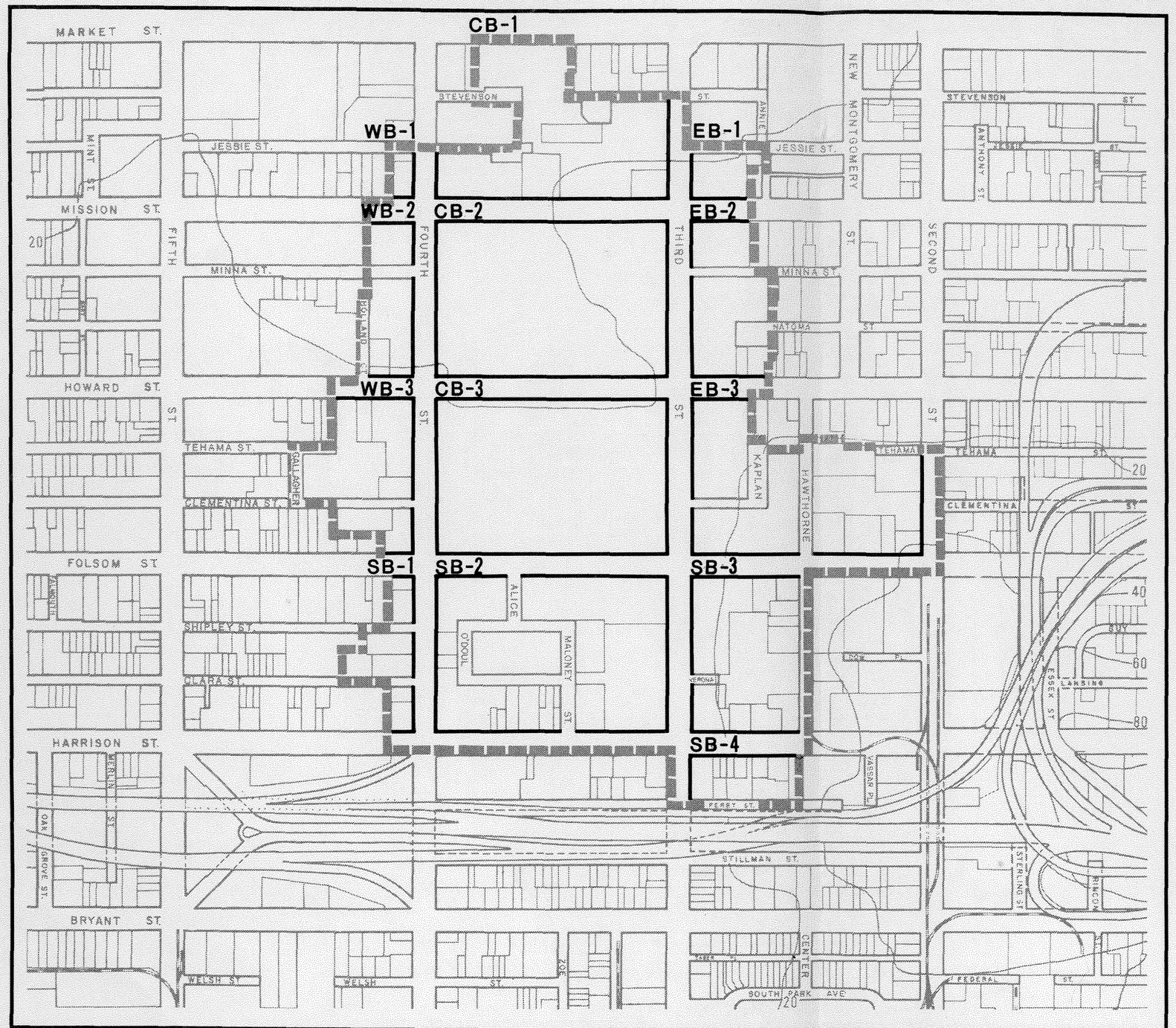
● Clearance of the YBC area began in 1970 and, except for the few remaining buildings intended to be demolished in accordance with the redevelopment plan, was completed in 1974. The clearance process required the relocation of approximately 3,000 residents most of whom were single and/or elderly. This activity was resisted in the form of the litigation described in Section I.B.7 which led to judicially mandated settlement agreements requiring new housing in YBC (see Table 7, page 88).

C. DESCRIPTION OF THE YERBA BUENA CENTER AREA AND VICINITY

● Throughout the EIR the blocks in the YBC area are designated, as indicated in Figure 4, by a combination of letters and numbers, with the letters indicating the general location within YBC. For example, EB-1 means Eastern Block 1. Assessor's Block numbers are also shown in the legend of Figure 4.

● The YBC site has been cleared of all buildings slated for demolition except for the Imperial Hotel and an adjacent three-story building on Fourth St., two office buildings at the northeast and southeast corners of Mission and Third Sts., the Jessie Hotel on Jessie St. and two adjacent buildings on Third St., the Planter's Hotel at Second and Folsom Sts, the New Montgomery St. Parking Garage, and the buildings at 676-678 Mission St. and 109 Third St. The clearance is most evident in Central Blocks 2 and 3 (CB-2 and CB-3) (See Figure 4), which comprise 21 acres of open space. In the peripheral blocks new buildings have been built in the past five years in conformance with the official redevelopment plan. These include office buildings in the eastern and southern blocks and housing in

the blocks west of Fourth St. The dominant interim use in the area is in the form of temporary parking lots which have a total capacity of nearly 2800 vehicles. Among the remaining buildings, two have been designated as landmarks by the San Francisco Board of Supervisors: St. Patrick's Church and the Jessie Street Substation (the latter is on the National Register of Historic Places; see section V. M).



LEGEND

Redevelopment area boundary

CB-1 = Central Block One
Assessor's Block 3706

CB-2 = Central Block Two
Assessor's Block 3723

CB-3 = Central Block Three
Assessor's Block 3734

EB-1 = Eastern Block One
Assessor's Block 3707

EB-2 = Eastern Block Two
Assessor's Block 3722

EB-3 = Eastern Block Three
Assessor's Block 3735

SB-1 = Southern Block One
Assessor's Block 3752

SB-2 = Southern Block Two
Assessor's Block 3751

SB-3 = Southern Block Three
Assessor's Block 3750

SB-4 = Southern Block Four
Assessor's Block 3763

WB-1 = Western Block One
Assessor's Block 3705

WB-2 = Western Block Two
Assessor's Block 3724

WB-3 = Western Block Three
Assessor's Block 3733

0 0.5 Kilometer

0 1800 Feet

BLOCK NUMBERS YERBA BUENA CENTER	4

Several forms of transit serve Yerba Buena Center directly or indirectly ("direct" service denotes transit vehicles passing through YBC; "indirect" service denotes transit agencies with terminals outside YBC, but accessible by walking, direct transit, taxi or jitney). The transit routes directly serving YBC include those of: San Francisco Municipal Railway (Muni); San Mateo County Transit (SamTrans); Golden Gate Bridge, Highway and Transportation District Transit (Golden Gate Transit) buses; and the Bay Area Rapid Transit (BART) District. These routes are located principally on Market, Mission, Howard and Folsom Sts. in the east-west direction, and Third, Fourth and Fifth Sts. in the north-south direction. Jitneys run along Mission St., and along Third and Fourth Sts., serving the Southern Pacific Terminal. Indirect service includes the Alameda Contra Costa Transit District (A-C Transit) and the Golden Gate Transit ferry system.

The eastern portion of the YBC site abuts the southern extension of the Financial district along New Montgomery St., and is the site of further southward expansion of the office uses on Hawthorne, Folsom, and Third Sts. The Market St. gateway to the area, opposite Grant Avenue, is at the southeastern edge of the Union Square retail shopping and hotel district, a concentrated downtown activity area. The southern edge of the site is predominantly industrial in use and is dominated by the Bay Bridge approach and Central Skyway structures. West of the YBC area, dominant uses are either residential or are commercial uses of a type which relate to and support the more intensive downtown activities. Sixth St. contains retail outlets serving residents of the area, and hotels catering to permanent residents.

FOOTNOTES

[1]The natural height of Rincon Hill was originally 120 feet above sea level. Quarrying and cutting carried out in the 1860's, including a 75-foot cut on Second Street, have left its highest point at an elevation of 108 feet.

[2]Board of Supervisors Resolution No. 13180.

III. APPROACH TO THE EVALUATION OF ENVIRONMENTAL IMPACTS

● As explained in Section I and developed in Section IV following, there are four "basic" alternative plans for the entire YBC area, some with reasonably well-defined single components, and all with a specified land use and floor area for each parcel or group of parcels in YBC considered in this EIR. Each alternative is treated as fully as if it were the project. Specifics (uses, square footages, building heights) which were the basis for the analysis of the four basic alternatives were adopted (by the EIR consultant, ESA, with the agreement of the Redevelopment Agency staff and the Office of Environmental Review, Department of City Planning) as of about August 25, 1977. Variations in certain components within each basic alternative plan are evaluated.

● The four basic alternatives have been examined equally, to an extent consistent with the level of detail available with respect to land use or component description. Some of the impact categories, such as air quality, that require quantitative evaluation have been examined on the basis of the maximum potential impact or "worst case" of the alternative. For example, all sources of air pollutants at full development of YBC are estimated for each pollutant, the total emission at full development is calculated, and the local and regional consequences are reported. When a component within a basic alternative is varied, the change in the areawide effect is discussed; however, tables and graphics for the basic alternative are not redone. The four basic alternatives produce a range of quantitative effects in each impact category. When the evaluation of the basic alternatives is combined with the discussion of the effects of variations in components, a basis is provided for future assessment of components or land uses that are not treated in this EIR, or that may change in size or nature as development continues. An example of the way the information in this EIR may be used to analyze a plan which contains components of several of the four basic alternatives is the

Redevelopment Agency November 1977 tentative staff proposal, which is described in Section IV. H, page 58. This analytic approach conforms to the spirit and directives of the California Environmental Quality Act and the State EIR Guidelines which indicate that environmental documents should be prepared as early as possible in the planning process to enable environmental considerations to influence project program and design[1]. Upon completion of this EIR the San Francisco Redevelopment Agency should be able to proceed with detailed planning of the entire YBC area on the basis of public, staff and decision-maker understanding of the environmental consequences of individual uses.

The estimated quantitative effects at full development of YBC include those of land uses now existing in YBC and scheduled to remain, (such as the new telephone buildings, the community college, etc.), and those of land uses committed for development because of binding legal commitments (such as the TODCO housing for the elderly). All such land uses are unchanged from one basic alternative to any other. What we have called the "discretionary" impacts, or the impacts of the "discretionary" land uses, represent the effects of those uses or components which vary from basic alternative to basic alternative (which, in fact, define the nature of the alternative). Discretionary impacts are presented in either quantitative or narrative form.

● The proposed convention center is the component which has received the greatest individual attention in the impact evaluation. This is because: (a) its planned construction triggered the need for an EIR at this time; (b) its concept is well-defined and it has gone through several preliminary designs thereby permitting greater specificity in the analysis; and (c) it was proposed to be built over the next 2-1/2 years. Accordingly, its potential impacts were assessed in the 1980 time frame (along with those of other uses, such as the TODCO housing for the elderly, scheduled for completion by 1980). Since the completion of the Draft EIR analysis, the estimated convention center completion date slipped to July 1981. The financial impact analysis (Section VI.D.4) has been revised to reflect this change, because of the implications for bonding capacity and for the use of hotel tax revenues. All other impact categories retain the 1980 analysis because the one-year difference is

statistically insignificant. For example, in the traffic analysis, which provides inputs for the air-quality and the noise analyses, a one-year change results in an increase of 1.8% in base (non-YBC-generated) traffic, so less than 1.8% for total traffic in YBC (see Section VI.F and Appendix F). This change is statistically insignificant in the face of the ±10-15% uncertainties in traffic volume estimates (Section VI.F and Appendix F). With respect to air-quality, a 1980 analysis is a worse case than a 1981 analysis because of the expected continuing decline in per-vehicle auto emissions through about 1985.

- The impacts of full development (including the contributions of the convention center and of other pre-1980 developments) have been analyzed in the 1988 time frame[2]. It has been recognized that market considerations might preclude that rapid a buildout for the entire YBC. Nevertheless, in the interest of preparing a worst-case impact evaluation for all impact categories, we have treated all social, physical, and biological impacts as if YBC development were complete by 1988. In the financial analysis, a slower rate of development has been taken into account, as well as the 1988 buildout assumption, as the financial consequences (to the Redevelopment Agency and the City) might be greater with a slower, post-1988 buildout. Costs of required City facilities are reflected in the economic analysis; they are not discussed under other impact categories.

- As implementation proceeds toward full development, major implementation elements would, as necessary and appropriate, be subject to further environmental review where it is determined that the more specific details of the implementation elements require additional environmental analysis. See, for example, Sections 15061(e), 15068, 15069, 15069.5 and 15147 of the State implementing guidelines.

For the most part, in the absence of detailed plans, quantitative estimates of impacts are based on general types of land uses. Office uses, for example, are considered to generate vehicular and pedestrian travel on a per-square-foot basis. No distinction as to type of office is made. The same is true for light industry, public parks, etc. For estimation purposes, residential uses have been broken down into subsidized elderly, subsidized family, and market-rate (conventional) housing.

The basic concept and economic feasibility of the proposed recreation/entertainment park in Alternative B (variously known as an "urban activity park," a "theme park", or a "pleasure park", at different stages in concept development), based on the recommendations of the Mayor's Select Committee on YBC, are being examined by the Redevelopment Agency. If the "theme" park were as well defined at this stage as the convention center or were expected to be built at the same time, it would be analyzed in as much detail as the convention center. In the absence of a firm definition, the "theme" park has been treated in general terms. For those impact categories for which quantitative impacts are summed over the entire YBC area, such treatment is within the limits of accuracy of the overall treatment.

Impacts have been evaluated at several scales. Certain categories, such as transportation and air quality, have regional as well as local implications. Others, such as financing, are essentially citywide in scale, with some implications at state and federal levels. Still others, such as noise, are primarily local problems. A 1977 baseline has been used for analysis of current conditions, except where otherwise indicated.

Alternatives have been compared with respect to one impact category (for example, transportation, air quality, financing) at a time. Alternatives have not been compared to one another on an overall basis. Readers are free to make such comparisons or to construct new alternatives, based on the information presented here and on their weighting of the relative importance of the impact categories.

FOOTNOTES

[1]Section 15013(b), State EIR guidelines.

[2]This date was accepted as a reasonable objective for full buildout, for analysis purposes, by R. Kernan, Deputy Director, San Francisco Redevelopment Agency, at a meeting on June 16, 1977.

IV. DESCRIPTION OF ALTERNATIVES

● The YBC central blocks proposal analyzed in the 1973 EIR and 1974 EIS is no longer feasible, due to changes caused by delays in its implementation and cost inflation, and there is no new plan with comparable detail. Four land use plans for the 87-acre YBC redevelopment area are considered, analyzed and evaluated in this EIR, in as close to equal detail as possible or appropriate, in order to assist in the development of an optimal proposal which balances various community objectives. Each alternative is based on a different plan or concept and represents a different balance of uses. Within each alternative, variations to certain components are distinguished in the analyses. None of the alternatives is singled out as "the project."

This analytic approach conforms to the spirit and directives of the California Environmental Quality Act and the State EIR Guidelines which indicate that environmental documents should be prepared as early as possible in the planning process to enable environmental considerations to influence project program and design[1]. Upon completion of this EIR the San Francisco Redevelopment Agency should be able to proceed with detailed planning of the entire YBC area on the basis of public, staff and decision-maker understanding of the environmental consequences of individual uses.

The range of alternatives (to the original "project") considered in the 1973 EIR covered those deemed practicable within the redevelopment context as it existed at that time. They were similar to the Alternatives C and D considered in this report, and responded in part to issues which are no longer pertinent, such as disapproval of proposed housing which has subsequently been approved through a settlement agreement and plan amendment. A reduction in the amount of office space in favor of housing was specifically considered; this is similar to one element of Alternative B as considered in this report. The 1974 EIS considered as alternatives the

disapproval of redevelopment plan changes which have since been adopted; a new-town-in-town concept similar in part to Alternative C in this report; and a park in the central blocks, similar to that considered in Alternative C in this report. Both earlier environmental reports considered the required "no project" alternative.

● Underlying objectives common to all alternatives considered in this EIR, except the variant to Alternative D (status quo), include 1) the removal of blight and substandard buildings and living and working conditions; 2) the replacement of under-used space or empty unused urban space with productive urban uses, both public and private; and 3) the provision of housing and jobs and the revitalization of a segment of central, downtown San Francisco.

The four current alternatives were selected for analysis on the basis of their importance as statements of official or semi-official policy (Alternatives A and B), as expressed public opinions or desires (Alternative C), and as the legally required no-action alternative (Alternative D).

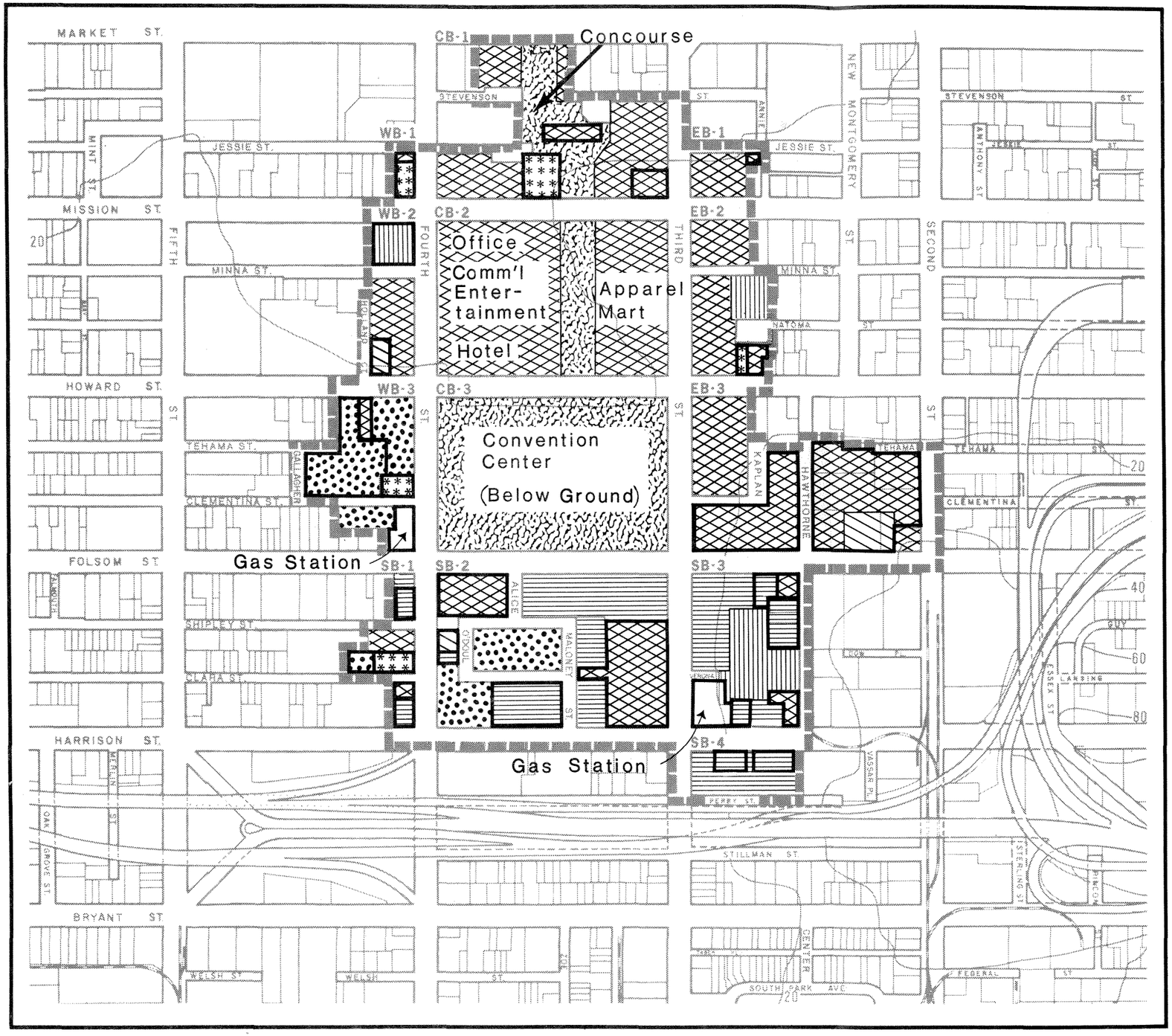
Alternative A (See Figure 5) is based on the Redevelopment Plan for YBC which was originally adopted by the Board of Supervisors of the City and County of San Francisco by Ordinance No. 98-66 on April 25, 1966. The plan has been amended four times: by Ordinance No. 201-71 adopted on July 26, 1971; by Ordinance No. 393-73 adopted on October 9, 1973; by Ordinance No. 386-76 adopted on September 13, 1976; and by Ordinance No. 367-77 adopted on August 8, 1977. This alternative provides for a central pedestrian concourse and urban plaza, a convention center, high-rise office buildings, retail activities, a hotel and entertainment facilities, subsidized housing for the elderly, and light industrial uses.

Alternative B (See Figure 6, page 35) is based on recommendations of the Mayor's Select Committee on Yerba Buena Center which were submitted in August 1976, after five months of review of a number of possible alternatives to the official redevelopment plan by the Committee

and members of the public. This alternative provides for less office space and more housing--both subsidized and market rate--and for a commercial recreational and entertainment park. A principal feature of Alternatives A and B is the Yerba Buena Convention Center.

Alternative C (See Figure 7, page 37) is based on a theoretical concept which reflects a variety of public suggestions and comments made on the 1973 EIR and 1974 EIS. It includes more market rate housing units and less office and retail space than Alternatives A and B; it has a

[Text continues on page 39.]



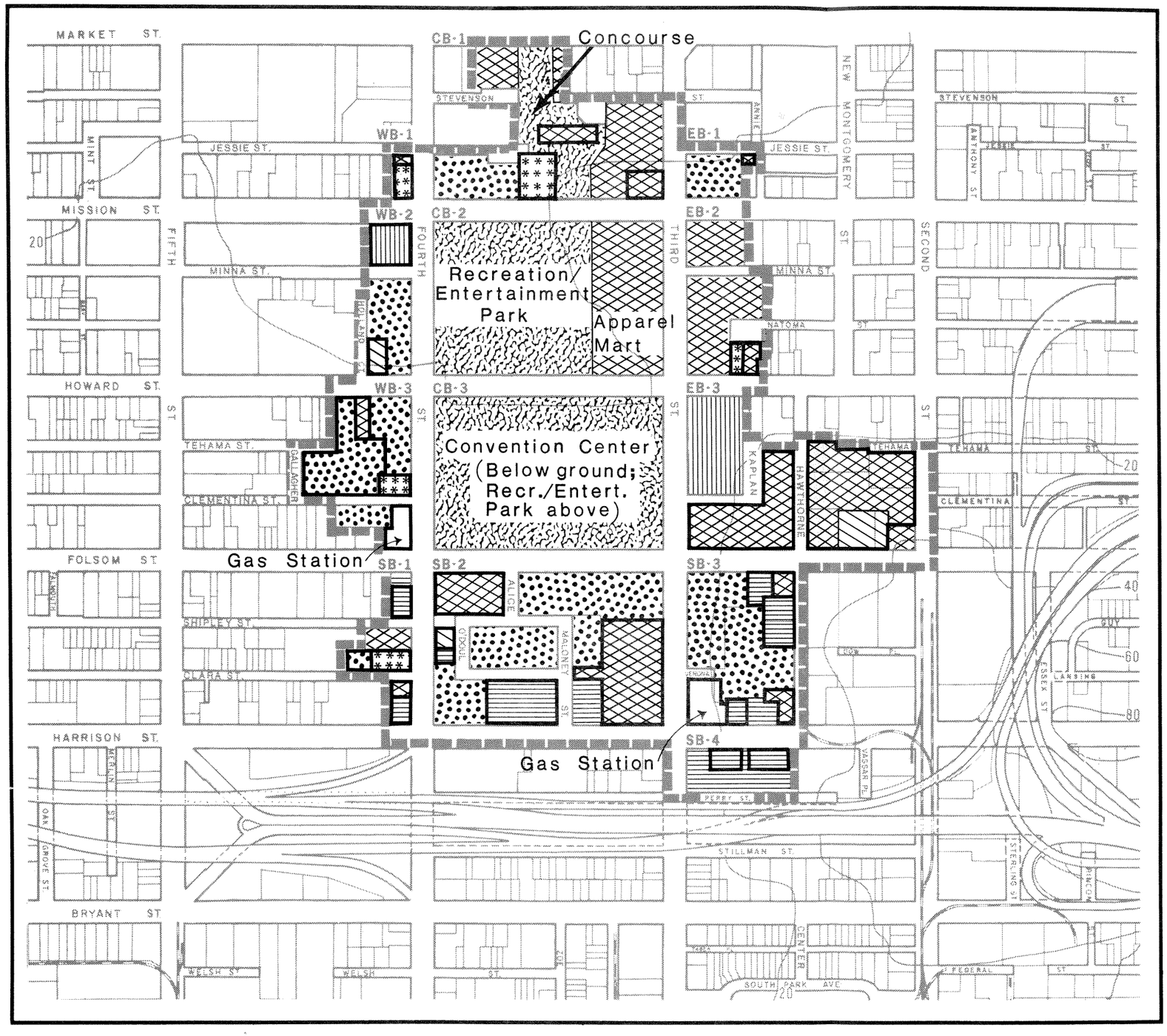
LEGEND

- Housing
- Office & Retail
- Downtown Support
- Light Industry
- Parking
- Community Service
- Park
- Existing, to Remain

0 0.5 Kilometer

0 1800 Feet

ALTERNATIVE A	5



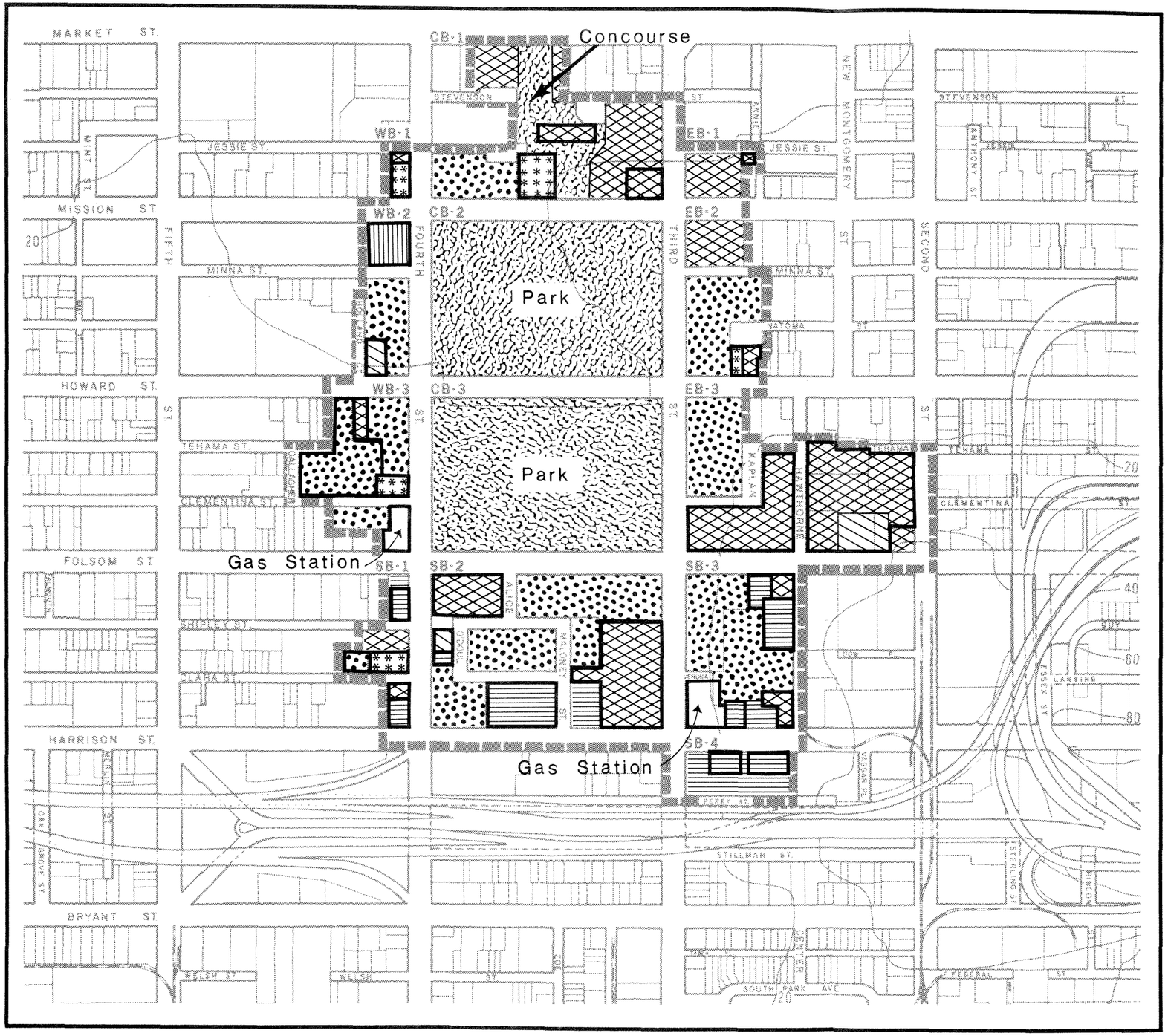
LEGEND

- Housing
- Office & Retail
- Downtown Support
- Light Industry
- Parking
- Community Service
- Park
- Existing, to Remain

0 0.5 Kilometer

0 1800 Feet

ALTERNATIVE B	6



LEGEND

- Housing
- Office & Retail
- Downtown Support
- Light Industry
- Parking
- Community Service
- Park
- Existing, to Remain

0 0.5 Kilometer

0 1800 Feet

ALTERNATIVE C	7

two-block, 21-acre park but contains no convention center. Alternative C is included for analysis to provide a basis for comparison with the other alternatives.

The California Environmental Quality Act and its implementing Guidelines (Section 15147) require a degree of specificity in an EIR which corresponds to the specificity of each activity which is described or analyzed. As the Yerba Buena Convention Center has a high level of specificity at this time, compared with YBC as a whole, it requires the most specific analysis, including that of no construction as provided in Alternative C.

Alternative D (See Figure 8) is a "no action" alternative for YBC as a whole. The assumption underlying this alternative is that no further action would be undertaken in accordance with an overall redevelopment plan, that the redevelopment plan would be rescinded and that uncommitted parcels held by the Redevelopment Agency would be sold on the open market for private uses complying with pertinent provisions of the San Francisco City Planning Code (Part II, Chapter II of the San Francisco Municipal Code). This could result in an intensity of use greater than that in Alternatives A, B, or C. A variant of this "no action" alternative is one in which no further action of any kind is taken and the parcels remain in their present state. This variant is not discussed fully because of its infeasibility in the judgment of the Redevelopment Agency, which has an outstanding obligation to repay the principal plus interest on a loan from HUD. Funds for this liability would accrue from land sales. If the land were left fallow, the obligation for payment would fall upon the taxpayers of San Francisco.

Common to all the alternatives are the following existing uses which are intended to remain. In CB-1, the existing buildings indicated as remaining include the Jessie Street Substation (16,720 sq. ft. of land area), St. Patrick's Church (21,000 sq. ft. of land area), and the Mercantile Building (81,800 sq. ft. of office area and 9,000 sq. ft. of retail area). (All areas are approximate; they have been rounded off to facilitate comparison.)

In EB-1 two owner-participation parcels on Jessie St. near Annie St. are developed as office (9,000 sq. ft.) and retail commercial (1,000 sq. ft.) spaces. In EB-2 a developed parcel included within the boundaries of YBC contains 7,000 sq. ft. of retail commercial space and 14,000 sq. ft. of office space. San Francisco Fire Station No. 35 is located on a 4,400 sq. ft. parcel on Howard St. within this block. It would remain as a

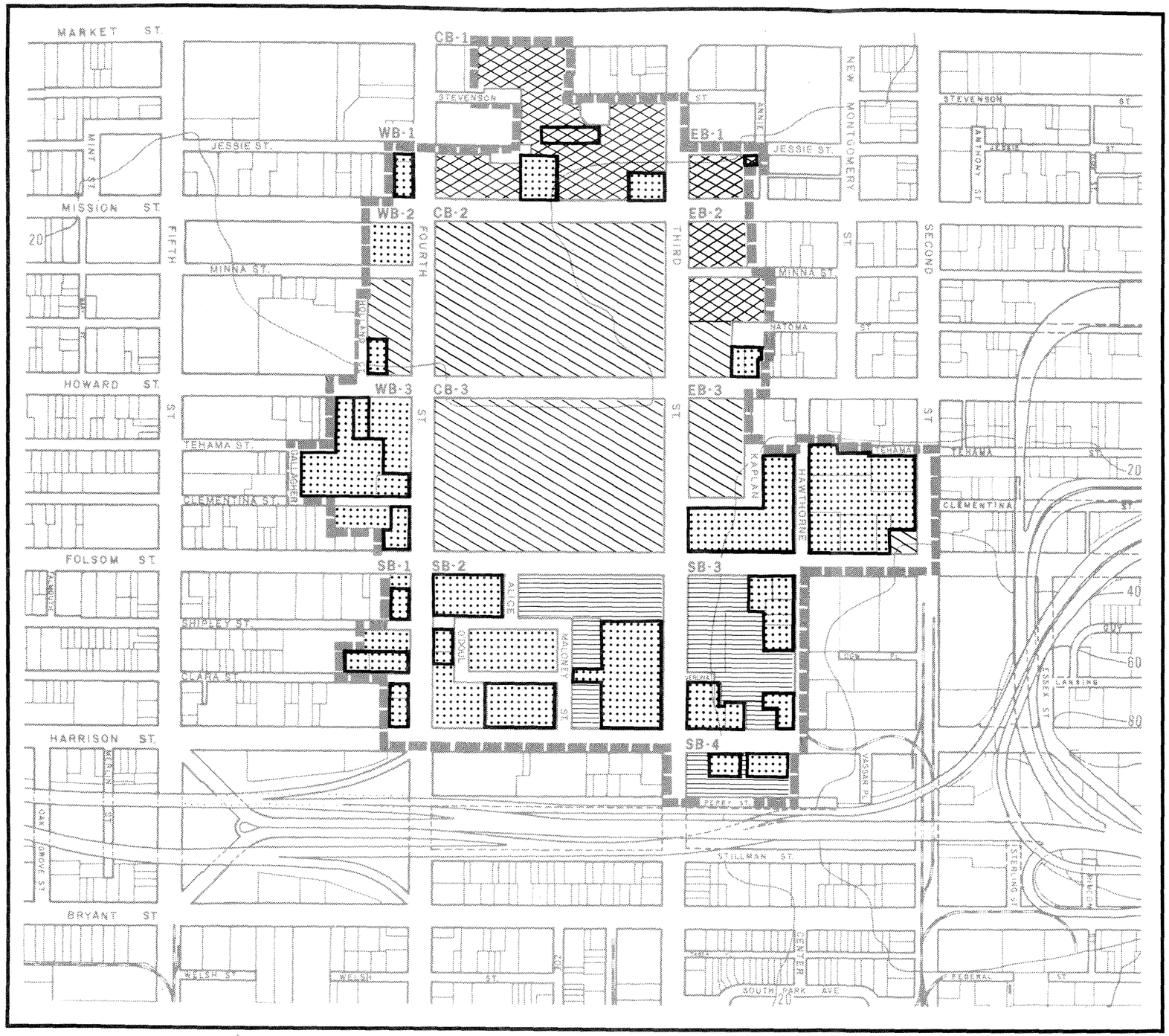
[Text continues on page 40.]

community facility. EB-3 is currently developed with 833,000 sq. ft. of office space (including the 11-story Pacific Telephone building, the United California Bank office building, and the Arcon General Electric building, all along Hawthorne St.). Present development also includes 60,000 sq. ft. of downtown support uses (downtown support uses refer to supporting functions such as wholesaling, printing and building services, and include offices and restaurants), and some private off-street parking.

SB-1 contains part of the Silvercrest Residence highrise complex (subsidized elderly housing) and 7,750 sq. ft. of developed light industrial space, slated to remain. The former Southern Police Station, which is now used as a recreation center by the Salvation Army, is a community service use which contains 17,600 sq. ft. In SB-2 there is 568,000 sq. ft. of office space (including a second Pacific Telephone building and the American Telephone and Telegraph Long Lines Building), 28,000 sq. ft. of light industrial space, and 10,500 sq. ft. of downtown support space to remain. In SB-3 there is currently developed 12,000 sq. ft. of office space, 49,000 sq. ft. of light industrial space, and 14,000 sq. ft. of retail commercial space. In SB-4 there is 35,000 sq. ft. of light industrial use in owner-participation parcels.

WB-1 contains the Downtown Center of the Community College and 5,500 sq. ft. of retail commercial space covered by an owner-participation agreement. Existing uses in WB-2 to remain include 28,000 sq. ft. of downtown support uses on a parcel fronting on Howard St., and 280 off-street parking spaces in the east end of the Fifth and Mission Garage. WB-3 contains the Clementina Towers, an existing subsidized housing complex for the elderly. Also in this block is the 33,000 sq. ft. Community Health Clinic, on Fourth St.

All of these existing uses, which are to remain, are considered common to all the alternatives. Also common to all the alternatives are four sites which are committed to subsidized housing for the elderly, described under Alternative A following.



LEGEND

- Office & Retail
- Downtown Support
- Light Industry
- Existing, under construction, or committed*
- Existing, to Remain

*See Figure 5,6 or 7 for actual use.

0 0.5 Kilometer

0 1800 Feet

ALTERNATIVE D	8

A. ALTERNATIVE A

The dominant element of Alternative A is the development proposed in the three blocks which comprise the 25-acre central blocks area, which extends from Market St. opposite Grant Avenue on the north to Folsom St. on the south, bounded generally by Third St. on the east and by Fourth St. on the west (see Figure 4, Section II, page 23). The central blocks (see Figure 5, page 33) would include a pedestrian concourse, occupying 163,000 sq. ft. of land area, extending southward from Market St. in a midblock location and across Mission and Howard Sts. on pedestrian overpasses to the entrance lobby of the convention center and exhibit hall which would be located on the south side of Howard St. in CB-3. The estimated 1988 total space in Alternative A and the other alternatives, by type of use, is summarized in Table 1, page 45.

In CB-1, the pedestrian concourse would consist of a landscaped and paved plaza extending southward from the Market St. gateway to YBC, opposite Grant Avenue. It would extend around and through the Jessie Street Substation and along St. Patrick's Church to Mission St. The pedestrian concourse would be adjoined by office uses (1,880,000 sq. ft.) and retail commercial uses (240,000 sq. ft.). A pedestrian overpass would connect CB-1 and CB-2.

In CB-2, between Mission and Howard Sts., Alternative A provides for an apparel mart on the eastern third of the block, occupying 152,000 sq. ft. of land area. It would contain up to 797,000 square feet of office space and 266,000 sq. ft. of retail commercial uses. Analysis of this alternative is based on the maximum development allowable by the redevelopment plan in each category of use. The multi-storied wholesale mart would be topped by 50 market-rate dwelling units, i.e., conventionally financed, non-subsidized units. The pedestrian concourse would occupy 82,500 sq. ft. in the center of the block, extending from Mission St. to Howard St. West of the pedestrian concourse, on a 220,000 sq. ft. site extending westward to Fourth St., a combination of uses would consist of up to 700,000 sq. ft. of office space, 40,000 sq. ft. of retail commercial uses, a 700-room hotel, and up to 400,000 sq. ft. of commercial

entertainment facilities. A pedestrian overpass would connect CB-2 and CB-3.

● The proposed convention center and exhibit hall would be located in CB-3, the southernmost of the three central blocks, occupying the block bounded by Howard, Third, Folsom and Fourth Sts. The facility would have approximately 600,000 gross sq. ft. of underground exhibit, meeting, and auxiliary space. The entrance and lobby space of approximately 30,000 sq. ft. would be covered by an extension of the landscaped roof area. The focal point would be the 275,000 sq. ft. underground exhibit hall. The exhibit hall ceiling would be about 37 feet high and free of supporting columns.[2] The surface over the convention center would be a public park. An entirely or partially above-ground convention center alternative will be considered as a variant in this EIR, but in line with the policy expressed in Proposition S, approved in November, 1976, the alternatives of an above-ground convention center and further undergrounding of the facility were studied by the convention center architects. The current design was selected because it was consistent with the policy expressed in Proposition S, approved in November 1976, and because other design proposals were financially infeasible./2a/ Other locations in San Francisco within and outside YBC -- such as further south of Market St., or Piers 27 and 29 -- were not considered because of the poorer pedestrian and transit access and further distance from major hotels.

● The current design of the convention center is for a roof strong enough to support a variety of loads including some combination of park and buildings. The roof could hold three feet of earth spread uniformly over its surface (which could support a variety of shrubs and trees up to 30 feet in height) or seven-foot mounds of earth at intervals to support large trees up to 50 feet in height. The roof could also support three-story steel structures.

● The roof has been designed to give the top area as much clear and unobstructed space as possible given the intended use of the convention center. All protrusions through the roof are at the perimeter of the site.

- The dropoff zone for vehicular passengers in front of the lobby has been sized and designed to allow a maximum area adjacent to the lobby for landscaping and for recreational and commercial use.

- Structural and mechanical provisions have been made for a loading dock on Folsom Street to serve whatever use is selected for the area above the convention center.

Attendance at the convention center at any one time would total up to 25,000-27,000 people. Of this total, up to 5,000 would be arriving and up to 5,000 would be departing. The heaviest arrival periods would occur at the opening of shows and concurrent meetings each morning between 8:30 a.m. and 9:30 a.m.; at 1:00 p.m. to 1:30 p.m.; and if the facility is used for banquet or evening functions, up to 6,000 people would be expected to arrive between 7:00 p.m. and 7:30 p.m. The heaviest departure periods would occur during the mid-day period (for lunch, return to hotels, and shopping) and at the 5:00 p.m.-6:00 p.m. period. Most national conventions and trade shows open on Sunday or Monday and close on Wednesday or Thursday. Peak convention use would occur in the fall and spring with less use in the summer and winter months.

The blocks or portions of blocks within the redevelopment area located around the central blocks on the eastern, southern, and western sides comprise the "peripheral blocks" of YBC. In Alternative A, the undeveloped portions of the eastern blocks, located on the east side of Third St., would contain uses similar to those in the central blocks.

TABLE 1. AREAS* AND QUANTITIES OF USE BY ALTERNATIVE, 1988
YERBA BUENA CENTER

Use	(X) Existing	(Y) Committed	ALTERNATIVE A (Z) Projected Discretionary	ALTERNATIVE A (X+Y+Z) Total Uses	ALTERNATIVE B (Z) Projected Discretionary	ALTERNATIVE B (X+Y+Z) Total Uses	ALTERNATIVE C (Z) Projected Discretionary	ALTERNATIVE C (X+Y+Z) Total Uses	ALTERNATIVE D (Z) Projected Discretionary	ALTERNATIVE D (X+Y+Z) Total Uses
Office	1,466,000	82,000	6,214,000	7,763,000	2,632,000	4,180,000	1,080,000	2,628,000	2,957,000	4,505,000
Retail Commercial	74,000	9,000	677,000	760,000	341,000	424,000	188,000	271,000	326,000	409,000
Community Service	167,000	-	-	167,000	-	167,000	-	167,000	-	167,000
Pedestrian Concourse	-	-	163,000	163,000	81,000	81,000	81,000	81,000	-	-
Hotel Rooms	-	-	700 Rooms	700 Rooms	-	-	-	-	-	-
Convention Center	-	-	370,000**	370,000**	370,000**	370,000**	-	-	-	-
Market Housing	-	-	50 DU's+	50 DU's	650 DU's	650 DU's	1000 DU's	1000 DU's	-	-
Housing for Elderly	534 DU's+	602 DU's	-	1136 DU's	-	1136 DU's	-	1136 DU's	-	1136 DU's
Family Housing	-	-	-	-	300 DU's+	300 DU's	300 DU's	300 DU's	-	-
Downtown Support Service	99,000	-	-	99,000	-	99,000	-	99,000	6,337,000	6,436,000
Light Industrial	137,000	-	1,077,000	1,215,000	343,000	480,000	359,000	497,000	1,552,000	1,689,000
Downtown Support Parking	146,000	-	66,000	212,000	1,700	147,000	1,600	147,000	1,600	147,000
Public Parking	101,000 (280 sp)	-	454,000 (1260 sp)	554,000 (1540 sp)	450,000 (1250 sp)	551,000 (1530 sp)	-	101,000 (280 sp)	-	101,000 (280 sp)
Park	-	-	454,000	454,000	-	-	909,000	909,000	-	-
Commercial Entertainment	-	-	400,000	400,000	-	-	-	-	-	-
Recr./Entert. Park	-	-	-	-	757,000	757,000	-	-	-	-

*In square feet, rounded to nearest 1000.
**Exhibit hall "footprint"--total floor area of convention center including meeting rooms, loading area and storage is 600,000 square feet.
+DU = dwelling unit.

EB-1, at the northeast corner of Mission and Third St., would contain up to 586,000 sq. ft. of office space and 60,000 sq. ft. of retail commercial uses. EB-2, extending from Mission St. to Howard St. on the east side of Third St., would contain up to 1,290,000 sq. ft. of office space, 20,000 sq. ft. of retail commercial space, and up to 500 public, off-street parking spaces. Up to 744,000 sq. ft. of office space would be developed on two sites in the undeveloped portion of EB-3 between Howard and Folsom Sts. The larger, 72,800 sq. ft. site is at the southeast corner of Howard and Third Sts.; the smaller, 8,100 sq. ft. site is at the northwest corner of Folsom and Second Sts.

In the southern blocks, Alternative A provides for a combination of light industrial and housing uses in SB-2, and for light industrial uses in SB-1, 3, and 4. SB-2, bounded by Folsom, Third, Harrison, and Fourth Sts., has been the subject of two amendments of the Redevelopment Plan which permit up to 470 subsidized dwelling units for the elderly in two apartment projects. Alternative A includes 340 units, based on designs developed to date which do not provide the maximum number of units permitted. This housing is common to all four alternatives. Up to 173,000 sq. ft. of light industrial uses would be accommodated on three separate undeveloped parcels.

In SB-1, along the west side of Fourth St. between Harrison and Folsom Sts., up to 18,000 sq. ft. of new industrial space would be provided, and on the southwest corner of Shipley and Fourth Sts., neighborhood retail commercial services would be developed to support the adjoining Silvercrest Residence, a 278-unit apartment complex for the elderly maintained by the Salvation Army, and other existing and projected residential developments in the vicinity.

In SB-3, bounded by Folsom, Hawthorne, Harrison, and Third Sts., up to 339,000 sq. ft. of light industrial space would be provided on two undeveloped parcels, and 760 public off-street parking spaces would be provided on a third parcel.

In the western portion of SB-4, bounded by Harrison St. on the north, Perry St. on the south, and Third St. on the west, 122,000 sq. ft. of new industrial space would be provided and up to 180 off-street parking spaces.

WB-1 contains no discretionary uses; it is fully developed. In WB-2, on the west side of Fourth St, between Howard and Minna Sts. up to 305,000 sq. ft. of office space would be developed.

In WB-3, extending along the west side of Fourth St. from Howard St. to Folsom St., up to 262 units of housing for the elderly would be developed on two sites, by the Tenants and Owners Development Corporation (TODCO). This housing is common to all four alternatives.

B. ALTERNATIVE B

The second alternative is based on the recommendations of the Mayor's Select Committee on YBC (See Appendix B for the complete text of the recommendations). This alternative contains the convention center in the same location and configuration as in Alternative A. The surface level of the convention center block (CB-3), and the western two-thirds of the middle block (CB-2) of the central blocks, would be devoted to a commercial recreation and entertainment complex, rather than to a general public park and open space (CB-3) and to hotel/commercial/office/ indoor-entertainment uses (CB-2) as delineated in Alternative A. Alternative B would contain less than half as much office space as Alternative A, 650 units of market-rate housing; 300 units of subsidized family housing; up to 1,250 off-street public parking spaces located in the eastern side of the area to serve short-term, non-commuter parking demands; and community and institutional facilities along the Fourth St. side of the area to serve citywide and area residents. The estimated total space in Alternative B, allocated by type of use, is summarized in Table 1, page 45.

In CB-1, the parcel between Mission and Jessie Sts., west of St. Patrick's Church, would have 40,000 sq. ft. of retail commercial space and 100 units of market-rate housing. The remainder of the block would be substantially the same as in Alternative A, with 121,000 sq. ft. of retail commercial space and 1,250,000 sq. ft. of office space. The Mayor's Select Committee recommended that the site of the mostly vacant 56,000 sq. ft. building of the federal General Services Administration, which fronts on Fourth St. between Stevenson and Jessie Sts., be included in YBC for use by offices and market-rate housing. Use or disposition policy pertaining to the site has not been determined by the General Services Administration; for that reason, the site is not included in this Alternative nor in the area and use computations, but is considered as a variant.

In summary, the portion of the block within YBC would contain up to 1,250,000 sq. ft. of office space, 161,000 sq. ft. of retail commercial space, 81,000 sq. ft. in the pedestrian concourse, 100 units of market-rate housing, and 21,000 sq. ft. of land area in the community service category, i.e., St. Patrick's Church. A pedestrian overpass would connect CB-1 and CB-2.

CB-2 would be the site of a recreation/entertainment park and of the apparel mart. The recreation/entertainment park would occupy the western two-thirds of the block plus the portion of the block designated for the pedestrian concourse in Alternative A; midblock pedestrian access to the convention center would be along the western side of the apparel mart, where pedestrian amenities would be provided, and on an elevated pedestrian way over the eastern edge of the recreation/entertainment park, connecting with overpasses over Mission and Howard Sts. Under the Select Committee recommendation, if the apparel mart should not be built on the eastern third of this block the site would revert to recreation/entertainment park use. The Committee also recommended that in the latter event, the apparel mart should be relocated to the opposite side of Third St. in an area designated for office use. This location is considered as a variant of this component of Alternative B.

If the apparel mart is not constructed in CB-2, its site would be added to the recreation/entertainment park area, making the total area of the recreation/entertainment park in CB-2 454,000 sq. ft. If the apparel mart is built in this block, the recreation/entertainment park would occupy 303,000 sq. ft. of the block. The recreation/entertainment park would also occupy most of the surface area over the underground convention center in CB-3. The two blocks of recreation/entertainment park would be joined by pedestrian connections across Howard St. The park would total approximately 18 acres of surface area in the two blocks, excluding the apparel mart site.

The recreation/entertainment park would provide for a variety of facilities for use by adults and children. One concept of the park is a modification of Tivoli Gardens in Copenhagen, Denmark.[3] Over 50% of the park could be allocated for landscaped open space, a children's playground, a botanical garden, and pedestrian circulation. Entertainment and amusement uses, such as an outdoor theater, dance pavilion, band shell, and carousel, could occupy about 250,000 sq. ft., of which over 80 percent would be in 1- to 3-story buildings. As much as 200,000 sq. ft. could be given to commercial uses such as restaurants, markets, drinking places, ice cream parlors, and retail shops. Yearly attendance is estimated at 1.7 million as a low and 6.5 million as a high figure[4]. Peak visitor usage would be expected to occur on Friday and Saturday nights and on Saturday and Sunday afternoons during the months of May through September; the park would attract from 16,000 to 26,000 persons during such periods. Lowest anticipated attendance would occur on weekdays and evenings and would range from 2,500 to 5,500 persons.

In summary, CB-2 would contain 303,000 sq. ft. (land area) of recreation/entertainment park if the apparel mart is built, or 454,000 sq. ft. (land area) of recreation/entertainment park if the apparel mart is not built on this block.

CB-3 would be the site of the convention center and exhibit hall, as in Alternative A. At least 80% of the surface of the convention center would be included in the recreation/entertainment park as described above.

The blocks east of Third St. -- EB-1, 2, and 3 -- would include mixed uses of primarily office and retail commercial space, with some housing, parking and community service space. EB-1, the northernmost block, bounded by Jessie, Annie, Mission, and Third Sts., would be devoted primarily to market-rate housing (400 units) and retail commercial space (25,000 sq. ft.).

EB-2 would be developed primarily as office (900,000 sq. ft.) and retail commercial (25,000 sq. ft.) space. In the event that the apparel mart is not built in CB-2, it might be relocated to this block.

Alternative B would permit 57,000 sq. ft of additional office space in EB-3. A public parking structure with 1,250 spaces would be located on Third St. to serve as short-term parking for the convention facility on the opposite side of the street, and for the recreation/entertainment park and other uses in YBC.

The southern blocks would include subsidized housing for families and for the elderly, light industry, recently developed offices, and some retail commercial space. SB-1 is shown with the same uses and space quantities in Alternative B as in Alternative A. In SB-2, two subsidized housing developments for families, one containing 100 dwelling units, the other containing 20, are projected in place of industrial uses shown in Alternative A. Additional light industrial space is shown as 99,000 sq. ft. New development in SB-3 would include 50,000 sq. ft. for light industrial use, and two subsidized housing developments, each containing 90 family units, on the two largest parcels. New development in SB-4 would include 176,000 sq. ft. of light industrial space. As a variant, some of the undeveloped parcels could be used for off-street parking spaces.

WB-1 contains no discretionary uses. In WB-2, the Fourth St. frontage between Howard and Minna Sts. is indicated as the site of 100 market-rate housing units in Alternative B. WB-3 would have the same uses in Alternative B as in Alternative A.

C. ALTERNATIVE C

Alternative C is based on a pattern of lower intensities of use in the YBC area. It would provide more housing for persons employed in the downtown area and adjacent support and industrial districts, and would not include the convention center. Traffic generated in the area would be lower than in the other alternatives considered because fewer people would be attracted to the area and more people, the residents in the 1,000 market-rate and 1,180 subsidized family dwelling units, would be able to walk to work, shopping, and entertainment. This energy-conserving aspect is part of the rationale for the definition and consideration of this alternative. The total space in Alternative C, allocated by type of use, is summarized in Table 1, page 45.

In CB-2 and CB-3 a public park would be developed. It would comprise a 21-acre open space surrounded primarily by new housing and secondarily by office uses (see Figure 7, page 37). In CB-1 the pedestrian concourse included in Alternatives A and B would be retained as an activity plaza and gateway from Market St. to the central park. New office space would be reduced in this block to approximately 750,000 sq. ft., and market-rate housing would be increased to 200 units at the northeast corner of Mission and Fourth Sts.

In the eastern blocks, new office uses would be accommodated at the northeast (EB-1) and southeast (EB-2) corners of Third and Mission Sts., providing 450,000 square feet of space. On the uncommitted parcels in EB-2 and -3 which front on Third St. and overlook the central park, there would be two market-rate housing developments of 300 dwelling units each.

● The pattern of uses in the southern blocks and WB-3 would be the same as in Alternative B. This would provide for 180 subsidized family dwelling units in SB-3, and 120 such units in SB-2, in addition to the 340 dwelling units for the elderly, all as shown in Alternative B. In WB-2, the parcel fronting on Fourth St. between Howard and Minna Sts. would

be designated for 200 market-rate dwelling units. Other parcels in the area would be retained in their existing or committed uses under the redevelopment plan, as in Alternative A. In WB-3, on the west side of Fourth St. between Howard and Folsom Sts., there would be 262 dwelling units for the elderly, as in Alternatives A and B. WB-1 contains no discretionary uses.

In summary, Alternative C would provide 400 more market-rate housing units in YBC than the maximum provided by Alternative B and 950 more than Alternative A; it would reduce the new office space to approximately 1,300,000 sq. ft. from the 6,200,000 and 2,600,000 sq. ft. of Alternatives A and B, respectively; and it would provide a 21-acre downtown park and open space without commercial development. Table 1, page 45, which compares the space allocations in the four alternatives, shows the lower intensity of use of the site which this alternative represents; the new office space is approximately half that included in Alternative B, land area devoted to light industrial use is approximately the same as that in Alternative B, and crowd-attracting activities such as the convention center and commercial recreation and entertainment park are not included.

D. ALTERNATIVE D

Alternative D is essentially a "no action" alternative under which further efforts to market properties in YBC for development in accordance with an overall guiding plan for a redevelopment area and in conformity with Redevelopment Agency development and design standards would cease. No further development of public facilities, including the convention center and the pedestrian concourse, would take place. Remaining uncommitted land in YBC, including the convention center site, totaling 1,400,000 sq. ft. would be placed on the open market for private use without regard for a comprehensive plan. The guiding standards for development and use would be the existing zoning laws which govern use, height, bulk, coverage, and parking.[5] Parcels which would be available for such sale on the open market are shown in Figure 8, page 41, and the total floor

area that could be developed is shown by type of use in Table 1, page 45.

In terms of zoning, most of the uncommitted land area would be governed by the provisions of the C-3-S (Downtown Support) district (65% or 895,000 sq. ft.), or of the M-1 (Light Industrial) district (19% or 249,000 sq. ft.). Nine percent (127,000 sq. ft.) would be in the C-3-0 (Downtown Office) district, and seven percent (97,000 sq. ft.) would be in the C-3-R (Downtown Retail) zoning district. (See Section V-A and Figures 10 and 11, pages 75 and 77, for a description of the zoning districts.)

The uncommitted land in the three central blocks would be developed under the C-3-R or C-3-S zoning designations. The available space in CB-1 (97,000 sq. ft.) would be developed under the C-3-R zoning district standards. The main permitted uses are retail commercial and office uses, with a maximum gross floor area ratio of 10:1; that is a ratio of 10 sq. ft. of floor space to 1 sq. ft. of lot area. The block is in the 400-I Height and Bulk District, which permits a maximum building height of 400 feet. Approximately 100,000 sq. ft. of retail space could be developed and up to 2,000,000 sq. ft. of office space could be accommodated. Housing would be permitted as a conditional use, requiring authorization by the City Planning Commission.[5]

The 303,000 sq. ft. of available land in CB-2 could be developed under the C-3-S zoning standards. The C-3-S zoning district is a downtown support district in which supporting functions such as wholesaling, printing, building services, and parking are permitted as well as office uses at a lesser intensity. The maximum gross floor area ratio is 7:1. The block is in the 340-I Height and Bulk District, which permits a maximum height of 340 feet. Up to 2,175,000 sq. ft. of office and support space could be developed. Housing would be permitted as a conditional use.

All of CB-3 would be available for disposal under the C-3-S standards; the 454,000 sq. ft. accommodate up to 3,180,000 sq. ft. of

downtown support services. Housing would also be permitted as a conditional use.

In EB-1, at the northeast corner of Mission and Third Sts., there is 31,800 sq. ft. of uncommitted land area. This block is in the C-3-0 (Downtown Office) district, has a 14:1 floor area ratio, and is in the 500-I Height and Bulk District. Approximately 405,000 sq. ft. of office space could be developed along with 40,000 sq. ft. of retail commercial uses. Housing would be permitted as a conditional use.

EB-2, on the east side of Third St. between Mission and Howard Sts., contains 62,000 sq. ft. of land north of Natoma St. in the C-3-0 District and 400-I Height and Bulk District. South of Natoma St. it contains 13,000 sq. ft. in the C-3-S district and 320-I Height and Bulk District. Approximately 825,000 sq. ft. of office space could be developed, and 93,000 sq. ft. of service and support facilities.

EB-3, on the east side of Third St. between Howard and Folsom Sts., has 81,000 sq. ft. of uncommitted land area. This is in the C-3-S district and 320-I Height and Bulk District, and could accommodate about 565,000 sq. ft. of service and support facilities.

In SB-1, on the west side of Fourth St. between Harrison and Folsom Sts., there is 3,600 sq. ft. available for industrial use, which could accommodate up to 21,600 sq. ft. of space.

SB-2, bounded by Folsom, Third, Harrison, and Fourth Sts., would have 120,000 sq. ft. of land available for development under the M-1 (Light Industrial) provisions of the Planning Code. This would accommodate approximately 650,000 sq. ft. of industrial space.

SB-3, on the east side of Third St. between Folsom and Harrison Sts., has 129,000 sq. ft. of land area which would be available for disposal under this alternative. This block is in the M-1 (Light Industrial) district, where the floor area ratio is 5:1. The portion of the block north of Verona Place is in the 130-G Height and Bulk District and

the portion south of Verona Place is in the 80-K Height and Bulk District. Up to 642,000 sq. ft. could be developed for industrial activities.

In SB-4, there is 35,000 sq. ft. of land available for industrial development along Perry St. This could accommodate approximately 175,000 sq. ft. of industrial space.

All land in WB-1 and WB-3 is developed or committed for development. WB-2 contains one 43,600 sq. ft. parcel fronting on Fourth St., which is in the C-3-S district and could be developed with up to 305,000 sq. ft. of space for downtown support activities. On all sites in a commercial zoning district (See Figure 10, page 75) housing could be permitted as a conditional use.

E. BUILDING HEIGHTS

Building heights would vary among the four alternatives. Alternative A would have the greatest number of tall buildings, committed uses exempted from current Planning Code height limits and uses built up to the maximum heights permitted. The office tower at 775 Market St., next to the pedestrian gateway to YBC, would be 36 stories high, and other office towers in the central and eastern blocks would range in height from 24 to 46 stories. Industrial and downtown support buildings could range from 5 to 8 stories, and housing structures would range from 8 to 11 stories in height.

Tall buildings in Alternative B would be fewer in number and probably would not exceed 32 to 36 stories in height, as the intensity of uses would be lower. Most housing would be medium-rise, ranging from 6 to 14 stories in height. The site for market-rate housing at the northeast corner of Fourth and Mission Sts., however, would probably be from 24 to 32 stories in height in order to accommodate the 400 dwelling units assigned to that site.

Alternative C would have the lowest overall height profile with the tallest buildings generally not exceeding 14 stories.

Alternative D could have some office buildings at heights between 14 and 46 stories; except for committed housing complexes, the maximum heights for other uses would probably range from 5 to 8 stories.

The projected heights for each parcel in each Alternative are shown in Appendix A, Table A-1.

F. VARIANTS

Within each Alternative, variants to certain components could occur. Such variants would result in modifications of the impacts resulting from the basic Alternative considered as a whole.

In Alternative A, the hotel and related uses in CB-2 could be moved to CB-1, fronting on Third St., thus freeing the western portion of CB-2 for use by the recreation and entertainment park as a variant. This variant would result also in the use of the surface of CB-3 for the recreation/entertainment park.

The variant of removal of the apparel mart from CB-2 would free the site for park use. Such a move could result in the apparel mart's being located on the east side of Third St. on sites otherwise indicated for office and retail use.

Other variants to Alternative A would result if the convention center were not built or if the convention center were built as an entirely or partially above-ground structure. This would result in a more-limited use of the site, since CB-3 would not be available for park use, or park development would have additional design constraints.

A series of variants would occur if portions of YBC were used for additional community service and institutional uses such as special purpose

museums, a new main library, a downtown branch of the Fine Arts Museum or a downtown high school. Further variants could consist of the provision of less public parking and of special forms of shuttle transit, or "people movers", from Market St. to the convention center along the route of the pedestrian concourse.

In Alternative B, the same variants as those described above are considered. The commercial recreation/entertainment park could be a general public park. The site on Fourth St. between Stevenson and Jessie Sts., which is presently controlled by the General Services Administration, could be incorporated into YBC as part of the final land use and design plan. A further variant would be the use of the site at the northeast corner of Fourth and Mission Sts. for office use rather than housing as shown (the latter being a Select Committee recommendation). This office variant would conform to the redevelopment plan and a Redevelopment Agency "Developer Designation" of Arcon-Pacific for an exclusive right to negotiate, preliminary to a specific land disposition agreement.

In Alternative C, inclusion of the convention center or development of the recreation/entertainment park constitute variants of the basic concept, resulting in a more-intensive use of YBC. Retention of uses included in the commitments between the Redevelopment Agency and Arcon-Pacific, i.e., the apparel mart with 50 units of market-rate housing, and offices at the northeast corner of Fourth and Mission Sts., comprises a potential variant to Alternative C.

A variant to Alternative D is one which would constitute absolutely no action: no action to dispose of the uncommitted land areas in any way, resulting in the continuance of the temporary underuse or non-use of the parcels in YBC. The current nature and physical status of existing uncommitted parcels is described in Section II, the General Area Description, and Section V, the Environmental Setting.

G. BUILDOUT

For purposes of the comparative analyses made in this report, it was assumed that YBC development would be fully completed by 1988. Actual fulfillment of this assumption would be dependent on factors (such as the state of the economy, the rate of building, and policy decisions) whose projections as to probability are beyond the scope of this report. In addition, a partial buildout schedule was projected to 1980 so that the impacts of the convention center, and of the YBC environment upon it, when it would be first available for use in that year, could be evaluated. These projections are shown in Table 2, page 59.

H. REDEVELOPMENT AGENCY STAFF TENTATIVE PROPOSAL OF NOVEMBER 1977

Following the definition and analysis of the alternatives and variants described above, the Redevelopment Agency staff, using information developed in the EIR process, at the request of HUD made a tentative proposal to HUD for changes to the approved Redevelopment Plan. This Redevelopment Agency staff November 1977 tentative proposal combines components of Alternatives A and B. Alternative A is taken as a base, with components of Alternative B replacing some of A's components. This staff proposal is regarded as tentative until final action is taken by the Redevelopment Agency Commissioners to amend the Redevelopment Plan. Such action is anticipated after this EIR has been finally certified.

1. The 1250 public parking spaces proposed by Alternative B for EB-3 at the southeast corner of Third and Howard Sts. would replace the office space provided by Alternative A, or could be added to that office space.
2. Up to 900 additional dwelling units could be added to Alternative A, in the same locations with the same number of units as provided in Alternative B. The location and distribution would be as follows:
    a. Up to 400 units located on EB-1 at the northeast corner of Mission and Third Sts.

TABLE 2. AREAS* AND QUANTITIES OF USE, BY ALTERNATIVE, 1980 YERBA BUENA CENTER

Use	(X) Existing	(Y) Committed	ALTERNATIVE A (Z) Projected Discretionary	ALTERNATIVE A (X+Y+Z) Total Uses	ALTERNATIVE B (Z) Projected Discretionary	ALTERNATIVE B (X+Y+Z) Total Uses	ALTERNATIVE C (Z) Projected Discretionary	ALTERNATIVE C (X+Y+Z) Total Uses	ALTERNATIVE D (Z) Projected Discretionary	ALTERNATIVE D (X+Y+Z) Total Uses
Office	1,466,000	82,000	-	1,548,000	-	1,548,000	-	1,548,000	-	1,548,000
Retail Commercial	74,000	9,000	-	83,000	-	83,000	-	83,000	-	83,000
Community Service	167,000	-	-	167,000	-	167,000	-	167,000	-	167,000
Pedestrian Concourse	-	-	-	-	-	-	-	-	-	-
Hotel Rooms	-	-	-	-	-	-	-	-	-	-
Convention Center	-	-	370,000**	370,000**	370,000**	370,000**	-	-	-	-
Market Housing	-	-	-	-	-	-	-	-	-	-
Housing for Elderly	534 DU's+	322 DU's	-	856 DU's	-	856 DU's	-	856 DU's	-	856 DU's
Family Housing	-	-	-	-	-	-	-	-	-	-
Downtown Support Service	99,000	-	-	99,000	-	99,000	-	99,000	-	99,000
Light Industrial	137,000	-	-	137,000	-	137,000	-	137,000	-	137,000
Downtown Support Parking	146,000		-	146,000	-	146,000	-	146,000	-	146,000
Public Parking	101,000 (280 sp)		-	101,000 (280 sp)	-	101,000 (280 sp)	-	101,000 (280 sp)	-	101,000 (280 sp)
Park	-	-	454,000++	454,000++	-	-	-	-	-	-
Commercial Entertainment	-	-	-	-	-	-	-	-	-	-
Recr./Entert. Park	-	-	-	-	-	-	-	-	-	-

*In square feet, rounded to nearest 1000.
**Exhibit hall--total floor area of convention center including meeting rooms, loading areas, and storage, is 600,000 sq. ft.
+DU = dwelling unit
++A park may be partially developed over the convention center by 1980.

b. Up to 100 units located on CB-1 at the northeast corner of Mission and Fourth Sts.

c. Up to 100 units on WB-2 fronting on Fourth St. and south of Minna St.

d. Up to 120 units on SB-2, fronting on Folsom St. and east of Alice and Maloney Sts.

e. Up to 180 units on SB-3 covering all of the area not noted as "existing, to remain" on the map of Alternative A, except for the Harrison St. frontage (see Figure 5, page 33).

Each of these housing facilities would entirely replace the use proposed for that land in Alternative A. For example, the 586,000 sq. ft. of office space and 60,000 sq. ft. of retail commercial space proposed for the southwestern corner lot on EB-1 (northeast corner of the Mission-Third intersection) under Alternative A would be completely replaced by 400 dwelling units, unlike Alternative B which proposes 400 dwelling units plus 25,000 sq. ft. of retail commercial space on the lot. Because of certain per-lot differences in amounts of commercial space between Alternatives A and B, the housing substitutions in the November 1977 tentative proposal would not reduce total retail commercial space below the levels found in Alternative B, despite the reductions below Alternative B on some of the new housing sites.

3. The tentative proposal would also permit the hotel proposed for CB-2 to replace office space and some retail commercial space on CB-1 on the lots surrounding the Mercantile Building, facing on Mission and on Third Sts. This move would permit the western 2/3 of CB-2 to be used for the recreation/entertainment park described as part of Alternative B. As noted under Alternative B, if the Apparel Mart were not built, the recreation/entertainment park could occupy all of CB-2.

Because Alternatives A and B do not propose, for example, the same amount of office space on a lot, even when both alternatives propose office uses on that lot, the tentative proposal is intermediate between Alternatives A and B in the amounts of office space. If, for example, the

900 dwelling units were added to Alternative A, total office space available as a result of the tentative proposal would be about 6,400,000 sq. ft., about 20% less than the amount provided by Alternative A, and about 50% more than that of Alternative B. The total retail commercial space would be about 650,000 sq. ft., or about 15% less than that in Alternative A and about 50% more than in Alternative B. The number of dwelling units would be the same as in Alternative B, 2086, and 900 more than in Alternative A. The light industrial square footage would be reduced to about 410,000, or about 65% less than in Alternative A and about 15% less than in Alternative B.

Dwelling units proposed for SB-3 would replace 760 public parking spaces. The suggested addition of 1250 public parking spaces in EB-3 (with the 500 spaces in EB-2 in Alternative A retained) would provide a net gain of 490 parking spaces over the 1260 spaces of Alternative A.

The tentative proposal leaves certain options open. If, in addition to housing substitutions, the parking facility were to replace the office building in EB-3, the office space would be reduced to about 5,700,00 sq. ft., or about 25% less than in Alternative A and about 35% more than in Alternative B.

If the hotel were also moved to CB-1 and a recreation/entertainment complex built on the western portion of CB-2, the total office space available would be about 4,300,000 sq. ft., about 45% less than in Alternative A and about 3% less than in Alternative B; total retail commercial space would be about 570,000, or about 25% less than in Alternative A and about 35% more than in Alternative B.

FOOTNOTES

[1]Section 15013(b), State EIR guidelines.

[2]P. Collins, Yerba Buena Convention Center, Office of the Chief Administrative Officer, personal communication, October 5, 1977.

[2a]Further undergrounding of the convention center would cost approximately $1,000,000 per foot of excavation (deepening). The cost of

building would increase geometrically from a base of $500,000 per foot of depth at -10 elevation (T.Y. Lin Associates, Turner Construction Company, and Hellmuth, Obata & Kassabaum).

[3]For a description of the Tivoli Gardens, see the following articles which are on file at the Department of City Planning: John Lyle, The Relevance of Tivoli, Landscape Architecture, Spring-Summer 1968; and Henning Søager, Managing Director, July 26, 1973, Letter and Information Kit, Kjøbenhavns Sommer-Tivoli.

[4]Mayor's Select Committee, Commercial Development Study Team, July 2, 1976; Economic Research Associates, July 30, 1976; and R. Gryziec, Consultant to the Redevelopment Agency, and early advocate of Tivoli Gardens concept, July 26, 1977.

[5]City Planning Code, Part II, Chapter II of the San Francisco Municipal Code.

V. ENVIRONMENTAL SETTING

A. LAND USE, ZONING, AND VISUAL ASPECTS

1. LAND USE IN THE AREA SURROUNDING YERBA BUENA CENTER

● The YBC area is at the southern edge of the downtown Retail District which is characterized by department stores, banks, restaurants, retail shops, hotels, and offices. The Retail District north of Market St. is a regional center for retail shopping within the Bay Area.

The area to the east of YBC contains offices and retail and downtown support services (wholesaling, printing, office supply sales, building services and restaurants). The YBC area is on the southwestern periphery of the Financial District, which is the regional financial and administrative office center of the Bay Area. It is served by regional transit networks and is characterized by modern steel-frame and glass highrise office buildings, as well as older highrise office structures such as the 30-story Pacific Telephone Company tower at 150 New Montgomery St. Most structures east of YBC are two to ten stories in height and are commonly older, rehabilitated brick or concrete buildings which contain smaller offices, and wholesale and retail establishments. Restaurants which serve daytime office workers are scattered throughout the area. Other downtown support services, such as printing and building maintenance services, are located in this district. Retail establishments which cater to offices, such as retail office supplies and furniture outlets, are also located in this area, particularly along Mission St.

South of Howard St. and east of Third St. the buildings are mostly older, brick or concrete, and one to ten stories tall. The buildings house light industrial firms, are used as warehouses, or contain retail and wholesale uses. Some are partially occupied. Parking lots located in this area are used by downtown office workers. The area beneath the Bay

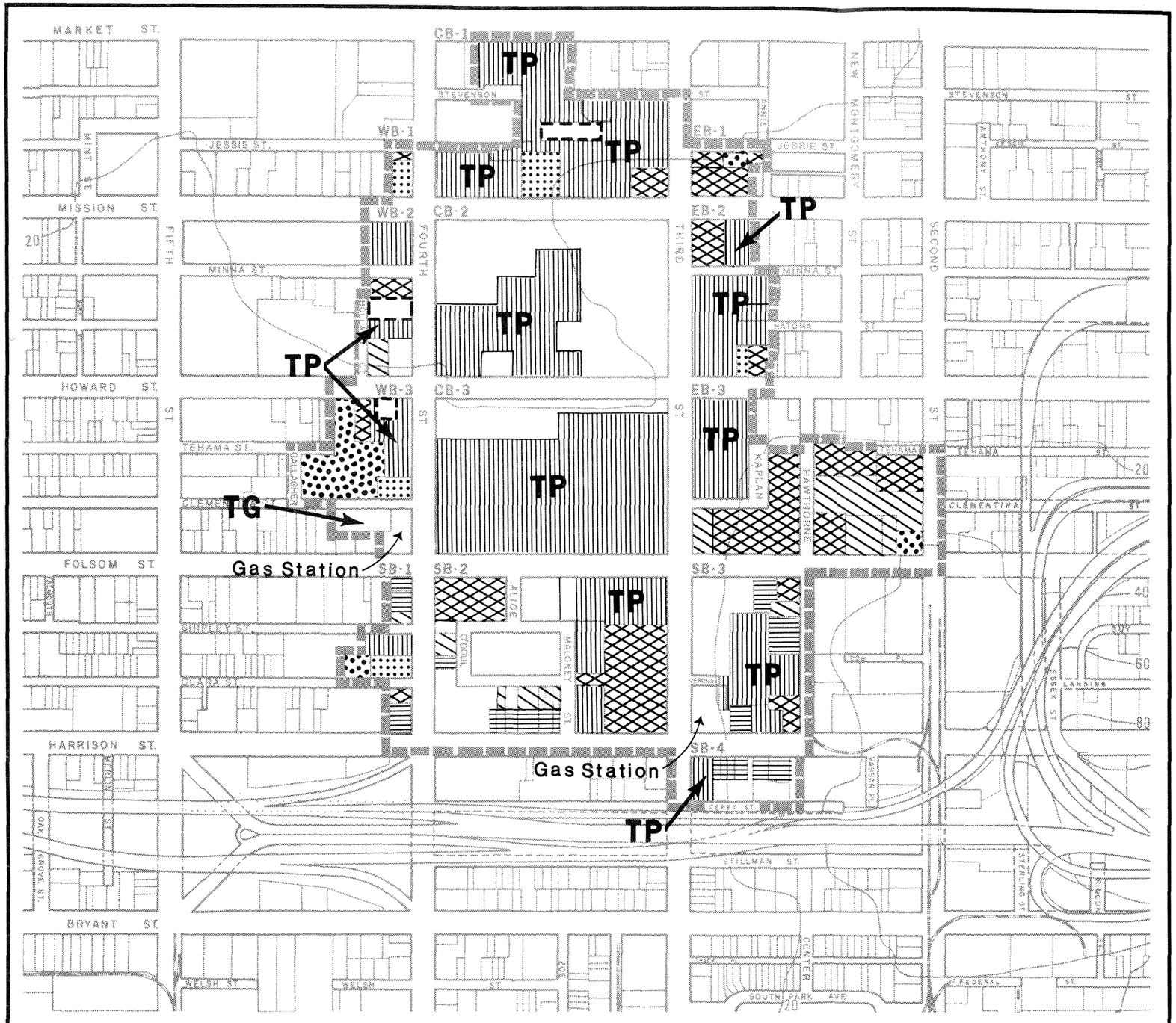
Bridge and freeway viaducts is used for all-day parking.

● The area to the south and southeast of YBC is primarily a light industrial district with some residential and commercial uses. The area is characterized by two-to-five story, brick and concrete, light industrial buildings and warehouses. Parking lots are scattered through the area. Third St. is a major thoroughfare[1] through the district (footnotes are at the end of each lettered subsection in this chapter). Retail stores front on the street and residential uses are scattered in two- and three-story wood frame structures. There is a residential concentration at South Park, a street south of Bryant St. which was originally laid out on the pattern of Berkeley Square in London. Retail shops, grocery stores, restaurants, and bars are located at street level in some houses.

The area west of YBC is similar to the area to the south, i.e., primarily light industrial, with some downtown support services, retail and residential uses. The structures are mainly low- to medium-rise brick or concrete buildings. The principal streets, notably Mission St. and Sixth St., have some retail businesses. Residential buildings are mixed with the other structures. Housing complexes built within the past five years, such as the Alexis Apartments and the Silvercrest Residence, are found in this area. The Filipino Education Center is located on the site of the former Lincoln Elementary School on Harrison St. adjacent to YBC. Sixth St. is lined with two-to-ten story brick or concrete buildings, including hotels which serve low-income residents. The street level floors are generally used for retail purposes such as bars, pawn shops, diners, grocery and liquor stores, and used-merchandise stores. Generally, people are found standing or sitting on the sidewalks and in doorways. Several soup kitchens and other service centers are maintained by philanthropic organizations.

2. OVERVIEW OF LAND USE IN YERBA BUENA CENTER

● Mixed land uses presently characterize the YBC area (see Figure 9). The total YBC land area, excluding the area devoted to streets, is 2,600,000 sq. ft., or almost 60 acres. Area land use is shown by



LEGEND

- Housing
- Office & Retail
- Downtown Support
- Light Industry
- Parking
- Community Service
- Vacant Land
- Vacant Building
- TP Temporary Parking
- TG Temporary Garden

0 0.5 Kilometer

0 1800 Feet

EXISTING LAND USE WITHIN YBC | 9

category and block in Table 3 (page 69). The largest single use is the 1,000,000 sq. ft. of cleared open space in and around the central blocks, which is used for temporary parking lots. Unused vacant lots comprise an additional 700,000 sq. ft. of undeveloped land.

● The YBC area is presently in a state of flux with concurrent construction, demolition, rehabilitation and planning of structures under way. Structures which occupied 1,800,000 sq. ft. of land surface area have been cleared since 1969, and their sites are available for new construction. Eleven existing buildings, which occupy a combined surface area of 60,000 sq. ft., are intended to be razed.[2] These structures include the Imperial Hotel on Fourth St. and the Planter's Hotel at Second and Folsom Sts. New office buildings with 1,380,000 sq. ft. of office space have been constructed on 241,000 sq. ft. of surface area since 1969 in the eastern and southern blocks of YBC. Other new structures include the Downtown Center of the San Francisco Community College, which occupies 9,800 sq. ft. of surface area and a 22,500 sq. ft. service station on cleared land at Third and Harrison Sts. Subsidized housing, the Clementina Towers (276 dwelling units) and a portion of the eastern tower of the Silvercrest Residence (about 70 dwelling units) occupy a total of 70,100 sq. ft. Private parking occupies 47,600 sq. ft. of cleared land, and the eastern end of the block-long Fifth and Mission public parking structure with 280 stalls occupies 21,000 sq. ft. (most of the structure is west of YBC).

The remaining YBC surface area is occupied by existing structures which are intended to be retained under owner participation agreements with the Redevelopment Agency. (Owner participation agreements are agreements between the Redevelopment Agency and property owners under which properties will be retained by present owners and brought into conformity with Redevelopment Agency design and use standards.) Some of the structures have been renovated while others, such as the Mercantile

Building and the Jessie Street Substation, would require considerable remodeling for retail and office use. There are 42 buildings which would be retained; these occupy a combined area of 331,000 sq. ft. Floor areas of present uses, by block and category, appear in Table 4, page 71.

3. LAND USE BY BLOCKS IN YERBA BUENA CENTER

The floor areas or surface areas of existing buildings and uses in the YBC area are shown, by block, parcel category, and expected use, in Appendix Table A-1. (Unless otherwise noted, all references in this report are to portions of each block within the YBC boundary; only CB-2, CB-3, and SB-2 are entirely within YBC).

The central YBC blocks, CB-1, CB-2, and CB-3, are mainly cleared land at present. CB-1 is mostly open space used for temporary parking (446 spaces). An area excavated below street level at the northeast corner of Mission and Fourth Sts. is used for temporary parking by construction workers. Three buildings of historical and architectural value (See Section V.M) are in the block: St. Patrick's Church on Mission St., the Jessie Street Substation, and the Mercantile Building at the northwest corner of Third and Mission Sts.

CB-2 and -3 form a central open expanse; more than half of CB-2 contains pits formed by the former basements of demolished buildings. A number of foundation walls remain standing below street level, particularly under the sidewalks along Mission St.; these cave-like shelters occasionally have been inhabited by squatters. Three such under-sidewalk shelters were inhabited in July 1977 in CB-2;[3] two other inhabited shelters were observed in other vacant blocks. Some shelters appear to be used only occasionally. The remaining street level area of CB-2 (205,000 sq. ft.) is used for temporary parking (302 spaces) by downtown workers. CB-3 uses are similar to those of CB-2: about eight acres consist of cleared land with temporary parking (959 spaces) and about two and one-half acres are fenced, cleared, vacant land.

TABLE 3

PRESENT LAND-USE, SURFACE LAND AREA IN SQUARE FEET, YERBA BUENA CENTER

BLOCK	LAND AREA	OFFICE	RETAIL/ COMMERCIAL	RETAIL/ OFFICE	LIGHT INDUSTRY	DOWNTOWN SUPPORT SERVICE	PUBLIC & DOWNTOWN SUPPORT PARKING	TEMPORARY PARKING	VACANT	COMMUNITY SERVICE	VACANT BUILDING	HOUSING
CB-1	281,000			15,000				205,000	22,000	21,000	17,000	
CB-2	454,000							106,000	348,000			
CB-3	454,000							336,000	118,000			
EB-1	34,000	1,000	32,000	1,000								
EB-2	136,000			13,000			13,000	105,000		4,000		
EB-3	301,000	132,000	8,000			24,000	64,000*	68,000	5,000			
SB-1	56,000		4,000		16,000		5,000*	11,000	5,000	9,000		6,000**
SB-2	374,000	131,000			26,000	5,000	14,000*	91,000	107,000			
SB-3	206,000	5,000	30,000		33,000		10,000*	48,000	81,000			
SB-4	64,000				29,000			12,000	23,000			
WB-1	12,000		2,000							10,000		
WB-2	75,000			6,000		10,000	21,000	24,000	3,000		11,000	
WB-3	148,000	8,000	15,000					21,000	11,000 and 16,000 garden	10,000	4,000	64,000***
TOTAL+	2,595,000	276,000	91,000	36,000	103,000	40,000	34,000 93,000*	1,027,000	723,000 and 16,000 garden	55,000	32,000	70,000

Principal Streets--874,000 plus Side Streets--290,000 = 1,164,000. TOTAL YERBA BUENA CENTER AREA: 1,164,000 plus 2,595,000 = 3,759,000

*Downtown Support Parking (private)
**Portion of the Silvercrest Residence in Yerba Buena Center
***276 D.U.'s
+May not add due to rounding of all entries to the nearest 1,000 sq. ft.

The eastern YBC blocks, EB-1, -2, and -3, have a variety of uses, old and new buildings, and vacant land. All the original structures are standing in EB-1. The land area is 34,000 sq. ft., of which 93% would probably be made available for new construction following demolition of the existing buildings. The five buildings which would probably be demolished have a combined floor space of 100,000 sq. ft. Retail shops and bars are located on the ground floors of these two- to five-story buildings. The upper floors are mostly vacant. Two of the buildings presently in greater use are the Jessie Hotel and Breen's Bar building. Breen's Bar is a bar and diner for local office workers; the second floor of the building is now partially used for office space.

Most of EB-2 has been or probably would be cleared. Two buildings will be retained under owner-participation agreements: the 4,400 sq. ft. Station 35 firehouse and a 21,000 sq. ft. renovated retail store (7,300 sq. ft. of land area). There are currently 304 temporary parking spaces.

EB-3 contains areas of cleared land, temporary parking (192 spaces), and new office buildings. Three office buildings have been developed along Hawthorne St. under agreements with the Redevelopment Agency: the 11-story Pacific Telephone building with 616,000 sq. ft. of floor space, the United California Bank office building with 104,000 sq. ft. of floor space, and the Arcon General Electric building with 93,000 sq. ft. of floor space and 35,000 sq. ft. of private parking underground (260 spaces).

The southern YBC blocks, SB-1, -2, -3, and -4 are characterized by mixed uses, new construction, and cleared land which is vacant or used for temporary parking (437 spaces).

The western blocks contain a mixture of vacant parcels, vacant buildings intended to be demolished, community services, and subsidized housing (Clementina Towers and Silvercrest Residence).

TABLE 4

PRESENT SPACE USE, FLOOR AREA IN SQUARE FEET,
YERBA BUENA CENTER

BLOCK	NUMBER OF BLDGS.	LAND AREA	OFFICE	RETAIL/ COMMERCIAL	RETAIL/ OFFICE	LIGHT INDUSTRY	DOWNTOWN SUPPORT SERVICE	PUBLIC & DOWNTOWN SUPPORT PARKING	TEMPORARY PARKING	VACANT	COMMUNITY SERVICE	VACANT BUILDING	HOUSING
CB-1	3	281,000			91,000				205,000*	22,000	21,000*	25,000	
CB-2	-	454,000							106,000*[e]	348,000*[e]			
CB-3	-	454,000							336,000*	118,000*[e]			
EB-1	7	34,000	7,000		3,000 and 100,000[d]								
EB-2	6	136,000			21,000 and 48,000[d]			13,000*	79,000*		4,000*		
EB-3	8	301,000	833,000	8,000*[d]			60,000	103,000** and 17,000*/**	68,000*	5,000*			
SB-1	5	56,000		10,000		25,000		5,000*/**	11,000*	5,000*	18,000		6,000*
SB-2	10	374,000	568,000			34,000	11,000	14,000*/**	91,000*	107,000*			
SB-3	7	206,000	12,000	35,000		49,000		10,000*/**	48,000	81,000*			
SB-4	7	64,000				35,000			12,000*	23,000*			
WB-1	2	12,000		6,000							86,000		
WB-2	4	75,000			6,000*[d]		28,000	101,000[e]	24,000*	2,000*		11,000*[d]	
WB-3	5	148,000	16,000	15,000					21,000*	11,000* and 16,000* garden	33,000	7,000*[d]	64,000*
TOTAL***64		2,595,000	1,435,000	66,000 and 8,000*[d]	115,000, 148,000, and 6,000*[d]	143,000	99,000	101,000, 13,000*, 103,000**, and 45,000*/**	1,027,000	723,000* and 16,000* garden	137,000 and 26,000*	25,000[d], 7,000[d] and 11,000*[d]	70,000*

*Land Surface Area Only
**Downtown Support Parking
***May not add due to rounding of all entries to the nearest 1,000 sq. ft.
e = Estimated
d = To Be Demolished

The remainder of the YBC area is in use as public streets. Of this, 874,000 sq. ft. is occupied by the grid of 82.5-foot-wide streets (width includes sidewalks), such as the north-south Second, Third, and Fourth Sts. Other side streets vary in width from 30 to 50 feet, and occupy a combined surface area of 290,000 sq. ft. The total combined surface area of all paved YBC principal and side streets is 1,160,000 sq. ft.

4. ZONING

The City Planning Code land use (zoning) districts are shown in Figure 10, page 75, the Planning Code Height and Bulk Districts are shown in Figure 11, page 77, and the Land Use Plan of the adopted Redevelopment Plan is shown in Figure 12, page 79. Among the principal uses permitted in CB-1 and WB-1 are retail businesses, personal service establishments, and business and professional offices. The allowable floor area ratios (10:1) and allowable building heights (400 feet) are the same under the Planning Code and the Redevelopment Plan.

CB-2 and -3, part of EB-2, all of EB-3, part of WB-3, and WB-2 are designated for downtown support use (Land Use District C) in the Redevelopment Plan and are zoned C-3-S, with a height limit of 340 feet and floor area ratio of 7:1. Both designations permit a variety of downtown support functions such as wholesaling, printing, building services and parking.

The central blocks are also in a "special use" category in the Redevelopment Plan, which permits an exhibit hall, sports arena, hotel for transient guests, and radio and television studios.

EB-1 and part of EB-2 are designated for downtown office use (Land Use District A) in the Redevelopment Plan and are zoned for downtown office use, C-3-0, in the Planning Code with a height limit of 500 feet. Office development and related retail and service uses are the principal permitted uses in both designations.

● Southern Blocks 1, 2, 3, and 4 are shown in the Redevelopment Plan as business service and light industry (Land Use District E), consistent with the M-1 (Light Industrial) zoning for these blocks. Parking is shown as a permitted alternative use in SB-3 and -4. Housing may be developed in an M-1 district as a Planned Unit Development upon authorization by the City Planning Commission[4] and is permitted as a conditional use in the C-3-R, C-3-0, and C-3-S districts upon authorization by the City Planning Commission. Figure 12, page 79, shows the six sites designated for housing by the Redevelopment Plan.

5. VISUAL SETTING OF YERBA BUENA CENTER

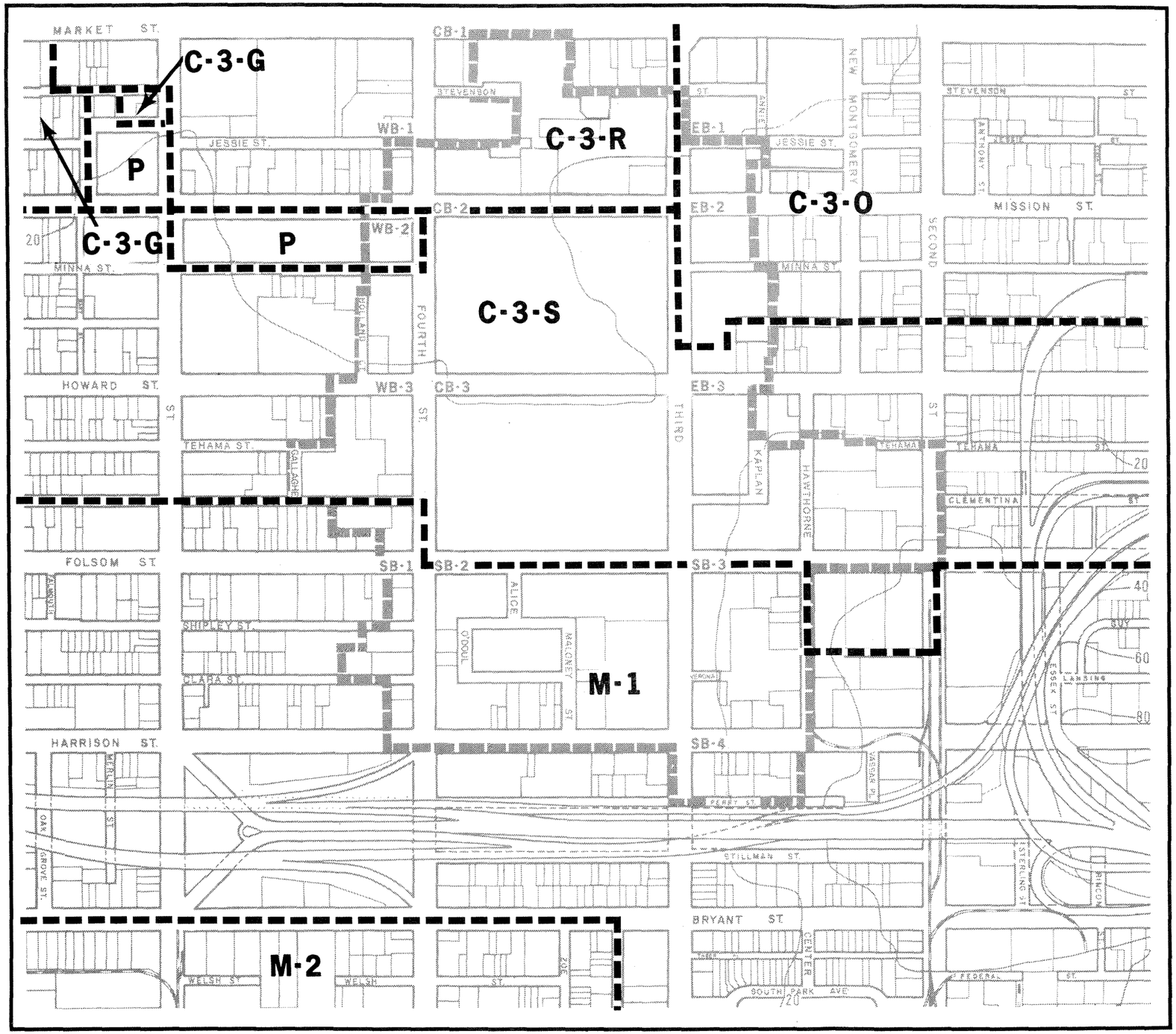
● The topography in the YBC area is nearly flat and slopes gently toward the south-southwest (see Section V.J, Figure 24, page 193). A slight rise occurs in the northern portion of the area; the steepest slope is in the southeastern portion east of Third St. The current visual character of Yerba Buena Center is dominated by the open space in the central blocks and the cleared lots in the adjacent peripheral blocks (see Photo 1, Figure 13, page 81). The Clementina Towers appear in the distance.

Looking at the central blocks, the views are of temporary parking lots, fenced-in vacant lots, and pits filled with rubble and crumbling foundation walls of the basements of the demolished buildings formerly on the site (see Photo 2, Figure 13). The lots are dusty, overgrown with weeds, and scattered with broken bottles and other trash. The openness of the central blocks provides views of the downtown highrise buildings in the Retail and Financial Districts and of the hotels on Nob Hill. The view toward the north from the central blocks is especially varied, with the foreground dominated by the red brick facade of St. Patrick's Church, and the red brick facade of the Jessie Street Substation (see Photo 3, Figure 13). The cream-colored, brick facade of the Mercantile Building also stands out in isolation from other buildings in the area. The larger buildings near and along Market St. form a backdrop behind these structures. Modern highrise buildings, such as the Bank of America headquarters and the Transamerica pyramid, rise behind older

structures; their angular lines contrast with the more intricate lines of the older buildings. The former Southern Police Station (Photo 4 Figure 13, page 81), now used as a Salvation Army recreation center, is of interest as a historic structure (see Section V.M., page 217) The view to the northeast is dominated by the highrise office buildings of the Financial District (see Photo 5, Figure 13). The view to the east and southeast is similarly dominated by the office buildings of the Pacific Telephone Company, including its 30-story building on New Montgomery St. at the edge of YBC, and the newer offices along Hawthorne and Second Sts. near the top of Rincon Hill.

The view toward the south is dominated by the new Pacific Telephone Building at Third and Harrison Sts. and the ochre-colored American Telephone and Telegraph office building at Fourth and Folsom Sts. The view further south is mostly blocked by the viaducts of the James Lick Freeway and the Bay Bridge approaches. The view to the west from the central blocks is dominated by the towers of the Silvercrest Residence, Clementina Towers, and Alexis Apartments, and by the steel and glass facades of the Crocker Bank Service Center Building at Fifth and Howard Sts. The brick facade of the vacant Imperial Hotel on Fourth St. contrasts with the modern or refurbished facades of other buildings which face on the central blocks, such as the steel-and-glass-faced Community College Downtown Center and the brightly painted Victorian Hotel.

A special visual point of interest is the planned entrance to YBC from Market St. The view to the south at that point is restricted by a temporary wooden wall constructed by the Redevelopment Agency. The Market St. sidewalk has been paved with red bricks and landscaped with trees, and a bus-stop shelter has been constructed at the site. The sidewalk is busy with shoppers and office workers in the daytime, and the street is crowded with transit and vehicular traffic. In contrast, the area is almost deserted at night. The view in either direction up Market St. is dominated by large buildings: to the east, the highrise offices of the Financial District and to the west, the older buildings of the Retail District.



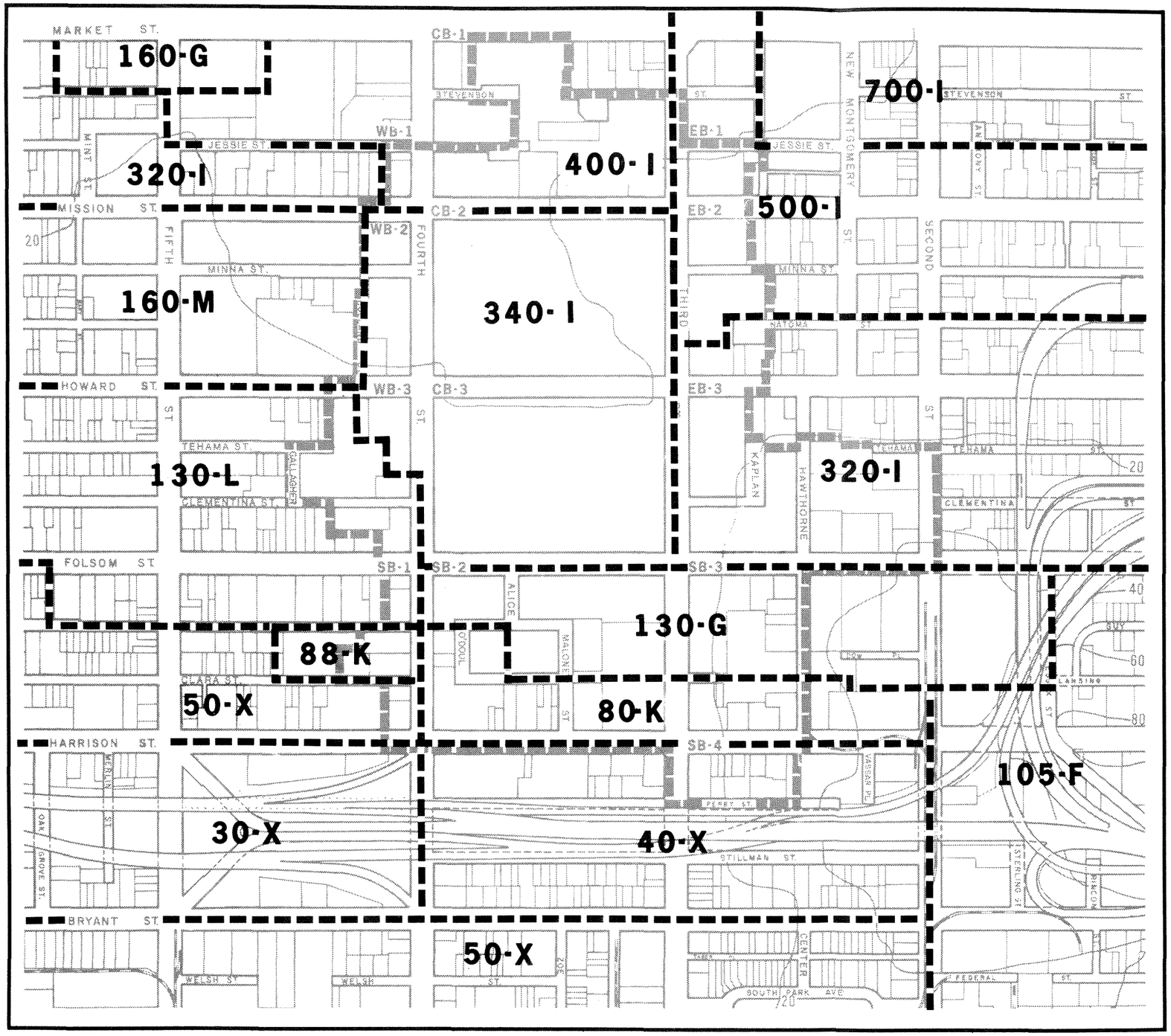
LEGEND

C-3-O	Downtown Office District
C-3-R	Downtown Retail District
C-3-S	Downtown Support District
C-3-G	Downtown General Commercial District
M-1	Light Industrial District
M-2	Heavy Industrial District
P	Public Use District
▬ ▬	Zoning District Boundary

0 0.5 Kilometer

0 1800 Feet

ZONING: USE DISTRICTS IN YBC AND VICINITY | 10



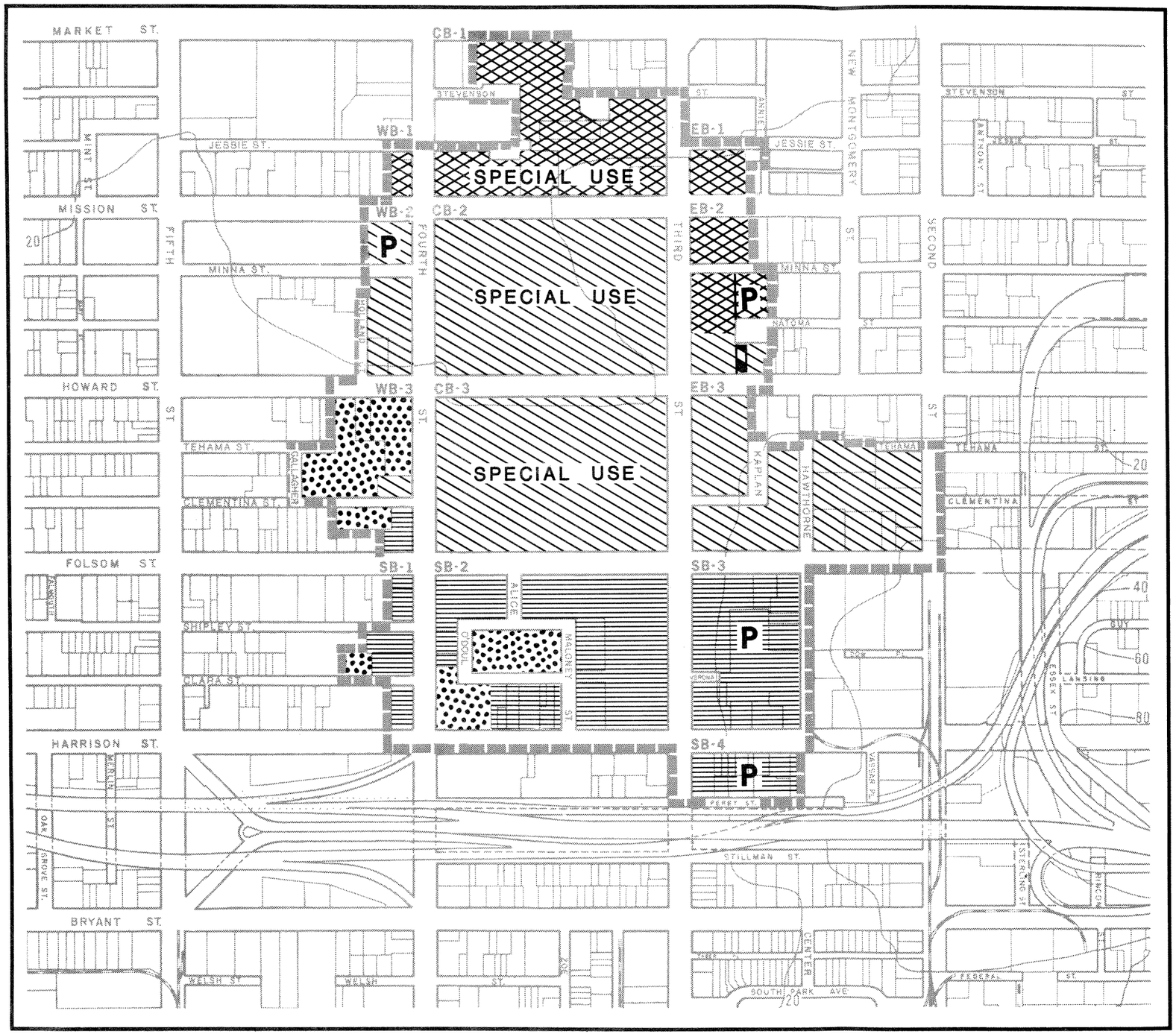
Height and Bulk Districts	Height Limit	Height above which Maximum Dimensions apply	Maximum Building Length	Maximum Diagonal Dimension
700-I	700	150'	170'	200'
500-I	500	150'	170'	200'
400-I	400	150'	170'	200'
340-I	340	150'	170'	200'
320-I	320	150'	170'	200'
160-G	160	80'	170'	200'
160-M	160	100'	250'	300'
130-G	130	80'	170'	200'
88-K	88	60'	250'	300'
80-K	80	60'	250'	300'
130-L	130	80'	250'	300'
50-X	50	Bulk limits not applicable		
40-X	40	Bulk limits not applicable		
30-X	30	Bulk limits not applicable		

Height and Bulk District boundary

0 0.5 Kilometer

0 1800 Feet

ZONING: HEIGHT & BULK DISTRICTS IN YBC AND VICINITY | 11



LEGEND

- Housing
- Office & Retail
- Downtown Support
- Light Industry
- P Parking
- City Owned

0 0.5 Kilometer

0 1800 Feet

ADOPTED REDEVELOPMENT PLAN	12

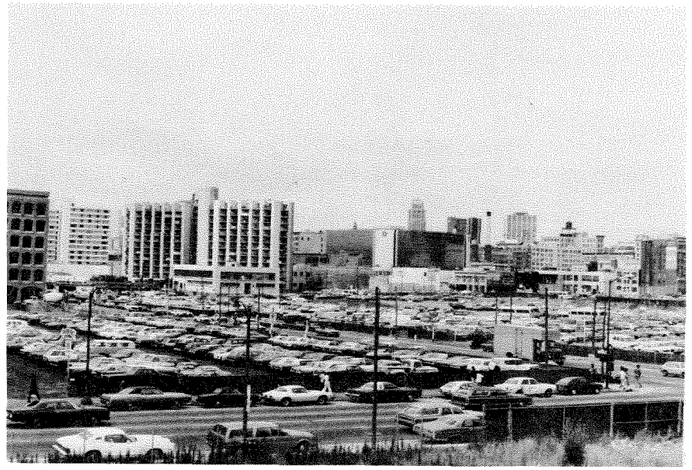


PHOTO 1
From Third Street and Verona Place looking West across SB-2, CB-3 and CB-2

PHOTO 2
CB-2, looking Northeast to Third and Mission Streets

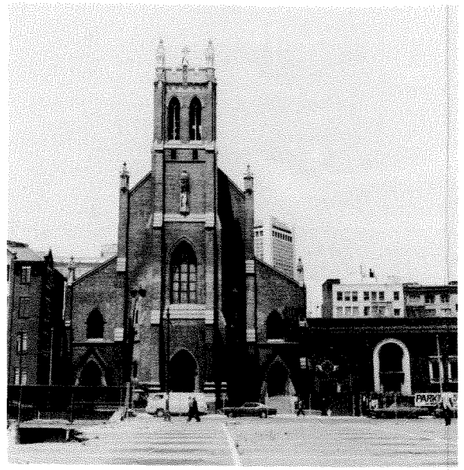
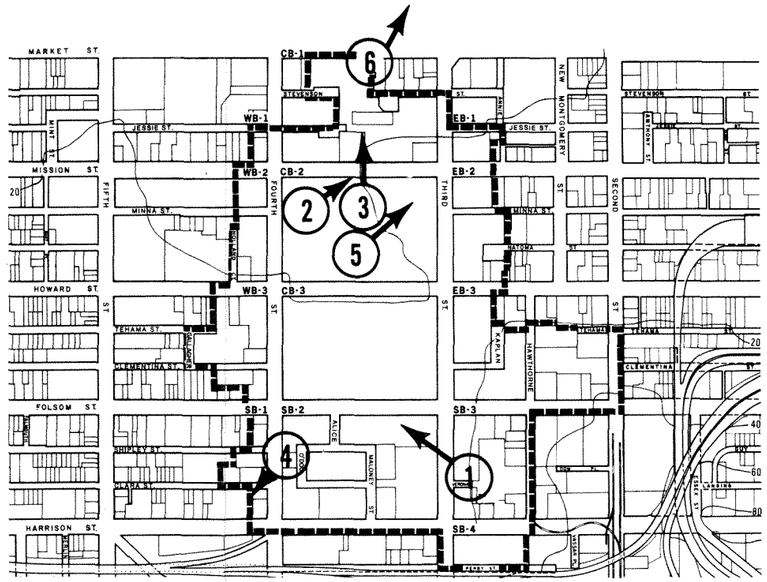


PHOTO 3
CB-2, looking North to St. Patrick's Church and Jessie Street Substation

PHOTO 4
Former Southern Police Station, 360 Fourth Street

PHOTO 5
Looking Northeast from CB-2, with the Mercantile Building in the left foreground

PHOTO 6
View North up Grant Avenue from the Market Street entrance to Yerba Buena Center



PHOTOGRAPHS OF YERBA BUENA CENTER, 1977

13

From the intersection of Grant Avenue and O'Farrell St. at Market St., there is a view of the older retail buildings along Grant Avenue framed by the two bank buildings of a neo-classical architectural style on either side of the street (see Photo 6, Figure 13). Grant Avenue is lined with trees up to the entrance gate to Chinatown. Behind the wooden YBC fence, the view to the south is of a foreground which is filled with parked automobiles in the daytime and which is an empty paved lot at night. The Jessie Street Substation is plain when viewed from this point, for its decorative facade cannot be seen. Similarly, the rear of St. Patrick's Church appears to be an unfinished structure because it lacks the red brick covering over the reinforced concrete which the facade possesses.

The openness of the central blocks is less impressive when seen from outside points like the Bay Bridge approach, for the whole area has a foreshortened appearance. From highrise buildings north of Market St., especially those closest to the site, the dominant element is the openness of the central blocks. The large scale of the open central blocks is most apparent from these vantage points, for they are seen within the context of the surrounding fully-developed districts.

FOOTNOTES

[1]Defined by the Transportation Element of the Comprehensive Plan as a "cross-town thoroughfare whose primary function is to link districts within the City and to distribute traffic from and to the freeways," (Page 19).

[2]T. Conrad, Chief of Housing, Planning and Programming, San Francisco Redevelopment Agency, telephone communication, July 29, 1977.

[3]Field observation by Environmental Science Associates (ESA), July 21, 1977.

[4]A Planned Unit Development is comparable to a Conditional Use and may be considered in a designated redevelopment project area where conditional uses are not otherwise authorized by the Planning Code. The City Planning Commission on August 4, 1977 authorized 140 dwelling units as a planned unit development in the center of SB-2 under Resolution No. 7784.

B. HOUSING AND BUSINESS RELOCATION

1. COMPLETED HOUSING DISPLACEMENT AND RELOCATION

Official displacement and relocation activities in the YBC area began in December, 1966 when HUD signed a loan and grant contract with the San Francisco Redevelopment Agency that authorized commencement of property acquisition, relocation of households and businesses, demolition of structures, installation of site improvements and disposition of property for redevelopment in accordance with the requirements of the Redevelopment Plan.

● A survey of the YBC area taken in 1963 by E.M. Schaffran and Company[1a] revealed that 3,170 single persons and 250 families would have to be relocated. Based on interviews with 82% of the individuals and 96% of the families, the following characteristics of the YBC population were identified:

- The majority of households were single-person households (93%); the majority of the people were male (93%), Caucasian (87%) and over the age of 45 (68%).

- The majority of the families had employed heads of households (65%), received an income of less than $400 per month (56%) and lived in flats or apartments (56%).

- The majority of the single individuals were unemployed (57%), received an income of less than $200 per month (57%), and lived in hotel rooms or dormitories (97%).

The number of individuals and families to be relocated was reduced to 3,050 individuals and 250 families[1] when the Victorian Hotel on Fourth St. and Jessie St. was privately rehabilitated in 1964[2] and subsequently deleted from the project area.

TABLE 5

HOUSING RESOURCES PROVIDED IN RESPONSE TO TOOR LITIGATION

Resource	No. of Units	Type	Completion Date
Western Park Apartments (additive)[4]			
1280 Laguna Street	11	New construction	1971
Salvation Army Harbor Lights			
1275 Harrison Street	65	Rehabilitation	1972
Alexis Apartments (adjacent to YBC)			
390 Clementina Street	206	New construction	1973
Vincentian Villa			
1825 Mission Street	124	Rehabilitation	1973
Salvation Army Chinatown Center			
1450 Powell Street	17	Rehabilitation	1972
491-31st Avenue	75	New construction	1974
El Bethel Arms (additive)[4]			
Golden Gate Avenue & Fillmore	22	New construction	1974
Silvercrest Apartments (in/ adjacent to YBC) 133 Shipley St.	258	New construction	1974
Crescent Manor			
467 Turk Street	92	Rehabilitation	1973
Maria Manor			
174 Ellis Street	120	Rehabilitation	1974
Antonia Manor			
180 Turk Street	135	Rehabilitation	1973
Marlton Manor			
240 Jones Street	151	Rehabilitation	1974
The Alexander			
230 Eddy Street	180	Rehabilitation	1974
Notre Dame Apartments			
1590 Broadway	205	Rehabilitation	1976
TOTAL	1,661		

SOURCE: Jefferson Associates; San Francisco Redevelopment Agency.

From 1967 to 1971 the Agency's relocation staff reduced the number of residents to be relocated to 900 individuals and 197 families. As of June 30, 1974 Redevelopment Agency relocation activities plus private resources had taken care of all but 300 individuals and 20 families. Most of the people (numbers not available) assisted by the Agency were relocated within the downtown area; a few of them were moved to the Western Addition. No move-ins occurred in YBC during this period as residential buildings were demolished as soon as they were vacated. A small percentage of the individuals relocated to Clementina Towers after its completion in 1971. Limited official records are available on those who relocated themselves without public assistance. Most residents who moved without public assistance notified the Agency of their new location, if only to claim their relocation benefits. Between 1974 and July, 1977 an additional 253 individuals and 19 families were relocated, mainly to hotels north of Market St., in the western portion of the South-of-Market area, and to the newly completed Alexis Apartments and Silvercrest Apartments, which were developed for the elderly only.

2. REMAINING RELOCATION REQUIREMENTS AND HOUSING RESOURCES

As of mid-July 1977, 47 individuals and one family remain to be relocated. These persons reside either at the Jessie Hotel on Jessie St. near Third St. or at the Planter's Hotel on Second St. at Folsom. For the most part they are elderly (one-third are over 62 years of age and none are under 30 years of age), Caucasian, and of low income.

Citywide replacement housing resources in 1971, the earliest date for which there are data on replacement housing resources, consisted of 3,180 dwelling units[3]. In addition, approximately 1,500 low-rent housing units were to be provided as part of the TOOR litigation settlement ordered by the court in November, 1970. In fact, 1,660 units were made available in response to the TOOR litigation settlement. These are indicated in Table 5, page 85.

The replacement housing resources included 520 low-income units which were made available in the city through HUD-assisted public housing or Section 236 programs. Section 236 of the National Housing Act of 1968 provides assistance for rental and cooperative housing for lower-income families. The assistance is provided in the form of monthly payments to the mortgagee to reduce costs to the occupant by paying a part of the interest on a market rate project mortgage insured by FHA. These additional replacement housing resources are indicated in Table 6.

TABLE 6

FEDERALLY ASSISTED RELOCATION HOUSING RESOURCES AVAILABLE FOR YERBA BUENA CENTER

	Program	Total Units	Number of Bedrooms 0	1	2	No. Low Income[5]
1. Royal Adah Arms Apartments, Turk & Fillmore Sts.	Sec.236	142	12	130	-	47
2. 1750 McAllister St.	Subsidized Elderly	97	76	21	-	97
3. 345 Arguello Blvd.	Subsidized Elderly	69	59	9	1	69
4. 1880 Pine St.	Subsidized Elderly	113	98	14	1	112
5. 1760 Bush St.	Subsidized Elderly	108	83	24	1	107
6. 25 Sanchez St.	Subsidized Family	90	75	14	1	89
					TOTAL	521

In addition to the completed housing units, the Redevelopment Agency has committed four YBC sites for additional housing developments based on the TODCO settlement. These are shown in Table 7.

TABLE 7

SITES COMMITTED FOR RELOCATION HOUSING - YBC

Location	Approx. No.Of Units	Construction Start Date
Site #1, Southwest corner of Howard and Fourth Streets (WB3)	112 70	1977 1978
Site #2, South side of Clementina Street, west of Fourth Street (WB3)	80	1979
Site #3, Northwest corner of Fourth and Harrison Streets (SB2)	200	1979
Site #4, Between Shipley, Clara, O'Doul and Peter Maloney Streets (SB2)	140	1978
TOTAL	602	

3. COMPLETED BUSINESS DISPLACEMENT AND RELOCATION

At the beginning of YBC relocation activities in 1966, there were approximately 586 firms engaged in private enterprise in buildings to be acquired by the Redevelopment Agency. The makeup of the 586 firms was as shown in Table 8. The number of firms to be displaced excludes businesses in buildings not acquired by the Redevelopment Agency.

TABLE 8

NUMBER AND TYPE OF BUSINESSES, BEFORE RELOCATION

Type of Business	Number of Businesses
Services (hotels, parking, motion pictures, etc.)	187
Retail Trade	144
Wholesale Trade	104
Manufacturing	104
Contract Construction	15
Auxiliary Warehouse	13
Finance, Insurance and Real Estate	12
Transportation, Communication, and Utility Service	7
TOTAL	586

As of June 1974, 508 businesses[1] had been relocated. Of the remaining businesses, five were minority owned: two Asian, one Spanish-speaking, one Black, and one Moroccan. Nearly one-half of the relocated businesses were wholesale/retail type businesses. Of those which were displaced, approximately 60% relocated in the City, 15% relocated outside the City and 25% discontinued operation.[1] Between 1974 and July 1977, another 72 businesses were relocated.[1]

4. REMAINING BUSINESS RELOCATIONS

As of July 1977, 95 businesses are within YBC. Thirty-five of these, with 128 employees, are waiting to be relocated. The total number of businesses to be relocated increased when the Agency acquired additional buildings because of owners' inability to rehabilitate as planned. The remaining 60 businesses, the names of which were not available from Redevelopment Agency files, with 776 employees, would continue business in YBC and would not be relocated. The characteristics of these businesses are shown in Table 9.

TABLE 9

REMAINING YBC BUSINESSES TO BE RELOCATED AND TO BE RETAINED, 1977*

	To Be Relocated				
	Light Industry	Business Services	Retail	Others	Total
Number of Businesses	2	20	11	2	35
Number Employed	10	50	60	8	128
	To Be Retained**				
Number of Businesses	15	34	10	1	60
Number Employed	83	571	112	10	776

*Pertain only to businesses in YBC before start of redevelopment.
**Figures for St. Patrick's Church, PT&T (Third and Harrison), PT&T (Folsom from Third to Hawthorne), AT&T (Fourth and Folsom), Arcon/GE Building and the Community College Downtown Center at Fourth and Mission are not included. See Section V.D-2, Table 11, Page 101, for current employment data.

FOOTNOTES

[1a]E.M. Schaffran and Company, December 1963, Relocation Survey Report.

[1]W. DeHart, Supervisor, Business Services, Redevelopment Agency, telephone communication, August 18, 1977.

[2]G. Harrison, Manager, Victorian Hotel, telephone communication, October 16, 1977.

[3]San Francisco Redevelopment Agency, n.d., Yerba Buena Center Revised Housing Plan.

[4]New housing units added to existing housing units.

[5]Low-income units include those constructed under the public housing programs and those receiving federal or local rent supplements.

C. SOCIAL CHARACTERISTICS

1. INSTITUTIONS AND COMMUNITY FACILITIES

Social service activities provided in YBC and in the adjacent area are available to those living and working in the South-of-Market district, and in some cases, to those in the entire San Francisco area. Present YBC residents, most of whom are elderly, are provided services primarily through the building complexes in which they live, e.g., Clementina Towers and Silvercrest Residence. The services include social, recreational, counseling, and health care programs (such as blood pressure clinics and mental health services). Other types of services available in the South-of-Market district include religious activities, family support, (e.g. marriage counseling), food programs, shelter for the needy, alcoholic recovery, adult day activity programs and employment training.

2. DEMOGRAPHIC AND HOUSING CHARACTERISTICS

Resident population in the South-of-Market district declined during the 1960's (U.S. Census, 1960 and 1970). It is estimated that the population went from nearly 17,100 to approximately 11,000--a decrease of over 35 percent. During the same period the population of San Francisco decreased by a little over 3%[1]. During this period the number of housing units in the South-of-Market district also declined. Further details on this housing decline appear in Section VI.D. (Economic Impacts).

Estimates for the present population characteristics of the YBC area are based upon data from the Redevelopment Agency and from the three housing complexes (Clementina Towers, Alexis Apartments, and Silvercrest Residence) built in the area or environs since 1973. Development of housing for the elderly between 1970 and 1976 brought change to the demographic and housing characteristics of the area.

There are a little over 800 persons living in the YBC area, including the Alexis Apartments and Silvercrest Residence which are

adjacent to, or partially within, the area. Whites make up the largest single group at 48%, followed by Asians (20%) and Blacks (18%). As the three housing complexes were constructed for the elderly, and as approximately 95% of the people living in the area reside in the complexes, it follows that between 90 and 95% of the area residents are over 62 years of age. It is likely that the majority of the persons living in the area have low incomes, as the requirements for public housing and Section 236 housing--the programs under which the complexes were built--include income limitations.

In addition to the residents of the housing complexes there are 47 individuals and one family living in YBC who still require relocation as described in Section V. B-2. Of these, 90% are unemployed and dependent on public benefits of some sort.

Table 10 presents estimated population and racial/ethnic characteristics of all persons living in the YBC area as of July 1977, including those yet to be relocated from the area.

3. SOUTH-OF-MARKET SOCIAL SERVICE NEEDS

The current South-of-Market population consists of several coexisting communities representing differences in age, culture, lifestyle, and social service needs. Since World War II, communities of elderly persons and Filipinos have formed in the South-of-Market district. The growing community of low-income elderly persons is concentrated in the recently developed housing near the southwest corner of YBC. Newly arrived immigrants from the Philippines settle in the South-of-Market district, which has become a cultural and community center for Filipinos throughout the city.

The South Park area, southeast of the YBC boundaries, is characterized by low- to moderate-income families. To the west of YBC, many unemployed itinerants and a range of emotionally, physically, or mentally handicapped persons are provided with life's necessities by public

TABLE 10

ESTIMATED POPULATION AND RACIAL/ETHNIC CHARACTERISTICS OF PERSONS RESIDING IN YBC, JULY 1977

RACIAL/ETHNIC GROUP	NUMBER	PERCENT
White	391	47
Asian	160	19
Black	157	19
Filipino	46	6
Latino	20	2
Other (unclassified)	52	6
TOTAL POPULATION	826	99*

*Does not add up to 100% due to rounding off of numbers.

SOURCE: San Francisco Redevelopment Agency; Clementina Towers, Alexis Apartments, Silvercrest Residence.

agencies and charitable organizations. Voluntary relocation from the cleared project area was predominantly to the west, and the social services currently available are concentrated heavily on the western side of YBC.

As reported in the 1974 EIS (pp. 86-88), social services and facilities required by YBC and available to the YBC area residents (i.e., within walking distance or accessible by public transportation) prior to redevelopment included the following:

- Commercial establishments (grocery stores, drug stores, barber shops, clothing stores, liquor stores, eating

facilities, banks) available generally within a three-block radius of housing sites.

- Twenty-four hour public transportation service available at stops located generally within a three-block radius of housing.

- Health services (within two to three blocks of housing) and access to emergency facilities and to San Francisco General Hospital (via emergency transportation services).

- Access to public assistance offices (Social Security, welfare, unemployment assistance) and public agencies such as the San Francisco Department of Social Services and the Department of Human Resource Development.

- Counselling and guidance resources.

- Food service programs.

- Religious institutions, community cultural and recreational facilities, public library, and city adult education facilities.

- Public security and protection services, i.e., police and fire protection.

As a result of the relocation and demolition which has occurred, many of the commercial establishments and facilities which once served the South-of-Market district residents are no longer available. The main deficiency in the area surrounding YBC now as in 1973, is the paucity of commercial services, restaurants and grocery stores.

More non-commercial social services are available to South-of-Market residents now than prior to YBC project initiation[2]. Although a few services have been removed, there has been a net increase in services

available to YBC residents and those in the larger South-of-Market district[3]. Social services available in July 1977 are found in Appendix C.

Gaps in current social service provisions as perceived by South-of-Market residents and organization representatives are discussed in a report entitled "Community Plan for Health and Social Service Delivery South-of-Market" (South-of-Market Community Planning Task Force, July 18, 1977). That report cites a need for better coordination of services and calls for an improved medical service delivery system, additional counselling and psychological services, community information and outreach programs, child care facilities, recreational opportunities and parks and open space. Vocal organizations of the area (such as the Filipino Organizing Committee, the Council of Agencies Serving the Elderly, and Tenants and Owners Opposed to Redevelopment (TOOR)) have cited similar needs.

FOOTNOTES

[1]This decline may be within the margin of error of the Census counts.

[2]W. DeHart, Supervisor, Business Services, San Francisco Redevelopment Agency, telephone communication, July 13, 1977.

[3]E. Coleman, Executive Director, Canon Kip Community House, San Francisco, personal interview, August 1977.

D. ECONOMICS

1. GENERAL ECONOMIC AND FISCAL SETTING

San Francisco's evolution into a regional financial, government and services center has led to changes in land use and development patterns, such as the following:

o An intensification of office space and associated retailing and services has occurred since the end of World War II. It is estimated that some four million sq. ft. of office space was added between 1945 and 1960, another 12 million sq. ft. between 1960 and 1970, and perhaps as much as seven million additional sq. ft. from 1970 to 1975, the cutoff date for the Arthur D. Little, Inc. and Department of City Planning studies of space use.[1]

o Due primarily to private and public redevelopment activities in locations such as Montgomery St., lower Market St., and the Golden Gateway, the historic Financial district has grown and expanded over time; similar growth has occurred in the Civic Center as government and private employment levels have increased.

o Centers of tourism have become more identifiable. Reuse of older manufacturing and warehousing areas such as Ghirardelli Square and the Cannery, and additions to Fisherman's Wharf and other locations, have added attractions in already popular areas of the City. In 1969-76, over 8,000 hotel rooms have been constructed or remodeled.[2]

The annual reports of the San Francisco Convention and Visitors Bureau for the years 1969 through 1976 indicate that approximately 18 million out-of-town visitors (including convention delegates) remained overnight in San Francisco hotels and motels during that seven-year period.[2] This represents an average of nearly 2.6 million out-of-town visitors using the City's hotels and motels each year since 1969.

- In 1976, the most recent year that statistics have been tabulated, 2.9 million out-of-town visitors remained overnight in San Francisco hotels and motels, and spent an estimated $661 million in San Francisco, or approximately $228 per visitor. In 1976, approximately 16% of all out-of-town visitors using hotel/motel facilities were convention delegates.

- In 1976, a total of 753,785 convention delegates spent an estimated $248 million in San Francisco, or approximately $330 per delegate visit. Approximately 60% of the total 1976 convention delegates (453,000) stayed in San Francisco hotels or motels; the remaining 40% stayed with family or friends in the Bay Area.

- Convention delegates play an important role in the San Francisco tourist industry, because in numbers alone they represent more than 16% of all out-of-town tourists to the City requiring hotel or motel accommodations, and account for nearly 40% of all combined tourism expenditures in the City each year, according to the Convention and Visitors Bureau statistics.

- During the seven-year period between 1969 and 1976, out-of-town visitors to San Francisco, excluding convention delegates, increased an average of 7% (non-compounded) per year. During this same time period, according to Convention and Visitors Bureau statistics, the non-convention visitor expenditures in San Francisco increased an average of approximately 22% per year.

- During this same time period, the number of conventions held in San Francisco increased from 679 in 1969 to 878 in 1976, an average annual increase of approximately 4% per year (non-compounded).

- Total convention delegates increased from 480,259 in 1969 to 753,785 in 1976, an increase of approximately 8% per year (non-compounded). Convention delegate expenditures increased from $101 million in 1969 to $248 million in 1976, an annual average increase of approximately 21% per year (non-compounded).

- Total hotel-motel expenditures increased from approximately $75 million in 1969 to $232 million in 1976, an annual average increase of approximately 30% (non-compounded).

- In 1969 there were approximately 12,120 quality hotel and motel rooms in San Francisco; in 1977, there were approximately 20,547 quality hotel and motel rooms registered with the Convention and Visitors Bureau, an increase of 8,427 rooms in eight years or 1,053 new rooms per year, or an average annual increase of 10.0% (non-compounded) in rooms.

- An average 30% per year increase in hotel room expenditures between 1969 and 1976 contrasts sharply with the 10% per year increase in room expenditures between 1965 and 1970, and may be due to a number of non-sustainable factors such as: the large number of new high-quality hotel rooms constructed during this period (these rooms would require high daily rates in order to cover high construction costs); the relatively high rate of generalized inflation experienced during this period, and the possibility of better reporting by the hotel industry of room sales revenues since the passage of a hotel tax.

- Current hotel occupancy is estimated by hotel analysts at the 75 to 80% level in San Francisco.

Most studies of future convention activity in the region are viewed by critics of the earlier YBC EIR and EIS as being overly optimistic, but no one source can be found that profiles San Francisco convention futures in a definitive manner, using other than various extrapolations of past growth in bookings and in average annual attendance. The Convention and Visitors Bureau views the future optimistically while cautioning that San Francisco needs a major convention-exhibition facility to remain competitive in the visitor market. The facility presently under design and examination is apparently deemed sufficient for that purpose by its supporters in the local convention and hotel-restaurant trade. Further information on convention center attendance, competing Bay Area facilities and prospects for the proposed convention center appears in Appendix D.

Growth in San Francisco's office markets and in tourism-related activities has tended to overshadow other more stable economic sectors. Concentrated mainly in the "light-industrial" categories of warehousing-distribution, light manufacturing, and construction, industrial employment remains near the level of 140,000 jobs,[3] about 25% of total San Francisco employment. Department of City Planning studies estimate that some 20 to 25% of industrial activity is concentrated in the South-of-Market area, surrounding YBC.

The following considerations apply to the YBC alternatives: (1) the possibility of continued and sustained growth in San Francisco office space markets, with YBC becoming more attractive to office space users as other undeveloped sites decline in number; (2) increased visitor interest in the

YBC area by convention attendees and others, and the potential effects of a recreation/entertainment park in the area; (3) the relationships between YBC as finally developed and other City business and tourism centers, in terms of their relative importance with or without YBC; (4) employment levels emanating from YBC, in terms of numbers and types of jobs; and (5) the ability of YBC planners and design consultants to give additional consideration to absorption of light industrial or distributive functions, thus strengthening an historic use in the South-of-Market district. Specific trends with respect to the apparel industry are discussed in Section VI.D (Economic Impacts).

● In more direct monetary or fiscal terms the following are considerations that apply to any American city today. Funds for all purposes are limited: the public's interest in large additional debt issues with high and lengthy repayment periods is low; financial needs for urban schools, health, crime control and other causes limit the amount of money that can be invested in a given development project, even if it appears at face value to have revenue-generating potentials over the long run. In the simplest terms, therefore, the fiscal setting for an area like YBC must be viewed as a limitation on the short-term "deficits" to public accounts that can be permitted as development evolves.

2. EMPLOYMENT

● Between 1965 and 1970 the South-of-Market area as a whole experienced an 18% increase in employment. Most of the growth was accommodated in buildings located east of Third St. between Market and Folsom Sts., outside the YBC area. Wholesale trade and government activities declined, while contract construction, communications, and services experienced growth. Detailed information on comparative trends in San Francisco as a whole, the South-of-Market area, and the YBC area are presented in Appendix D-2.

While employment increased in the South-of-Market district as a whole, it declined within YBC between 1965 and 1970, as some wholesaling, warehousing, and manufacturing uses were displaced.[1]

Current YBC employment is at a level of 4,600 (See Table 11). The number of employees in the communications industry--3,550 persons--reflects the Pacific Telephone Company buildings which have been constructed since 1970. The American Telephone and Telegraph Company added another 800 persons to the total when its long-lines building was completed at the end of 1977. The second largest employment category is business and repair services.

3. FINANCING YERBA BUENA CENTER DEVELOPMENT

There are three major components of a YBC financial program:

o Funds controlled directly by the San Francisco Redevelopment Agency, principally those available through the Agency's agreements with HUD;

o Funds raised by the City and County of San Francisco by means of taxes, bond proceeds of the Redevelopment Agency, or other bond-issuing entities;

o Investment funds raised and controlled by private interests, to be applied to development of the various private uses in YBC. The first two are discussed below.

Redevelopment Agency Financing

Financial resources controlled by the Redevelopment Agency consist of: a 1966 Loan and Grant Agreement with HUD, approving an overall project development cost--the Gross Project Cost--of $125.1 million, and $26.4 million from sales to private and public interests, which leaves a Net Project Cost level of approximately $98.7 million. Pertinent figures are tabulated on page 103, following further explanation. Although the amount of Gross Project Cost and Land Sales Proceeds may change as project characteristics are changed, the total financial support from the federal

TABLE 11

ESTIMATED EMPLOYMENT, JULY 1977, YBC

Industry	Employees Number	Percent
Communications	3,550	77%
Business and Repair Services	621	14%
Retail Trade	172	4%
Manufacturing	93	2%
Health Services	53	1%
Construction*	50	1%
Other Industries**	32	1%
Finance, Insurance and Real Estate	18	0.5%
Educational Services	10	0.2%
TOTAL	4,599	101%***

*Does not include construction workers at San Francisco Community College.
**Does not include transportation, wholesale trade, personal services, other professional and related services and public administration.
***Does not add up to 100% because of rounding of numbers.

SOURCE: San Francisco Redevelopment Agency; Pacific Telephone and Telegraph Company; American Telephone & Telegraph Company; Jefferson Associates, Inc.

government by agreement is fixed at $46.8 million. This represents the "grant" portion of the agreement.

In the normal settlement procedures called for in federally supported urban renewal financing, the Redevelopment Agency is liable for one-third of the deficit balance of the net project expenditures (in terms of the existing 1966 Loan and Grant Agreement). Typically, redevelopment agencies reduce this type of liability with land sales receipts. In YBC the currently budgeted amount is $26.4 million. The net requirement of the Redevelopment Agency for cost-sharing on a one-third basis is roughly $33 million. This amount is planned to be covered by the provision of cash and of "non-cash credits," special credits allowed by HUD for certain project area improvements paid for with locally generated funds. Street improvements, sanitary facilities, major public buildings, and related investments for projects constructed by the City are the usual non-cash credit sources;[4] such credits have been applied to other local redevelopment projects.

The existence of the Loan and Grant Agreement with HUD permits the Redevelopment Agency to continue its YBC activities for another two-to-three years, depending on the level of activity and associated outlays for improvements and services. At that point it is expected that a more definitive "closeout" agreement with HUD would be negotiated, and more refined, updated numbers would be developed for the likely levels of project cost, land sales proceeds and the like.

This analysis is based on the major components of the existing Loan & Grant Agreement, and shows the relationships between project costs, land sales proceeds, and the planned provision of the local share through the funding of non-cash credits or local improvement projects in the redevelopment area. The key elements of the 1973 agreement with HUD, expressed as a "Project Financing Plan" in HUD-Redevelopment Agency documentation, are (1973 dollars):

Item I Costs (see following text)	$ 68.0 Million
Item II Costs (see following text)	57.1
Gross Project Cost	$ 125.1
Land Sales Proceeds	(26.4)
Net Project Cost	$ 98.7 Million
Local Share Required	32.9 (One-third)
To be Provided (57.1 + 2.0 cash)	$ 59.1

In this formula for federal financing of urban renewal activity, Item I Costs include all Redevelopment Agency expenditures for project execution such as property acquisition, relocation, planning and administration. Item II Costs are locally funded improvements within the redevelopment area such as street and utility improvements, and transportation system improvements. Estimated receipts from land sales to new users are deducted from total costs to reach a net cost level; the local share is one-third of this net total. This local share is to be met with non-cash credits (Item II Costs), and cash which, in this case, is approximately $2.0 million invested in the initial stages of the redevelopment project. (The total obligation to provide non-cash credits would be determined on a pooling basis, considering the contributions made to all HUD-assisted renewal programs in the City. The fact that the planned Item II costs are higher than the required local share means that an excess of Item II funds would have been available to cover local share requirements in other Redevelopment Agency projects.)

The 1973 Project Financing Plan shown above envisioned the provision of some $57.1 million in Item II Costs, through various public works expenditures by the City, BART, and others, plus anticipated credit for construction of a convention center facility, public parking garages, and the like. Similarly, the land sales proceeds amount ($26.4 million estimated in 1973) is based upon various appraisals and project plan elements related to the 1973 redevelopment plan amendment and associated actions, including agreements with prospective redevelopers.[5]

Variations in both the actual amount of land sales proceeds received and the amount of non-cash credit actually granted for Item II improvements initially control the net project cost for the redevelopment activity and finally the amount of local share required. Projected land sales proceeds may vary in at least two ways: (1) in the estimated valuation of parcels depending on the scale of reuse permitted by the plans, and (2) in the valuation levels approved or concurred in by HUD overall.[6] The present estimate for land sales proceeds, $26.4 million, is the circa-1973 "concurred in" level of land sales proceeds to be received by the Redevelopment Agency. Estimated non-cash credits for locally funded improvements in the redevelopment area are also "concurred in" by HUD as project activity continues; actual certification of all proposed "non-cash credits" typically proceeds slowly, through negotiation with HUD.

Typically, a HUD-approved Project Financing Plan does not actually reflect the "real" expenditures in any given category of Redevelopment Agency activity. Actual expenses, however, are kept on a current basis by the Agency, and the Project Financial Plan may be amended from time to time (within the same overall totals for major items, however) and funds transferred from one activity to another as required. For example, an Agency might reduce estimated outlays for property acquisition and transfer funds to another area, such as capital improvements, upon approval by HUD. Typically, major revisions to Project Financing Plan documents do not occur frequently, but they are generally made when significant changes have outdated the previous version of the program. At this time there are strict limitations to the amendment of HUD-supported programs.

Thus there are at least three considerations associated with a review of the Redevelopment Agency's financial program for a given project that is federally funded: (1) the existing Project Financing Plan as approved by HUD, illustrating the estimated levels of cost and revenue; (2) the proposed changes in that financing plan based on the Agency's latest estimates of funding requirements and receipts from land sales; and (3) the actual levels of expense and revenue that have been recorded by

the Agency at a given date. For a new project, there are often substantial differences between the financing plan and the actual levels recorded. For an older project, the numbers begin to bear similarity.

● With respect to the funding of the completion of YBC by the Redevelopment Agency, there are limits to the role the Agency can play as its own federal funds are depleted. First, the federal financing program, consisting of grants of $46.8 million and a loan authority of $30 million, is nearing the end of its effectiveness. Further extension of the Agency's loan from the federal government, which at this writing is some $26 million, requires interest payments of approximately $850,000 in 1977, with fluctuations in the future as the amount of the loan or the interest rate is varied up or down. Administrative costs to handle all YBC activities are budgeted on an annual basis. These can range from roughly one-half to three-quarters of a million dollars per year depending on the nature of services provided by the Agency. The Redevelopment Agency does not have the authority to levy a property tax, or to collect special user charges, and it cannot unilaterally obtain cash from the San Francisco general fund. With federal financial support on the wane, and additional costs (delays, inflation) on the horizon for completion of YBC, the Redevelopment Agency will have to seek additional funding from other sources.[7] Further information appears in Section V.D.4, following.

Of the other financial resources generally available to a redevelopment agency in California, the following tend to be most often employed when federal support is limited or unavailable: (1) use of additional cash from the local general fund, often on a revolving or reimbursable basis, in competition with other budget needs; and (2) use of funds raised through the issuance of "tax allocation" or lease-revenue bonds, to be repaid by flows of funds from project area improvements.[7]

The amount of capital improvement cost involved in project activities, and, to a lesser extent, administrative, legal, planning, property management and related services necessary to support development activity would vary with the selected YBC alternative. The division of additional expenditures between those to be covered with

federal funds (the remaining amount) and those to be covered with additional Agency revenues or City resources would also vary with each alternative studied. Similarly, there are some differences in each alternative in the amount of "non-cash credit" expected from locally financed improvements, and in the effective land sales proceeds expected from the resale of sites to private and public users. (See Section VI. D.)

The Redevelopment Agency would play a limited role in the actual rebuilding of YBC under any alternative. While, in the case of private projects or those sponsored by another agency, the Agency provides sites and related improvements for new development (whether an office building or a convention center), another entity must be ready to finance, construct and manage the actual building and associated improvements placed on the site.

● In the case of a public facility, such as the convention center now being planned for the area, the Agency would lease the land to the City and ultimately convey the land to the City at the end of the lease term. It is possible that additional Agency participation in the proposed improvement would occur if long-term debt, such as lease-revenue or tax allocation bonds,[8] is employed to finance the facility, or if other arrangements for ownership, financing or maintenance would call for the Agency to retain more than an administrative role.

4. RELATION OF REDEVELOPMENT AREA FINANCING TO OVERALL CITY FISCAL STRUCTURE

A. Need for Funds

Funds may be needed for four possible purposes:

1. To repay the HUD loan, i.e. to repay money advanced under the 1966 loan agreement and later amendments. HUD has loaned the Redevelopment Agency almost all of the money used to date to acquire

land, prepare it for resale, plan and administer the redevelopment program, pay interest on the loan and pay the cost of public improvements sponsored by the Agency. A balance of $26,850,000[9] remained payable to HUD as of June 30, 1977, and interest charges of $850,000[9] are budgeted for fiscal 1978. About $750,000[9] more could be borrowed from HUD. Repayment would be in cash unless agreement is reached to pay by delivery of bonds.

2. To pay for public facilities, i.e., municipally owned public-use areas, utility systems, and land or easements acquired for these uses. Public facilities paid for by the Redevelopment Agency form part of the Item I costs; those paid for by other public entities and credited as a benefit to the redevelopment area form the Item II costs.

3. To pay for the development of private facilities, i.e., sites, structures, and other site improvements financed by private entrepreneurs and used by them or their tenants. The price paid by the developer for land in YBC would not equal the amount expended publicly to acquire the site and prepare it for redevelopment. This is a reflection of the fact that the guiding principle of redevelopment is to subsidize urban renewal where market forces fail to accomplish it.

4. To pay for public-private facilities, i.e., site development or improvements to be financed with public funds for lease or sale to private entrepreneurs. Cities and other public agencies commonly issue tax exempt bonds to lower financing costs for public facilities.[10] Tax exemption is provided under Section 103 (c) of the Internal Revenue Code and the related Treasury Regulations.

B. Status of Financial Planning

The alternatives considered in this EIR vary from previous plans and each would involve a different combination of financing methods.

For any alternative the financing plan would be a composite of what is possible under existing legislation and what, if anything, might be required as a result of interpreting and applying recent judicial directives, agreements, and policy statements (see Section I, pp. 7-8).

C. Financing Methods

Public agencies can finance their needs in one or a combination of four ways--they pay now, pay later, have another agency pay the cost, or enlist the help of private capital. A financing plan shows whether costs are to be paid from funds on hand or to be borrowed, assigns financing responsibility, and proposes a schedule for obtaining and using money.

1. Pay now by use of current public revenues. Possible sources are:

o Any hotel tax funds allocated to YBC carried forward from previous years, collected to date, and not yet encumbered to meet existing contractual obligations. Although it is the practice of the City to segregate a portion of the hotel tax, the money is part of the general funds of the City.

o City hotel room taxes. By Ordinance No. 502-76 the City allocated portions of the hotel room tax for use in or adjacent to YBC. As the ordinance now stands,[11] the tax rate is 6 cents per dollar of room rental, allocable to YBC as follows:

2.0 cents	to YBC generally, less $100,000 a year;
$160,000	a year for ten years specifically for rent supplements under the jurisdiction of the Mayor;
0.5 cents	less $60,000 a year, specifically to YBC housing development and rent supplements;
$100,000	a year for up to 35 years for YBC housing development.

● The ordinance would be revised to increase the hotel room tax to 8 cents per dollar prior to the sale of the lease-revenue bonds. Up to 4 of the 8 cents would be allocable to the convention center under Proposition S, a policy declaration approved by the voters in November 1976. The ordinance amendment is under study, but has not been submitted to the Board of Supervisors.

For purposes of this analysis, it is assumed that the ordinance would increase the former 2-cent allocation to YBC to 4 cents, out of which $160,000 a year would continue to be drawn for rent supplements through June 30, 1983.

● As of June 30, 1977, the City Controller's office showed balances from hotel tax revenues of $4,505,804 for YBC, plus $918,736 for low-income housing within the City.

● o Use of current or carried-forward community development block grant monies. Block grants were established by the Federal Government in August 1974, partly to complete redevelopment projects which had already obtained Federal commitments, and partly to replace several categorical grant[12] programs for community development which then existed. The City qualifies for about $28 million a year under the Federal formula for entitlement grants. The City might qualify for additional sums, if they are needed to hold it harmless, i.e., avoid financial distress, under previous funding levels of programs replaced by the block grant legislation. City financial reports through June 1976 show no previous use of these funds for YBC. The Redevelopment Agency has been allocated $377,500 of block grant funds for YBC in 1978. The use of block grant funds is subject to local legislative review each year. They cannot be pledged to secure bonds.

o Use of categorical Federal or State grants if any. Categorical grants now provided by Federal and State laws relate almost wholly to personal assistance and services. Current Federal and State laws do not provide for direct capital grants for YBC, but may provide help in financing some facilities through rental assistance programs.

o Use of general revenue sharing (GRS) funds. In general these funds are not restricted as to use if federal requirements for hearings, employment opportunities, wage rates, and reporting procedures are followed. Although GRS money may be put in trust or otherwise segregated from the City's general fund as a management practice, the money is equivalent to general fund money, i.e., it could be used in the absence of Ordinance No. 502-76, establishing the hotel tax, as a substitute for ad valorem taxes or any other City income not restricted as to use, so long as a public purpose is served. In fiscal 1977, unexpended revenue sharing funds totaling $23,716,000 were appropriated by the Board of Supervisors primarily to police, fire, and transit services. The continuing need for police, fire, and transit operating funds is likely to preclude any use of GRS funds for YBC, except as a short-term loan.

o Ad valorem taxes. Current property taxes may be appropriated or accumulated at the direction of the Board of Supervisors. In 1976/77, property taxes, excluding State subventions,[13] were expected to produce about 33% of the total general fund revenue, and about 29% of general and other current revenues. The Board of Supervisors has never appropriated property tax receipts for YBC. There is no reason to expect this policy to change in the future.

o Other general funds. General fund balances or unrestricted reserves from prior years may be applied except as limited by State law and the City Charter. Use of general funds is subject to the budget process each year, and in the absence of a two-thirds vote, the general fund may not be pledged other than to pay current expenses including facilities rent. Proposition P, as passed in November 1976, amended the Charter to require a majority vote by the electorate on all future lease-revenue commitments not exempted under the language of the Charter.

As of the June 30, 1976 audit, general fund reserves were about $38 million, of which all but $6 million was on loan to or receivable from other City funds. Reserves are not a likely source of YBC funds in view of the need to maintain liquidity, i.e., to keep funds available for unforeseen City needs.

o Sales and use taxes. Of the 6.5 cent per dollar sales and use tax in San Francisco County, 1 cent goes to the City. It was expected to produce about $33 million, or about 5% of the general fund and other current fund revenues budgeted for 1976/77. Currently, the entire revenue from this source is appropriated primarily for bond interest and redemption, and for other general fund uses. Sales and use taxes are general fund revenues for all practical purposes, and are subject to the annual budget process.

o Other City revenues. The City obtains other general fund revenues from earnings on unrestricted funds, fines and penalties, service charges and fees, periodic transfers of surplus utility system funds and other sources of many kinds but of lesser importance. None of these revenues would come uniquely or in large measure from YBC. They are general-fund revenues, subject to the annual budget process. Although the Board of Supervisors could appropriate these or other general fund revenues to YBC, it has not done so. Past policy shows a consistent preference for "self-support" from revenues to be earned within or stimulated by YBC development.

2. Pay later. Public borrowing is permitted only within the powers conferred by State law and City Charter.

o Short-term borrowing. In general, no general fund debt may be incurred which cannot be paid from prospective tax and other revenues for the current fiscal year or from grants payable by a specified date. Little capital is expected for YBC from either general fund or grant sources; therefore, short-term borrowing is likely to be used only to bridge short-term gaps in the inflow of hotel tax or bond monies.

o Interfund borrowing. The City Charter allows the City to transfer funds from its cash reserve fund in anticipation of tax receipts. It also provides for borrowing idle funds from other than the pension fund, in anticipation of the next tax collection within the current fiscal year. Interfund borrowing is likely to be used only to bridge short-term gaps in the inflow of hotel tax or bond monies specifically appropriated or borrowed for YBC.

o Bonded indebtedness. The City Charter generally follows State Law procedure to incur bonded indebtedness on behalf of the general fund. A two-thirds approving vote of the electorate is required after a notice, hearing, and ordinance procedure. Because voter approval is needed, general obligation bonds are seldom issued except for facilities of community benefit or for facilities which would be self-supporting. General obligation bonds are probably impractical for any YBC facilities other than parks.

o Lease-revenue bonds. These are long-term bonds payable solely and exclusively from rentals for use and enjoyment of the facility. Bonds of this kind issued by or on behalf of a city to finance public facilities are tax exempt. Lease-revenue financing is used to finance most public buildings throughout the state because state law does not require a vote to lease public, non-school buildings.

- Under state law, lease-revenue bonds for buildings may be issued cooperatively by two or more public agencies, by a redevelopment agency, housing authority, parking authority, or by a nonprofit corporation.

- Proposition P amended the City Charter to depart from state law by requiring a majority vote on lease-revenue bonds other than for residential rehabilitation, unless such bonds were approved in principle before April 1, 1977 by the Board of Supervisors. By Resolution No. 186-77 the Board of Supervisors, on March 14, 1977, gave such approval to lease-revenue bonds for the convention center. Other YBC facilities which would be financed with lease-revenue bonds would require voter approval.

● Lease-revenue bonds are secured by the obligation to pay rent, usually from the general fund. Rent is a use charge, not a debt payment. Bonds payable solely from rent are not charged against bonded indebtedness. San Francisco is not near its limit on bonded indebtedness (see Section VI.D.4).

● The convention center bonds authorized by Proposition S, and subsequently approved in principle by the Board of Supervisors, would be a lease-revenue obligation payable from the general fund, with payment limited to the amount of hotel room tax revenues authorized by the voters.

o Tax allocation bonds. The California Community Redevelopment Law[14] provides for the issuance of bonds secured by taxes on increases in assessed valuation following a designated base year. The purpose of tax allocation bonds is to stimulate renewal and eventually raise taxable valuation for the benefit of the community and all taxing entities involved. The initial impact is to reduce the tax base by removing property from the tax roll and demolishing blighted buildings. Later, as valuation is restored and increased, these increased taxes are diverted from their usual uses, both local and regional, to repay the bonds used to stimulate redevelopment. In YBC the City general fund, the school systems, BART, and all other taxing jurisdictions would forego allocated taxes while the bonds are being paid in order to enjoy the increased tax base after the bonds are paid.

● Tax allocation bonds require assured growth and development in order to be marketable. They would not be marketable at the present stage of YBC planning. Their most effective use in YBC would be as a way of stretching out any cash payments required on the HUD loan. If acceptable to HUD, they could be delivered to HUD in lieu of cash, and retired from tax allocations derived from redevelopment. Federal agencies[15] are empowered to accept securities in repayment at interest rates close to the current Federal borrowing rate. The advantage to the Redevelopment Agency would be that the Federal loan rate is 1-3% less than that for tax allocation bonds or notes.

● Tax allocation bonds can be used to finance eligible redevelopment activities of many kinds; when used in this way, they have to be marketed to the public. Such bonds are among the most difficult to market, and even with interest rates near the statutory maximum (8%), they sometimes may be offered at a discount below face value. In general, the amount of bonds which can be sold at any given time will not exceed ten to twelve times the annual tax allocation available at the time of sale from already completed development and present land values. For example, an annual tax allocation of $1,000,000 would cover the interest on a $12,000,000, 7.5% bond issue, by 111%. That is about the minimum coverage under which the bonds would be marketable, and the bond purchaser would still have to speculate on future valuation growth to raise the money to repay principal when the bond issue matures.

Marketability improves as redevelopment succeeds in raising the taxable base. The bonds become more readily marketable when tax allocations become sufficient to make level payments of interest and principal. Bond issues designed for level bond service generally do not exceed seven times the tax base provided by development in place or firmly committed when the bonds are sold.

Tax allocation notes are sometimes issued for terms of three to five years to allow development to get started before the offering of a larger amount of bonds. Such notes are usually speculative. Depending on the risks assumed by the buyer, interest and discount may range from 6 to 12% a year. The City has achieved a top-grade bond rating partly because it has not issued or fostered the issuance of such speculative paper.

o Industrial aid bonds. Bonds may be issued by a public agency to pay for land or facilities to be privately used if the use also serves a public purpose recognized by local law.

Internal Revenue Service regulations allow such bonds to be income-tax exempt under certain conditions. There is ordinarily no advantage in issuing this kind of bond unless the interest on the bond qualifies for federal income tax exemption.

Within YBC there are two plan elements which might qualify for industrial aid bond financing: low-income and market-rate housing. The purpose of industrial aid bonds is to lower the final price of private facilities by making tax exempt financing available. The bonds are used only when private development serves a quasi-public purpose such as improving housing. These bonds may be issued only when State and Federal laws recognize the public purpose as worthy of public financial aid.

Industrial aid bonds are payable, in most instances, primarily or solely from rents, installment payments, or assessments upon private parties. California Housing Finance Agency and San Francisco Housing Authority bonds are the only forms of industrial aid bonds likely to be considered for YBC.

o Parking revenue bonds. State laws and local ordinances allow bonds to be issued for parking facilities, and paid for solely from on- and off-street parking revenues and ground floor rentals. These bonds are tax exempt if the parking facility is provided for the general public or relates to family housing. The City issues parking revenue bonds through the San Francisco Parking Authority. Parking revenue bonds are a likely financing source, initially, for parking facilities nearest to the existing office and retail areas. As YBC development generates its own parking demand, parking revenue bonds might prove feasible to serve YBC development itself. As a result of approval of Proposition P, a majority vote is needed to issue parking revenue bonds.

3. Transfer or forgive the debt. A number of ways exist to transfer the obligation to pay from San Francisco, or its agencies (including the Redevelopment Agency), to one or more federal agencies. The net effect of these transfers, whether through grant programs or debt forgiveness, is beyond conjecture; however, it is axiomatic that if a grant program exists, the grant will be sought. No specific grants have been assumed for purposes of this analysis, because eligibility depends on the kinds of development and uses to be fostered in YBC. There is a possibility that the HUD loan agreement may be renegotiated to reduce the

amount owed (local share), or to extend repayment time. It has been assumed that the HUD loan would be fully paid from the proceeds of land sales as rapidly as such money is realized. Renegotiation and debt forgiveness are treated here as a method of last resort. Default is not a planned event.

Under terms of the HUD grant for YBC, the City, the Redevelopment Agency, or other local and regional agencies are required to provide local contributions of facilities (non-cash local grants-in-aid), which may be financed by one or more of the methods described above. The total obligation to provide such facilities would be determined on a pooling basis, considering the contributions made to all HUD-assisted renewal programs in the City. If the total non-cash grants credited to State and local agencies do not equal or exceed one-third of the net project cost, a cash contribution may be required. The amount of credit allowed for non-cash local grants-in-aid is subject to negotiation, but no further cash contribution is now projected by the Redevelopment Agency.

4. Enlist private financing. The forms of private financing are more varied than those of public financing. Public concern usually focuses on the effective cost, i.e., the rate of return required, rather than the method of private financing. Rate of return is annualized profit after all taxes. The rate of return required by a developer determines the minimum price which he would try to get from sale, rent, or use of the facility financed.

Since rate of return is calculated as an after-tax percentage of investment, the required price of the facility would be lowered if the developer could shelter income from income taxes through depreciation charges, investment tax credits, and corporate tax strategies. It would usually be in the interest of the City to make land available in ways that would allow the developer as much freedom as possible in arranging financing and that would stimulate competition. If there were to be restrictions, they would be more likely to relate to the level of development, job access, residential rents, and public impact rather than to financing methods. For YBC, public aid to private financing could take

the forms of industrial aid bonds for housing as previously described, sale of land below cost, and assistance through Federal or State mortgage guarantees.

D. Applicability of Financing Methods

Many features of the YBC plan alternatives lend themselves to more than one method of financing. Some methods and combinations of methods are more likely than others, and it is impractical to discuss every possibility. Table 12 lists the kinds of physical features which may have to be financed, and the more likely ways to finance each kind.

FOOTNOTES

[1]Arthur D. Little, Inc., 1975, Commercial and Industrial Activity in San Francisco: Present Characteristics and Future Trends, San Francisco Department of City Planning; San Francisco Department of City Planning, 1975, Commercial Trends.

[2]San Francisco Convention and Visitors Bureau records, 1965-1976.

[3]Mayor's Economic Analysis Unit/Department of City Planning/Mayor's Office of Economic Development/San Francisco Redevelopment Agency (YBC Commercial Development Study Team), YBC Commercial Development: Options for Light Industry, June, 1976.

[4]Documents related to the current Loan & Grant Agreement and the variations possible under the federal urban renewal formula were reviewed with members of the San Francisco Redevelopment Agency staff, led by Ms. Jane Hale, Agency Controller.

[5]Numerous agreements with prospective redevelopers of sites will exist at any given time. The Redevelopment Agency decribes agreed-upon future sales to redevelopers as "commitments" to those parties.

[6]HUD concurrence relates to approval of land prices for all uses. Variations up or down are achieved through negotiations between HUD and the Redevelopment Agency.

[7]Conversations with Mr. T. Conrad, Ms. J. Hale, and other Redevelopment Agency personnel, August and September, 1977.

[8]See Sections V.D-4 and VI.D-4 for discussions of the bonding techniques that might be employed.

[9]Source: San Francisco Redevelopment Agency Budget for Yerba Buena Center, September 8, 1977.

[10]San Francisco used tax exempt financing for Candlestick Park under an exemption authorized by the Industrial Revenue Bond tax laws.

[11]September 12, 1977.

[12]In general, federal grant programs for purposes defined by federal agencies are termed "categorical." The block grant program was created to give local governments more discretion in the use of grant funds through a locally prepared community development program.

[13]A portion of the property tax levied on business inventory and owner-occupied dwellings, returned by the State.

[14]California Health and Safety Code, Section 33000 ff.

[15]Examples are the Farmers Home Administration and the Economic Development Administration.

TABLE 12

FINANCING SOURCES FOR
PHYSICAL ELEMENTS OF YERBA BUENA CENTER*

	Likely Sources of Construction and Development Funds								
				Municipal Bonds					
	Available Funds	Grant Programs	Land Sales Revenue	General Obligation	Lease Revenue	Tax Allocation	Parking Revenue	Industrial Aid	Private Financing
Convention center	x				x[1]				
Pedestrian concourse	x		x	x		x			
Public park		x		x		x			
Office, retail and com.									x
Light industrial									x
Hotel, entertainment									x
Theme park									x
Downtown support									x
Subsidized housing		x[2]		x[3]	x[3]	x[3]		x[3]	x[3]
Market rate housing								x	x
Public off-street parking					x	x	x		
Private off-street parking									x
HUD repayment			x			x			

1 - Hotel tax supported lease payments.

2 - Federal or state mortgage guarantees or direct rental assistance; rent supplements from San Francisco hotel tax.

3 - Partially paid from rents.

*Source: Bartle Wells Associates, Municipal Financing Consultants.

E. COMMUNITY SERVICES

1. WATER

The YBC area is served by gravity flow from the 140 million gallon capacity University Mound Reservoir, located in the Portola District north of McLaren Park.[1] System details are illustrated in Appendix E.

The 30-inch Howard St. main between Third and Fourth Sts. was relocated in 1973 into a 20-inch temporary detour south of Howard St. in CB-3 to accommodate the previous YBC Exhibit Hall design. This will have to be replaced with a permanent 30-inch steel main again beneath Howard St. All other mains are under the streets.[1]

2. SEWERS

San Francisco sewage is treated at three treatment plants: Richmond-Sunset, Southeast and North Point. The system collects both rainfall runoff through the storm drains and the sewage from the City's residential, industrial and business areas. Due to the combined sewers/storm drains, the system cannot handle all of the wastewater produced during storms. When the rainfall exceeds 0.02 inches per hour, the capacity of the treatment plants is exceeded and untreated wastewater flows into San Francisco Bay and the Pacific Ocean. On the average, approximately 37 billion gallons of sewage (average dry-weather flow) are produced in the City annually. During periods of rainfall, an additional 4.4 billion gallons of wastewater on the average flows into the system each year from roof and area drains as well as 4.4 billion gallons of street runoff. Of the total 46 billion gallons, six billion gallons flow untreated into the Ocean and Bay[2].

Because of hazards created by the release of untreated sewage into the surrounding waters, on December 21, 1967 the City was ordered by State of California Regional Water Quality Control Board Resolution

No. 67-74 to prepare a sewerage Master Plan, pursuant to the State Water Quality Act (the Porter-Cologne Act) and the Federal Water Pollution Control Act[3]. An overall plan for wastewater management, initiated in 1966 and completed in 1971, is now evolving as environmental and engineering information is developed for implementation of elements of the plan. For further information about the Wastewater Master Plan, relevant environmental documents may be consulted at the Bureau of Sanitary Engineering, the Office of Wastewater Management, or the Office of Environmental Review of the Department of City Planning.

Wastewater from the Redevelopment Area is now treated at the North Point Plant; the eight-foot diameter, concrete North Point main runs through the Area (see Appendix E). The North Point Water Pollution Control Plant offers primary treatment supplemented with chemical addition for assisting coagulation and sedimentation. This treatment process removes approximately 50% of the pollutants.[4] As implementation of the Wastewater Master Plan proceeds, sewage from the Area would then be routed by 1982 through the transport/storage mains and via the Channel St. Pump Station and the Crosstown Force Main to the expanded Southeast Treatment Plant[2].

● Two relocations of the North Point main have taken place in the vicinity. To accommodate the construction of BART, the section of the main going north under Second St. and east under Market St. to Sansome St. was rerouted in 1970 to go from Second St. east on Stevenson St. and north on Ecker St. to Sansome St.[5] The 2,500 foot section of the North Point main, previously under Howard and Second Sts., was realigned under Fourth St. and Mission St. to Second St. in 1973 to accommodate an earlier design for a below-grade Exhibit Hall in Blocks CB-2 and CB-3 which would have extended under Howard St.

The total amount of sewage generated in the area may be estimated from the water consumption. San Francisco Water Department records show that an average of 0.132 mgd (million gallons per day) were used within YBC during 1976-1977. As little water is used there for landscaping, 100% of this is assumed for estimating purposes to be

discharged into the sewers[6]. This is 0.13% of the total annual City sewage production of 37 billion gallons and 0.22% of the 22 billion gallons treated annually at the North Point Plant.

3. ELECTRICITY, GAS AND STEAM

The Pacific Gas and Electric Company furnishes electricity, natural gas and some steam power in the City of San Francisco.

Electricity is provided to the YBC area through a predominantly underground network supplied by the 225 MVA (million volt ampere) capacity Mission Street Substation at 66 - Eighth St., at Mission St.[7]

Natural gas is brought in via San Jose and the East Bay and distributed through a grid system in the YBC area. Restrictions on the amount of natural gas available have been instituted by the PUC (refer to Section V.I).

The steam-generating plants serve a limited area of downtown San Francisco. Station T is located at Fifth and Stevenson Sts.; the original Station S is on Geary St. The distribution system extends to Fourth and Mission Sts., but there are no customers within the boundaries of YBC at the present time. Requests for steam power would be considered on an individual basis, but the expense to the consumer of extending the distribution lines would probably be prohibitive.[8]

4. SOLID WASTE

Domestic solid wastes are collected by the Golden Gate Disposal Company, a private firm, and trucked to the Transfer Station at Tunnel and Beatty Avenues in north Brisbane, San Mateo County. They are then transported, as are all domestic solid wastes from the City of San Francisco, to the Mountain View landfill site at Mountain View Shoreline Regional Park in Santa Clara County. The current contract provides for

the use of the landfill site until October 31, 1983.[9] In November, 1975, when the contract was signed, space for 4.8 million tons of solid wastes was guaranteed for San Francisco's use. Space for approximately 3.0 million tons remains available at the landfill site[10]. Plans for expansion of the landfill site are being prepared and all permits have been secured, but the final design is not yet complete and the exact capacity of the expanded site has not been determined.[10]

● After the Mountain View site is exhausted, the San Francisco Solid Waste Management Plan calls for a resource recovery system in which glass, ferrous and other recoverable metals and other materials would be reclaimed from the solid waste and recycled; the remaining refuse could be burned to generate steam or gas to power a PG&E generation plant.

545,600 tons of domestic solid wastes, exclusive of sewage, were produced in the City in 1975.[9] Golden Gate Disposal Company has roughly estimated the amount of solid wastes now generated in the YBC area to be between four and six tons per day.[11] At this rate, YBC is responsible for approximately 0.3% of the City's annual domestic solid waste production. Pick-ups are made six days per week, with the frequency of service at a particular location dependent on the size and amount of wastes produced. Most of the waste is containerized.

Some refuse is dumped on the vacant lots on the site, but this is limited by the surrounding fences and preponderance of apartment hotels providing paid collection for tenants.

5. COMMUNICATIONS

Telephone service is provided by Pacific Telephone and Telegraph Company. Most of the telephone cables have been undergrounded beneath the streets, but some lines in the vicinity are still on poles and will remain so until the City schedules their undergrounding. Lines on Howard St. between Third and Fourth Sts. remain in a temporary detour made to accommodate the superseded below-grade design of the Exhibit Hall.[12]

Several private firms offer courier and messenger services with foot and bicycle messengers in the local area and Financial District and truck delivery to the airports and throughout the Bay Area[13].

6. POLICE

Officers of the San Francisco Police Department patrol YBC from the Southern Station, located in the Hall of Justice at 850 Bryant St. Ninety-nine officers, about 10% of the Patrol Division, were stationed at the Southern Station in 1976.[14] Five squad cars cover the area south of Market St. as far south as 16th St.; the response time to the area is five minutes.[15] No YBC patrols are made on foot.

In 1976, 3,550 police reports of all types were filed for the four statistical reporting areas which include YBC; [16] these included 2,590 major crimes (Part I crimes as recorded by the FBI).[17] There were 11.2 major crimes per acre in that year as compared to 2.6 per acre for the City as a whole. Statistical Reporting Area 606, which includes the portion of YBC west of Fourth St. and north of Howard St., had the most crimes in the City in 1976;[18] robberies, assaults and thefts are concentrated there. The crime frequency decreases in the areas to the east and south of Reporting Area 606. Thefts and burglaries are the two crimes most frequently committed in the rest of YBC. The rate of auto theft is also higher than elsewhere in San Francisco due to the large number of unattended parking lots currently distributed over YBC. Auto thefts occur most often in the mornings and late afternoons while other crimes are most often committed in the afternoons and evenings.[19]

7. FIRE[20]

Station Numbers 1, 8, 13, 27, and 35 of the San Francisco Fire Department serve YBC. Station No. 35 at 676 Howard St. is located within YBC and Station No. 1 at 416 Jessie is one block west of it. Response time is three minutes or less.

Between 1973 and 1976, the YBC area averaged two to three major (greater than One-Alarm) fires per year; between 1969 and 1972, it averaged five major fires per year. This is low in comparison to the rest of the City. Resuscitation and paramedical services were required an average of four times annually from 1973 to 1976.

According to Chief Rose, the water supply is adequate for current fire-fighting needs.

8. SCHOOLS

● Few school-age children are known to be living in the YBC Area.

The Filipino Education Center is located on the site of the former Lincoln Elementary School on Harrison St., west of Fourth St., adjacent to YBC. It is operated by the San Francisco Unified School District and offers bilingual education in grades Kindergarten through Six to children drawn citywide.

All primary students (grades Kindergarten-3) living in the YBC vicinity are bused to Douglas School at 4235-19th St. Intermediate students (grades 4-6) living east of Fourth St. are bused to Daniel Webster School at 465 Missouri St., while those to the west walk to Bessie Carmichael School at Harrison and Russ Sts. Older students attend Everett Junior High School and Mission High School.[21]

● In 1964, St. Patrick's School, serving the parish which includes YBC, closed for lack of students. The nearest parochial school is now St. Joseph's at 220 Tenth St. near Howard St. St. Joseph's has the capacity to accommodate more than the 194 students presently enrolled.[22]

The new Downtown Center of the San Francisco Community College District is under construction at Fourth and Mission Sts. The Center is planned to open in 1978 and to have a capacity of 10,000 students per day.[23] Students from the downtown business area as well as nearby

residents are anticipated due to the emphasis on courses in job development and business skills. The City College and San Francisco State University will participate with the Community College Center in the courses at the Downtown Center as a cooperative venture.[24]

9. PARKS AND RECREATION

There are no parks or mini-parks in YBC; none are currently planned there by the San Francisco Recreation and Park Department. The nearest parks are the 0.2 acre Langton and Howard Mini-Park, built in 1971, and the 0.9 acre South Park, one of the oldest in the City, which is in the center of South Park Avenue between Second and Third Sts. and Brannan and Bryant Sts.[25]

The Recreation and Open Space Element of the Comprehensive Plan[26] and the General Manager's Report on the Open Space Acquisition and Park Renovation Fund for Fiscal Year 1977-78[27] designate the South-of-Market area as a high-need neighborhood for new parks and recreation improvements; the Open Space Committee of San Francisco, appointed by the Board of Supervisors as mandated under Proposition J in 1974, has allocated $1,000,000 for the acquisition of a park site in the South-of-Market area outside of YBC to serve the needs of community residents. The exact location of this park has not yet been determined.[28]

10. MEDICAL

The South-of-Market Health Center at 551 Minna St. is the primary provider of outpatient care for the Redevelopment Area and vicinity. Funded by a grant from the Department of Health, Education and Welfare as a part of the San Francisco General Hospital Outpatient Department, it charges for services on a sliding scale based on ability to pay. The Health Center provides general outpatient medical care to 1,500-1,600 patients per month, but does not provide emergency service. Approximately 40% of the patients are families and 30% are elderly.[29] The South-of-Market Health Center is especially well-used by families.[30]

The Mental Health Clinic Number Four outpatient facility is at 450 Sixth St. and the San Francisco Venereal Disease Clinic is at 250 Fourth St.

● San Francisco General, approximately three miles from YBC, is the nearest public hospital, although Veteran's Hospital and the Public Health Service Hospital are also used. Emergencies are generally served at Mission Emergency of San Francisco General Hospital. City ambulance service response time in the YBC area has averaged four to six minutes[31] although response times of one-half hour to one hour have been reported by South-of-Market residents.[30] Ambulance service is also provided for all kinds of emergencies by the Fire Department. One rescue unit is housed at the fire station at 416 Jessie St.;[32] response time to YBC is about three minutes.[33]

FOOTNOTES

[1]G. Y. Nakagaki, Assistant Manager, City Distribution Division of San Francisco Water Department, personal interview, July 15, 1977.

[2]Data supplied by A. H. Brandow, Administrative Engineer, San Francisco Department of Public Works, Bureau of Engineering, personal interview, July 15, 1977.

[3]T. R. Almdale/B. W. Sahm, Wastewater Management Program, letter dated August 18, 1977 and telephone communication, August 17,1977.

[4]J. Crafts, Superintendent of the Bureau of Water Pollution Control, Department of Public Works, telephone communication, November 3, 1977.

[5]N. Lee, Investigation Section, Department of Public Works, Bureau of Sanitary Engineering, personal interview, July 15, 1977.

[6]J. M. Dela Cruz, P.E., Section Chief, Bureau of Sanitary Engineering, personal interview, August 12, 1977.

[7]R. McKillican, Industrial Power Engineer, San Francisco Division, Pacific Gas and Electric Company, letter dated August 22, 1977.

[8]R. McKillican, Industrial Power Engineer, Pacific Gas and Electric Company, telephone communication, August 2, 1977.

[9]S. Snoek, Engineer, Department of Public Works, Office of the City Engineer, telephone communication, July 13, 1977.

[10]R. Haughey, Shoreline Park Project Engineer, Public Works Department, City of Mountain View, telephone communication, August 1, 1977.

[11]F. Garbarino, Office Manager, Golden Gate Disposal Company, telephone communication, July 13 and August 4th, 1977.

[12]P. Bray, Facilities Engineer, Pacific Telephone and Telegraph, telephone communication, July 15, 1977.

[13]S. Hossall, Sales and Operations Manager, U.S. Messenger and Delivery, telephone communication, July 19, 1977, and J. Driscoll, Rocket Messenger and Air Courier Service, telephone communication, July 18, 1977.

[14]San Francisco Police Department Planning and Research Division, 1977, Annual Statistical Report 1976.

[15]San Francisco Department of City Planning in cooperation with the San Francisco Police Department, Police Facilities: A Proposal for Citizen Review, Community Facilities Element of the Comprehensive Plan of San Francisco, April 1974.

[16]Statistical reporting areas #606, #608, #618, and #620, bordered by Sixth, Harrison, Second and Market Sts.

[17]Part I crimes as tabulated by the F.B.I.: murder, manslaughter, rape, robbery, aggravated assault, burglary, larceny, and auto theft.

[18]Sergeant V. Wode, Research and Development Division, San Francisco Police Department, telephone communication, August 3, 1977.

[19]Statistical information from Lt. E. Hartman, Officer-in-Charge, Planning and Research Division, San Francisco Police Department, letter dated September 26, 1977.

[20]All information in this section supplied by Chief R. Rose, Planning and Research Division, San Francisco Fire Department, telephone communications, July 15, 1977 and November 2, 1977.

[21]P. Der and R. Mesta, Statistics Department, San Francisco Unified School District, telephone communications, July 13 and July 18, 1977.

[22]Mrs. A. Canepa, Statistics Department, Archdiocese of San Francisco Department of Education, letter dated July 19, 1977.

[23]Dr. C. S. Biesiadecki, Director, Downtown Community College Center, letter dated July 27, 1977.

[24]L. Broussal, Director of the San Francisco Community College Centers, telephone communication, July 13, 1977.

[25]T. Lillyquist, Administrative Staff Assistant, San Francisco Recreation and Park Department, letter dated July 29, 1977.

[26]San Francisco Department of City Planning, 1973, The Recreation and Open Space Element of the Comprehensive Plan of San Francisco.

[27]San Francisco Recreation and Park Department, 1977, General Manager's Report, Open Space Acquisition and Park Renovation Fund: Fiscal Year 1977-78.

[28]M. Greenlaw, Coordinator, Open Space Program, Recreation and Park Department, telephone communication, July 21, 1977.

[29]Dr. W. Shore, Director, South-of-Market Health Center, telephone communication, September 9, 1977.

[30]South-of-Market Planning Task Force, 1977, Draft Report.

[31]D. Carey, Assistant Superintendant, San Francisco City Ambulance Service, telephone communication, November 2, 1977.

[32]Chief C. W. Carli, Fire Marshal, San Francisco Fire Department, telephone communication, August 15, 1977.

[33]Chief R. Rose, Planning and Research Division, San Francisco Fire Department, telephone communication, November 2, 1977.

F. TRANSPORTATION

● The YBC area lies within the hub of a citywide and a regional transportation system. Thus, transportation is of both local and regional significance.

Street Pattern and Functions

For purpose of the traffic analysis, the study area has been expanded beyond the actual Yerba Buena Center project limits to include approximately the area bounded by Market, Bryant, First and Fifth Sts. Some of the streets within this area would be more directly affected by YBC traffic than others.

The James Lick Freeway (I-80), the San Francisco/Oakland Bay Bridge approaches (I-80), and the Embarcadero Freeway (Cal-480) provide high-capacity service to the system of streets in the South-of-Market area. Market St. borders the project on the north, and functions principally as a transit street and a major pedestrian way with thirty-five foot wide sidewalks and a fifty-foot roadway. Similar in function is Mission St., one block to the south, which is a transit preferential street with exclusive lanes for buses during the peak hours. Mission St. carries mixed vehicles and pedestrians. "Mixed vehicles" is a term used for the total flow of vehicular traffic, including autos, buses, trucks, etc. Mission St. and the other South-of-Market streets have standard sidewalk widths (10-15 ft) and pavement widths (52-62 ft).

A recent addition to South-of-Market traffic management is the transit-preferential diamond lane pair on Mission St. The curb lanes west of Fourth St. are reserved for buses and right turns during the morning and afternoon peaks (7-9 a.m. and 4-6 p.m.); between Fourth and Beale Sts., they are so reserved all day.

Fifth St., like Mission St., is a two-way street, but with less transit emphasis. The one-way streets in the area include the Howard and

Folsom pair and the Harrison and Bryant pair, running in the east-west direction. Third and Fourth Streets form a principal north-south one-way pair.

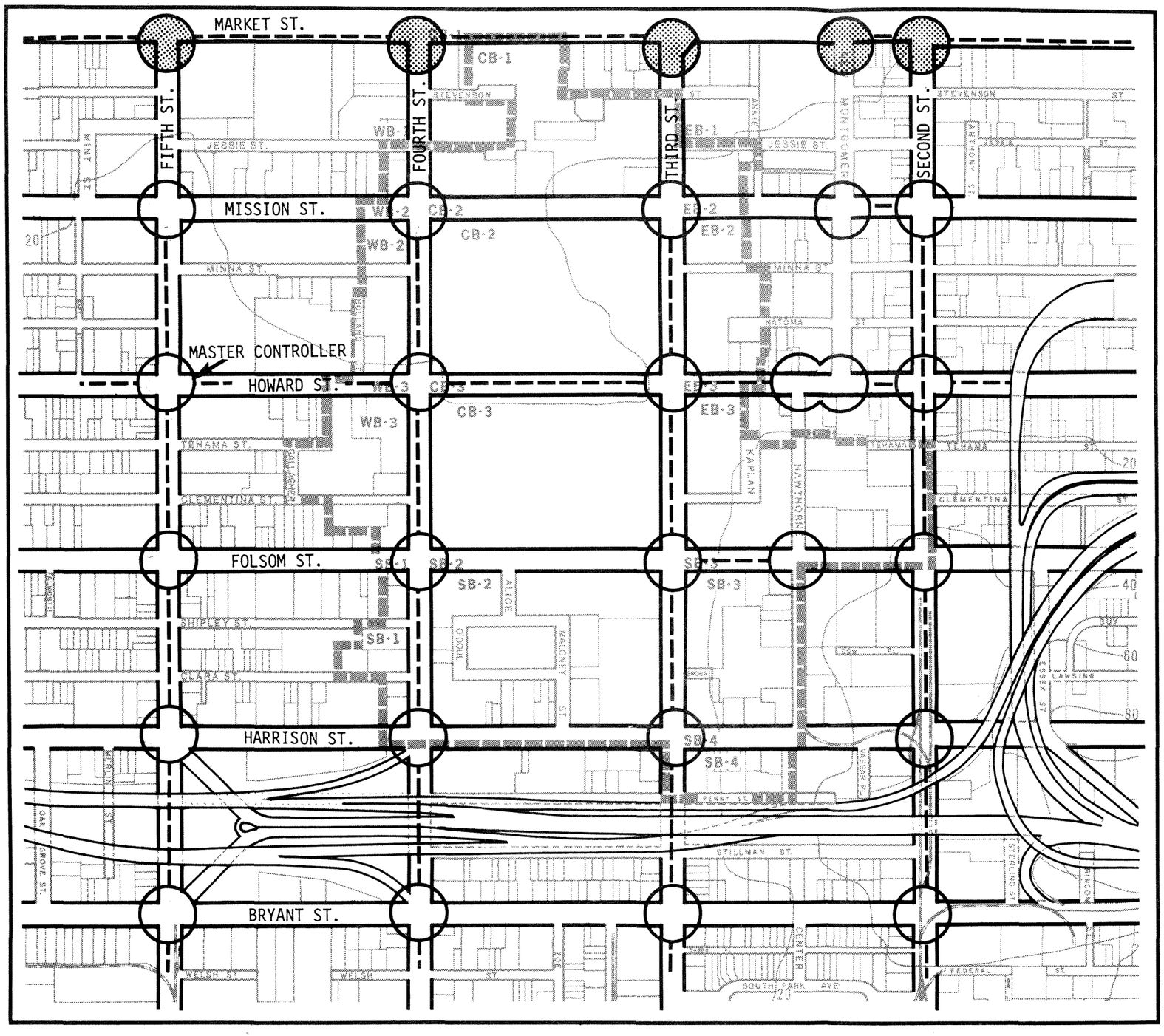
The principal access ramps to the James Lick Freeway are at Fifth St. (Harrison and Bryant) and Fourth St. (Harrison and Bryant). To the east are the ramps at Harrison, First, Fremont, and Bryant Sts. serving the San Francisco/Oakland Bay Bridge (see Figure 14). To the south at Sixth and Brannan Sts. are the ramps serving the I-280 freeway, not shown on the figure.

Regulation and Control

The principal traffic control devices in YBC are the traffic signals at the principal intersections. There are two separate signal systems, the Market St. signals and the South-of-Market signals, both with green-time allocations pre-timed in proportion to off-peak and peak period traffic volumes. Figure 14 shows the location of traffic signals in the YBC area.

There are turn restrictions within the project area, the most notable being the left-turn prohibitions on Market and Mission Sts. This form of regulation improves the traffic flow efficiency on these two-way streets and reduces the number of potential conflicts. At some locations, buses are excepted from the regulation. The turn prohibitions serve to discourage the use of Market and Mission Sts. by automobile traffic destined for the Retail and Financial Districts while promoting transit movement. The result is improved efficiency for mixed-vehicle flow.

On-street parking regulations establish either parking time limits or peak hour towaway zones to clear additional lanes for moving traffic. Other forms of curb regulation establish bus stops, truck loading zones, passenger loading zones, and parking prohibitions where necessary for safety purposes. Figure 15, page 135, shows the principal parking regulations.



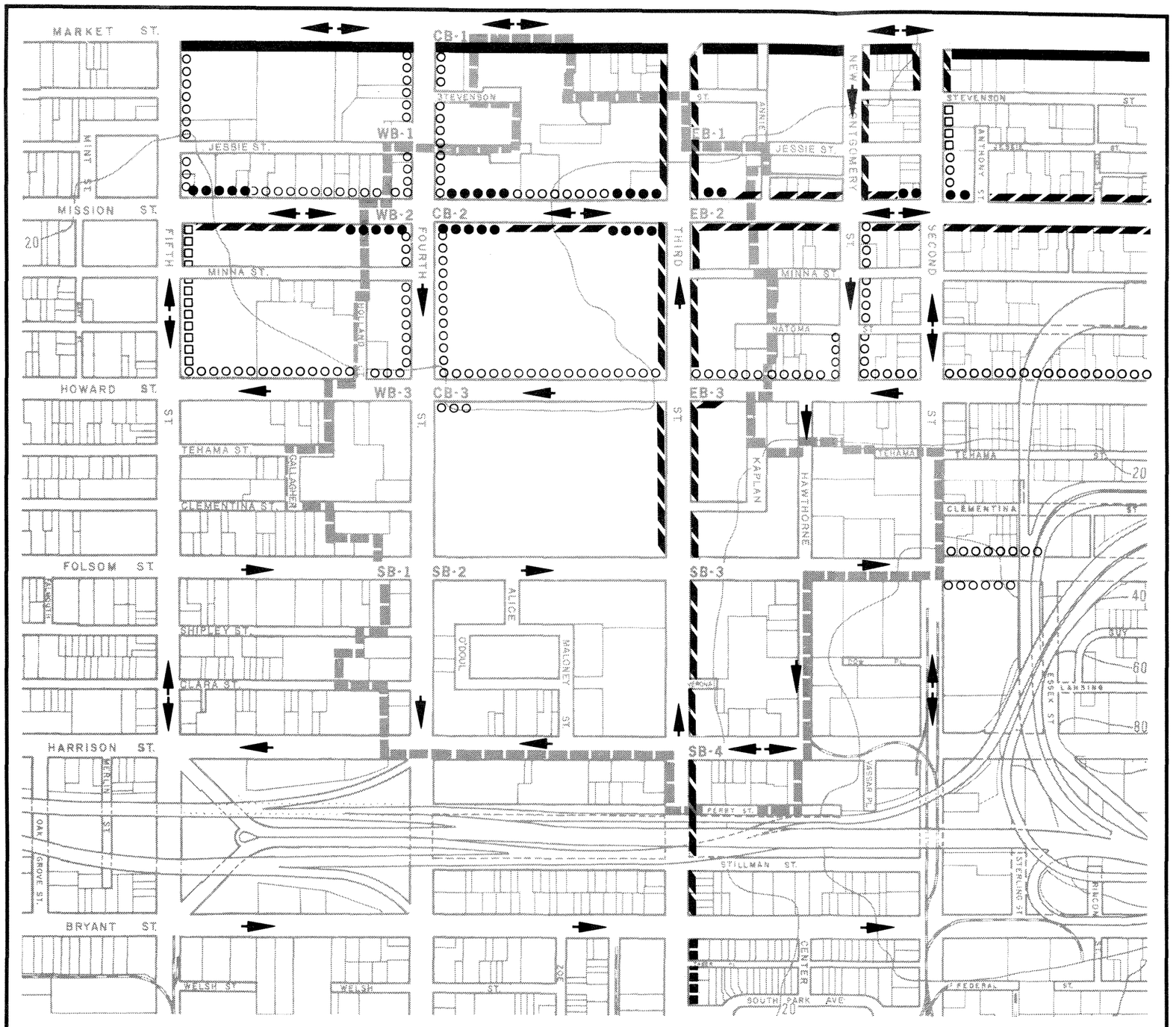
LEGEND

- Market Street Signal System
- South of Market Signal System
- Electrical Control Interconnect Routing
- Major Streets

0 0.5 Kilometer

0 1800 Feet

TRAFFIC SIGNALS AND FREEWAY ACCESS	14



LEGEND

- No parking anytime - towaway
- No stopping anytime - towaway
- 7am - 9am No parking - towaway
- 7am - 9am, 4pm - 6pm No parking - towaway
- 7am - 6pm No parking - towaway
- 4pm - 6pm No parking - towaway
- One-way
- Two-way

0 0.5 Kilometer

0 1800 Feet

TRAFFIC CONTROL AND REGULATION	15

Traffic Characteristics

The movements of pedestrians, transit vehicles, automobiles, trucks and other vehicles all contribute to the transportation setting. Traffic characteristics are presented for the p.m. peak period and the nighttime period associated with potential convention center and recreation/entertainment park activities.

Pedestrians. There is a varying level of pedestrian activity through the project area. Market St. sidewalks and crosswalks carry several thousand pedestrians per hour during the weekday and Saturday peak periods of noontime and afternoon shopping (12 noon to 3 p.m.). Two classification systems for pedestrian volumes are shown in Table 13; the TJKM values have been used in the text discussion.

TABLE 13

PEDESTRIAN VOLUMES

	VOLUMES ON ONE SIDEWALK	
LEVEL	TJKM JUDGMENT	S.F.D.P.W.
Very high	>500 peds/hour	>600
Moderately high	200-500	300-600
Moderate	100-200	<300
Light	<100	-

The Department of Public Works levels are from a DPW worksheet, "Traffic Signal Priority Calculations, Pedestrian Volume Ranges," used in signal-timing design.

The highest pedestrian volume observed in previous studies (1965)[1] was a two-way flow of 13,300 pedestrians per hour on the south side of Market St. near Powell St. Although the street and land use patterns have changed since 1965, "very high" pedestrian volumes still exist along Market St. The volumes are half, or less, outside the Retail District, as observed in counts by the Market Street Design Task Force in 1964 and 1965. TJKM engineers have observed similar volume ratios in 1977.[2]

Mission St. sidewalks carry "moderately high" pedestrian volumes (qualitative estimation, based on observed densities),[2] as do the cross street sidewalks on New Montgomery, Third, Fourth, and Fifth Sts. Extending further south into the YBC area to Howard and Folsom Sts., the pedestrian volumes are "moderate" throughout the day. On other streets toward the outer limits of the YBC area (Second, Harrison, Bryant and Fifth Sts.), the pedestrian volumes are "light" except for short peaks in the noon period and a surge of pedestrians along Third and Fourth Sts. associated with Southern Pacific commute movements. Crosswalks crossing Bryant St. at Third and at Fourth Sts. carry more than 200 pedestrians per hour in the p.m. peak periods (at times between 4 and 6 p.m.).

Transit. Several forms of transit serve YBC directly (pass through YBC) or indirectly (have terminals outside YBC). Market St., at the northern edge of the YBC area, is the transit spine of San Francisco. Trains of the 75-mile system of the San Francisco Bay Area Rapid Transit (BART) District provide service to Daly City, Richmond, Concord, and Fremont, from the lower level of the Market St. subway. Beginning in 1979, the light-rail Muni Metro transit vehicles of the San Francisco Municipal Railway (MUNI) system will operate in the upper level of the Market St. subway, and will provide service to the Sunset, Parkside, West-of Twin Peaks, Ocean View, Merced Heights, Ingleside, Eureka Valley, Dolores Heights, and Noe Valley areas of the City. Most bus lines serving Eureka Valley, the Sunset, and parts of the Richmond and Western Addition districts pass along Market St.

Third and Fourth Sts., operating as a one-way couple, are used by north-south Muni bus lines serving the Southern Pacific Terminal (independently franchised jitneys also serve the S. P. terminal along Third and Fourth Sts.), Hunters Point, Bayview, and Visitacion Valley to the south, and the Financial district, Union Square, Chinatown and North Beach to the north. Mission St., operating as a transit preferential street,[3] carries most of the bus lines serving the Mission district, Glen Park, and the Outer Mission district, and the independently franchised jitneys. Transit service is provided by the Golden Gate Transit buses serving Marin County (on Howard and Folsom Sts.) and by SamTrans buses serving San Mateo County (on Mission St.).

- Indirect service includes the Alameda-Contra Costa Transit District (A-C Transit), serving cities in Alameda and Contra Costa Counties (the Transbay Terminal on Mission St., between First and Fremont Sts., serves as the San Francisco terminus for all A-C Transit transbay routes), Southern Pacific R.R. (SPRR), serving cities in San Mateo and Santa Clara Counties, and the Golden Gate Transit ferry system, serving cities in Marin County. Indirect service involves a secondary mode split; for example walking, Muni, jitney, or taxi from the Southern Pacific terminal at Fourth and Townsend Sts. to YBC.

Transit capacities have been determined for each agency serving the project area. The capacities are shown in Table 14, page 141, for existing equipment and scheduled headways. Headway is the average time between transit vehicles at a checkpoint on a scheduled route.

SOURCES FOR TABLES 14, 15, AND 16.

All data are from publicly available system reports or discussions with transit agency staff, as follows:

San Francisco Municipal Railway: T. Standing and G. Cauthen (Muni POM Study, 1977); Southern Pacific Railroad: Discussions with G. Pera and E. Mohr (Metropolitan Transportation Commission) (7/21/77); SamTrans: A. Lumley (Schedules, plus discussion 7/21/77); Golden Gate Transit: B. Richard (Schedules, plus discussion 7/26/77); Harbor Carriers, Inc.: Dispatcher's office (discussion 8/11/77); BART: W. Belding (discussion 7/21/77); A-C Transit: R. Videll (discussions 7/21/77, plus "Traffic Survey Series A-48" (Institute of Transportation Studies, April, 1977).

TABLE 14

EXISTING TRANSIT CAPACITIES (PERSONS) (SCHEDULES CURRENT IN MID-JULY 1977)
ASSUMING TOTAL OF SEATED AND STANDEE* CAPACITY

TRANSIT AGENCY	VEHICLE CAPACITY (Persons/Unit)		TOTAL WEEKDAY CAPACITY P.M. PEAK (4-6 p.m.) IN	P.M. PEAK (4-6 p.m.) OUT	NIGHT (7-8 p.m.)+++ IN	NIGHT (7-8 p.m.)+++ OUT
S.F. Municipal Railway	Seated	Standee				
Motor Coach	48	27	17,500	22,700	2,400	2,400
Trolley Coach	51	24	20,300	20,300	2,700	2,700
Streetcar	55	35	11,800	11,800	1,800	1,800
Cable Car	60		2,400	2,400	600	600
TOTAL			52,000	57,200	7,500	7,500
Southern Pacific R.R.**	100/150		-0-	10,000	-0-	-0-
SamTrans	53	12	500	500	130	65
Golden Gate Transit:						
Buses	45	10				
First Street Routes			300	9,700	-0-	-0-
Folsom-Howard Routes			1,000	1,600	200	300
Ferries: Larkspur, Sausalito	+		4,200	3,400	1,300	800
Harbor Carriers, Inc.						
Tiburon Ferry	+			1,000	-0-	-0-
BART:						
Transbay	72 ++	36	21,500	21,500	2,000	6,300
Westbay	72 ++	36	21,500	21,500	6,300	2,000
A-C Transit	48	12	6,400	17,600	800	1,000

*Standees were included where allowed by agency policy and contracts.
**Southern Pacific capacity is based on the assumption that all commuter rolling stock is in service; in practice, trains have only the number of cars needed to meet demand (9-10 cars per train). There are two types (sizes) of car.
+Larkspur Ferries - 750 persons/Ferry
Sausalito Ferry - 575 persons/Ferry
Tiburon Ferry - 350 persons/Ferry
++In peak hours, 10 cars per train. In off peak hours, as few as two cars per train.
+++Could be one-half the 4-6 p.m. capacity if available vehicles were used in the 7-8 p.m. period.
Sources: See page 140.

TABLE 15
EXISTING TRANSIT PASSENGER VOLUMES
VICINITY OF YERBA BUENA CENTER

TRANSIT AGENCY		WEEKDAY PASSENGER VOLUMES P.M. Peak 4-6 P.M.* In	Out	Night 7-8 P.M. In	Out	Date of Survey
S.F. Municipal Railway: Routes J,K,L,M,N,5,6,7,8, 9,11,12,14,15,17,21,25,27,30,31,33,38,40/80, 41,59,60,66,71,72		10,200	26,500	1,410	3,810	Months of April/May 1975
Southern Pacific Railroad		-0-	6,190	-0-	-0-	Tues.-Wed. Oct. 12-13, 1976
SamTrans		270	350	160	10	Month of July, 1977
Golden Gate Transit:						
Busses						
First Street Routes 2,4,6,8,10,18,22,24,26, 34,36,40,52,54,64,74,76,78		140	6,270	-0-	-0-	
Folsom-Howard Routes 20,30,50,62,70,80		350	850	70	130	Month of
Ferries: Larkspur, Sausalito		510	1,400	100	630	May, 1977
Harbor Carriers, Inc.						Thursday
Tiburon Ferry		20	450	10	50	July 21, 1977
BART:						
Transbay	Montgomery	390	4,630	70	550	Wednesday
(To/from E. Bay and Embarcadero Station)	Powell	560	1,660	160	480	May 11, 1977
Westbay	Montgomery	100	4,110	50	180	
(To/from Daly City direction)	Powell	380	1,860	120	320	
A.C. Transit: Routes A,B,C,E,F,G,H,K,L,N,O,R,S, V,W,Y**		1,430	11,650	150	450	Thursday April 21, 1977

*BART time is from 4:30-6:30 p.m.
**Routes G,H,S,V,W,Y do not run during 7-8 p.m. period.
Sources: List on page 140.

An inventory of transit patronage in the vicinity of the project area is presented in Table 15, covering two time periods and a breakdown for inbound and outbound trips. A summary of the transit patronage characteristics in the vicinity of the project area is shown in Table 16.

TABLE 16

PASSENGER VOLUMES BY MODE
P.M. PEAK, OUTBOUND

TRANSIT AGENCY	PERCENT
San Francisco Muni	38.8*
Southern Pacific	9.6
SamTrans	0.5
Golden Gate Transit	13.9
BART - Transbay	9.8
- Westbay	9.3
A-C Transit	18.1
TOTAL	100.0

*Does not include passengers boarding at locations west of YBC cordon points.

Sources: List, page 140.

Jitneys supplement public transit. A sample 1977 study[4] on Mission St. showed 435 passengers in 35 jitneys (12- and 15-passenger vehicles) outbound from 4:30 - 5:30 p.m. Inbound flow was 162 passengers in 26 jitneys. There are 116 approved permits[5] for jitney operations on Mission St. and five for operations on Third/Fourth Sts.

Muni carries the largest passenger load in the YBC area. The average Muni operating speeds for YBC streets are shown in Table 17. They reflect loading/unloading times, signal delays and average traffic conditions.

TABLE 17

AVERAGE MUNI SCHEDULE SPEEDS

EQUIPMENT	SCHEDULE SPEED, MPH
Motor Coach	10
Trolley Coach	8
Streetcar	9

Source: San Francisco Municipal Railway; Recapitulation and Analysis of Schedules. Effective April 13, 1977.

Mixed Vehicles. The traffic volumes in the area are represented by the available machine count information from the San Francisco Department of Public Works, Traffic Engineering Division. Where machine counts were not available, estimates were made by the EIR Team (TJKM) by expansion of available intersection turning movement counts. The volumes are shown in Table 18 with a breakdown for four different time periods. Counting locations are shown on Figure 16, page 147.

The traffic volumes range from about 3,000 vehicles per day, on Hawthorne St., to about 19,500 vehicles per day on Third St. Fifth, Sixth, Mission and Howard Sts. carry volumes of traffic near the upper end of the range. The evening peak represents the peak weekday period of traffic flow analysis (highest hourly volumes).

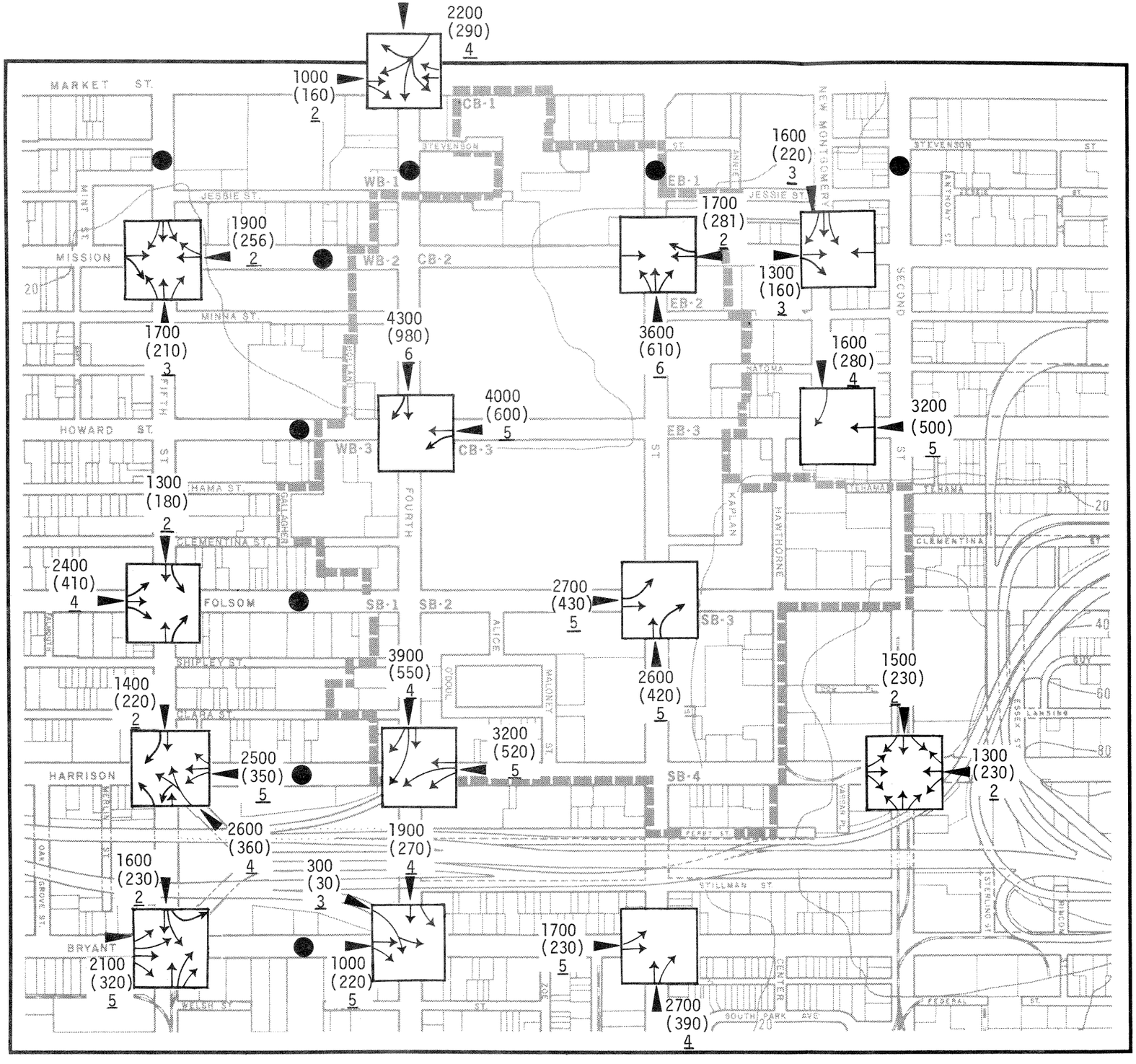
Manual turning movement counts were obtained for the morning, midday, and evening peak periods at 14 intersections in and adjacent to YBC. The locations of the turning movement counts are shown in Figure 16, with the total approach volumes for the peak hours and the number of lanes available. The approach volumes were translated (assigned) to adjacent intersections to provide volume estimates at those intersections not counted. Figure 16 also shows the locations of the machine counts reported in Table 18.

TABLE 18

WEEKDAY TRAFFIC VOLUME SUMMARY
1976 DATA

STREET		TIME PERIODS			
		24-hour	4-6 p.m.	4:30 p.m. to 5:30 p.m.	7-8 p.m.
First*	S/B**	11,600	2,100	1,100	400
Second*	S/B	1,700	200	100	100
	N/B	2,100	300	200	100
	TOTAL	3,800	500	300	200
New Montgomery	S/B	8,700	1,400	800	300
Hawthorne	S/B	3,000	500	300	100
Third*	N/B	19,500	3,100	1,700	600
Fourth*	S/B	13,000	2,500	1,300	400
Fifth*	S/B	7,200	1,000	500	300
	N/B	7,500	1,200	800	300
	TOTAL	14,700	2,200	1,300	600
Sixth*	S/B	10,700	1,700	900	400
	N/B	7,900	1,200	600	300
	TOTAL	18,600	2,900	1,500	700
Market	TOTAL	10,300	1,800	1,000	400
Mission*	E/B	8,500	1,400	700	200
	W/B	9,900	2,000	1,100	300
	TOTAL	18,400	3,400	1,800	500
Howard*	W/B	16,100	4,500	2,600	300
Folsom*	E/B	13,600	2,100	1,400	200
Harrison***	W/B	7,900	1,800	1,100	100
James Lick*	TOTAL	172,000	20,400	15,200	7,000
Bryant***	E/B	7,200	1,100	700	100

*Machine count data available. James Lick data from CALTRANS.
**S/B=Southbound, etc.
***1971 machine count data.



LEGEND

580 — Approach volume 4-6 P.M. (1977)
(115) — Approach volume peak 15-minutes (1977)
4 — Traffic lanes

Direction for volume/lane data

Turn movement

Location of machine counts (1976, some 1971)

EXISTING P.M. PEAK TRAFFIC VOLUMES	16

Figure 17, page 151, is given to show an area-wide indication of level of traffic service. This figure shows the average headways (time between vehicles entering an intersection) for the intersection approaches with the highest average volumes per lane in the evening peak period, and for some intersections where the highest volumes occur during the morning peak.

Level of Service "D" as defined in the Highway Capacity Manual[6] is used for evaluation of YBC traffic flow conditions. Table 19 shows the definitions of all Levels of Service.

TABLE 19

LEVEL OF SERVICE DESCRIPTIONS

Level of Service A - Conditions are such that no approach phase is fully utilized by traffic and no vehicle waits through more than one red indication.

Level of Service B - An occasional approach phase is fully utilized; vehicle platoons are formed; this is suitable operation for rural design purposes.

Level of Service C - Stable operation; occasionally, drivers may have to wait through more than one red indication; this is suitable operation for urban design purposes.

Level of Service D - Approaching unstable operation; queues develop, but are quickly cleared.

Level of Service E - Unstable operation; the intersection has reached capacity; this condition is not uncommon in peak hours.

Level of Service F - Forced flow; intersection operates below capacity.

"High" Levels of Service (A, B, B-C) are termed "good;" "moderate" Levels (C, C-D) are termed "fair;" and "low" Levels (E, F) are termed "poor."

Table 20 shows the volume and headway guidelines (to achieve Level "D"), as adjusted (DPW Traffic Engineering techniques) for pedestrian volumes, which reduce the vehicular capacity of an intersection.

TABLE 20

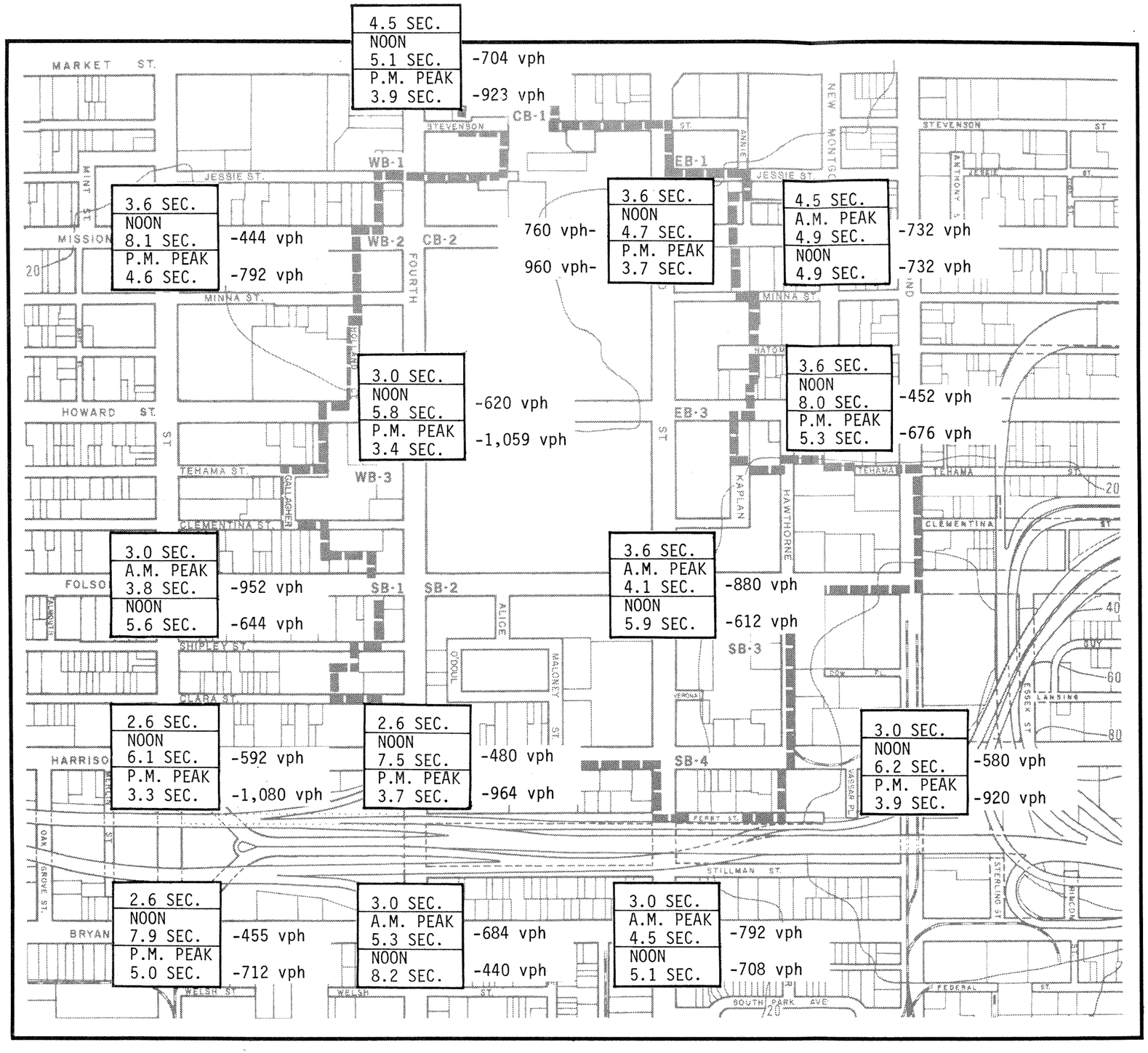
VEHICULAR LEVEL-OF-SERVICE GUIDELINES
FOR VARIOUS PEDESTRIAN VOLUME LEVELS

PEDESTRIAN VOLUME	MAXIMUM VEHICLE VOLUME CRITICAL APPROACHES TOTAL VEHICLES PER LANE	MINIMUM VEHICLE HEADWAY (SECONDS)
Light*	1,400	2.6
Moderate	1,200	3.0
Moderately High	1,000	3.6
Very High	800	4.5

*See definitions in Table 13, page 137.

Table 21, page 153, shows the existing headways at selected intersections, with the guideline headways and a Volume/Capacity percent (100 V/C) for Level "D". Since all actual headways but one exceed guideline headways (all streets but one are below 100% of Level "D" "capacity"), Level of Service almost everywhere is at "D" or better. Fourth at Howard St., Third at Mission, and New Montgomery at Mission are close to capacity (92-96%). Fourth at Market is over capacity (115%).

Traffic speeds are an indication of quality of flow for mixed vehicles. Spot speeds (measured at a mid-block point on the street) and average travel speeds (recorded in a moving vehicle along a length of street) were sampled for representative streets. Table 22, page 154, shows the results and a general guideline for downtown streets obtained from the Highway Capacity Manual for Level of Service "D". Eighty-five percent of the vehicles are travelling at or below each indicated spot speed. The average travel speeds are lower than the mid-block spot speeds. This difference reflects the delays to traffic due to mid-block friction (cars parking, double parking, cars slowing for alleys, etc.) and traffic signals.



LEGEND

3.0 SEC.
NOON
8.1 SEC.
P.M. PEAK
5.3 SEC.

Guideline Headway Level of Service "D"

Existing headways for noon hour and peak 15 minutes in P.M. peak hour.

- 580 vph — Existing equivalent hourly critical approach lane volumes in vehicles per hour.

Note - The critical approach lane volume is the total of the highest-volume conflicting movements at an intersection. (See Appendix F for sample calculation)

EXISTING PEAK VOLUMES AND VEHICLE HEADWAYS

17

TABLE 21

EXISTING PEAK HOUR HEADWAY SUMMARY
BASED ON 15-MINUTE VOLUMES

		GUIDE HEADWAY	ACTUAL HEADWAY	HOURLY VOLUME	CAPACITY*	% OF CAPACITY (100 V/C)
FIFTH	MISSION	3.6	4.6	792	1,000	79
	FOLSOM	3.0	5.6	644	1,200	54
	HARRISON	2.6	3.3	1,080	1,400	77
	BRYANT	2.6	5.0	712	1,400	51
FOURTH	MARKET	4.5	3.9	923	800	115
	HOWARD	3.0	3.2	1,128	1,200	94
	HARRISON	2.6	3.7	964	1,400	69
	BRYANT	3.0	8.2	440	1,200	37
THIRD	MISSION	3.6	3.7	960	1,000	96
	FOLSOM	3.6	6.4	562	1,000	56
	BRYANT	3.0	5.1	708	1,200	59
NEW MONTGOMERY	MISSION	4.5	4.9	732	800	92
	HOWARD	3.6	5.3	676	1,000	68
SECOND	HARRISON	3.0	3.9	920	1,200	77

*Level of Service "D". See Table 20, page 150.

According to a 1974 Department of Public Works study, traffic accidents for the project area are higher than for the City as a whole, as shown in Table 23.[7] This is due to the higher volume of mixed-vehicle, transit and pedestrian activity in the Central Business District than in residential neighborhoods. Demolition activities in YBC at the time of the study were probably not measurable factors in the accident rates, in the judgment of the EIR team (TJKM engineers).

TABLE 22

OFF-PEAK SPEED COMPARISON, WEEKDAYS, SELECTED YBC STREETS

STREET	SPOT SPEED (MPH)*	TRAVEL SPEED (MPH)**	LEVEL "D" SPEED (MPH)
Mission, two-way	25	14	10
Howard, one-way	30	23	15
Folsom, one-way	30	24	15
Third, one-way	30	14	15
Fourth, one-way	30	23	15
Fifth, two-way	--	12	10

*The 85th percentile speed--85% of the vehicles sampled were traveling at or below this speed, as measured at one mid-block point.
**The average speed for a trip of several blocks along the street.

TABLE 23

TRAFFIC ACCIDENT RATE[7]
ACCIDENTS PER MILLION VEHICLES,* 1969-1973 Period

INTERSECTION TYPE	AVERAGE ACCIDENT RATES CITY-WIDE	YBC AREA
Two-way streets	0.37	0.51
One-way streets	0.39	0.76
One-way & two-way streets	0.53	0.70
One-way & two-way "T" intersections	0.08	0.13

*One million vehicles would pass through the busiest YBC intersection, Third at Mission, in about one month.

Truck Traffic. The movement of goods in commercial vehicles within the project area is vital to the conduct of business. Although the trucks in the traffic stream are fewer than 3% of the total number of mixed vehicles, and most of the trucks are of the two-axle type (which are relatively mobile), the overall effect of truck traffic can be increased congestion.

The last study of truck traffic in the downtown area, done by the Department of Public Works in 1973,[8] showed that industrial buildings and warehouses in the downtown area generate about 65 truck trips daily per hundred thousand square feet of floor space, compared with 22 and 26 trips by retail and office buildings, respectively.

Currently, the older commercial and industrial establishments provide inadequate loading facilities for trucks, having been built before relevant code requirements came into force in 1968. The resulting disruption due to double parking of trucks and to their maneuvers into and out of narrow alleys is compounded by other illegal parking.

Other Traffic. There are other modes of travel in the project area. These include taxis, charter buses, limousines and bicycles. Their contribution in serving YBC has not been quantified.

There are 711 total approved taxi permits in San Francisco.[5] In addition there are over 200 licensed charter buses, the Gray Line Company, and 51 licensed limousines.[5] The role of the bicycle is evident in small-package delivery service activity.

Parking

The last study of parking characteristics in the project area was done in 1975.[9] Since changes have occurred, the amount of on- and off-street parking within the YBC boundaries has been updated to the present.[10]

Within the YBC boundaries, the current inventory shows a total of 5,800 spaces. An early-afternoon study[10] showed that 5,400 vehicles were using the off-street spaces. This represents 93% occupancy, a "full" condition. (For off-street parking spaces a rule of thumb used by traffic engineers is that 85% occupancy represents "full" occupancy. The remaining spaces are in the process of being-- or about to be--occupied by arriving vehicles).

Observations outside the YBC boundaries show that on-street spaces are used to capacity and that the off-street spaces drop in occupancy with increasing distance away from the retail core along Market Street.

FOOTNOTES

[1]Count taken: Monday, December 20, 1965; 1:55-2:55 p.m., by the Market Street Design Task Force. Counts during other times of the year were less, in proportion to gross sales. No more-recent data have been located.

[2]The discussion in this paragraph is based on TJKM field observations, July 14-22 (Thursday-Friday), 1977.

[3]Defined by the Transportation Element (page 24) of the Comprehensive Plan, City Planning Commission Resolution No. 6834, April 27, 1972, as a route "of major arterial transit lines" where interference with transit vehicles by other traffic should be minimized.

[4]By EIR Team members (TJKM) on Wednesday, September 7, 1977, on Mission St., west of Fifth St.

[5]Officer Martindale, San Francisco Police Department, Taxicab Detail, telephone communication, September 23, 1977.

[6]Highway Research Board, Highway Capacity Manual 1965, Special Report 87, National Academy of Sciences, National Research Council Publication 1328.

[7]City and County of San Francisco, Department of Public Works, Study of High-Accident Intersections, Traffic Safety Study, October, 1974.

[8]Commercial Vehicles In a Large Central Business District, City and County of San Francisco Department of Public Works, 1973.

[9]Parking inventory for the downtown area was supplied by the Public Works and Planning Departments; personal interview with Edward A. Green, Transportation Planner, Department of City Planning, on August 15, 1977.

[10]EIR Team (TJKM) Field Survey on Thursday, July 21, 1977.

G. CLIMATE AND AIR QUALITY

CLIMATE - GENERAL

San Francisco can be described as having mild winters (average temperatures between 49 and 55 degrees F.) and pleasant summers (average temperatures between 61 and 63 degrees F.). Table G-1, Appendix G, shows a summary of San Francisco's temperature based on an average of 1941-76 records. The yearly precipitation normally is about 21 inches; however, in the last two years,[1] rainfall approximately half of normal has resulted in drought conditions. On the average, 84% of the total annual precipitation occurs from November through March.[2] Table G-2, Appendix G, shows the 1974-76 monthly rainfall record, as well as normal monthly rainfall based on an average of 1941-76 records.

Topographic variability results in climatic differences within the City, largely depending on geographical relationships to the Pacific Ocean and the Bay. Low hills, the influence of large water bodies and influx of marine air determine the wind patterns of the area.

Fog and low clouds nights and mornings are characteristic of San Francisco's climate. The YBC area experiences foggy conditions less frequently than parts of the City near the Ocean and the Golden Gate. The sun shines an average of 66% of the daylight hours in San Francisco[3] (the percentage is higher in YBC).

Certain generalizations about YBC-area winds can be made on the basis of information presented or referred to in Appendix G (Tables G-3 through G-5). The most frequent wind directions are west to northwest. (Winds are identified by the direction from which they come. A west wind flows from west to east.) The west to northwest winds occur about 55% of the time--identifiable wind directions (non-calm conditions) occur about 75% of the time. Winds from all eight main compass points are experienced in January, February, March, November and December. In other months, most of the wind directions are represented, with exceptions: in April

and May, little or no NE, E, SE and N winds occur; in the summer months of June, July and August no or practically no N, NE, E, SE, or S winds occur; in September, no E, SE and practically no N winds occur; and in October, no E winds occur.

In general, the air is calmer during the nighttime hours, windier in the late afternoon. The incidence of stagnant or light-variable (no particular wind direction) conditions is less at 4:00 p.m. than at other times of the day. Table G-5 in Appendix G shows that in June, July and August there were no occurrences of light-variable conditions in four years of record for the 4:00 p.m. period. Overall, calm or light-variable conditions occur about 25% of the time.

LOCAL CLIMATE AND PEDESTRIAN COMFORT

The elements of climate which affect comfort are temperature, humidity, sunshine, precipitation and wind. Their relative importance varies with the geographical location and the characteristics of local climate.

Existing structures in the YBC area are generally not over ten stories high. The interaction of local wind patterns with high-rise structures is complex; there is no evidence that existing structures have created particularly gusty conditions in their vicinities. The dominant factors in existing wind patterns are the open central blocks.[4]

Comfort of pedestrians is affected by temperature, wind, precipitation, and blowing dust. At low temperatures, the so-called "comfort index" is a composite of temperature and wind speed. Higher summer wind speeds cause wind-induced discomfort to be greatest in the summer months. Summer fog also causes some discomfort (chilling) to pedestrians. Visitors find the summer months (July and August) less comfortable than expected, because the temperatures are lower than those elsewhere in the United States, and wind speeds are higher.[5] Fall in San Francisco generally brings lower wind speeds and higher temperatures. Afternoons in fall could be expected to bring comfortable conditions to most of the YBC area.

Cool temperatures and rain during winter months result in relatively uncomfortable conditions.[6] If no rain or storm conditions were occurring, the generally low wind speeds of winter[7] would lower the frequency of discomfort in the area. Spring afternoons in San Francisco are often windy, with the result that open or shady portions of YBC are uncomfortable a good deal of the time.

AIR QUALITY IN SAN FRANCISCO - EXISTING 1977

Air quality in the San Francisco area is largely determined and influenced by the interplay of topography, air flows (wind speed and direction) and temperature (e.g., sunlight, and temperature inversions) acting on pollutant emissions produced by stationary and mobile sources.

San Francisco's air quality is, in general, the highest for all developed portions of the Bay Area. The City's predominantly westerly and northwesterly winds tend to carry pollutants to other parts of the Bay Area, chiefly east and south. Much of the City is generally upwind from major sources, such as industrial areas, airports, freeways, and other urban areas. Light-variable (calm) wind situations, which occur about 25% of the time on an annual basis, lead to stagnation in the airshed, most commonly in the fall and winter months. At such times, the potential exists for the entire Bay Area to experience high concentrations of pollutants. However, San Francisco generally is more a contributor to its own air-quality problems and those in other parts of the Bay Area than a recipient of pollutants from other areas. Thus, air quality is both a local and regional problem.

Pollutant levels depend directly on amounts emitted. Atmospheric circulation and wind patterns modify this relationship because they determine the rate of dispersion of contaminants. For example, higher average wind speeds may dilute the emissions of a specific contaminant so that measured air quality levels are lower than would have occurred with light winds. On the other hand, (temperature) inversions increase pollutant concentrations because they limit vertical dilution for emitted contaminants. ("Inversion" is the phenomenon of a layer of warm air over

cooler air below, in which pollutants cannot disperse through the warm layer and are in effect trapped. Under non-inversion conditions, temperature drops continuously as altitude increases.)

Pollutant Levels

● Table 24 is an air pollutant summary for San Francisco based on measurements taken at the Bay Area Air Pollution Control District (BAAPCD) monitoring station at 939 Ellis Street, the closest San Francisco monitoring station. Data are available also from the San Francisco East monitoring station at 900 23rd St., sometimes known as the "Potrero" station. The table shows the major contaminants and the number of days regulatory standards (Table 25) were exceeded, as well as the maximum concentrations for applicable averaging times during the period 1974-76. This station is located on the roof of the nine-story building. While measurements there give a picture of daily, seasonal and annual trends, as related to meteorology, it is not clear how well a given measurement or a series of measurements represent conditions at street level in the vicinity of the station, much less elsewhere in the City.

Carbon Monoxide (CO)

● Over 90% of CO is emitted from vehicular sources. These tail-pipe level emissions are particularly sensitive to low-level radiation inversions, resulting in daily and seasonal variations. (Radiation inversions are one class of (temperature) inversions; they result when the earth radiates its heat to the night sky, thus cooling itself and the air near the surface.) Table 24 indicates that for the periods shown, one-hour Federal standards for CO were not exceeded, and the eight-hour standard of nine parts per million (ppm) was exceeded an average of three days per year at 939 Ellis St. (inclusion of Potrero CO experience for 1976 would have added three more days over standard). Table 26 (page 166), which provides a comparison of San Francisco with other Bay Area monitoring stations for 1976, shows that San Francisco (including Potrero station) is equivalent to other developed portions of the Central Bay Area with respect to carbon monoxide.

● Additional CO data appear in The 1977 Air Quality Maintenance Plan, Technical Memo #3, prepared by the regional Environmental Management Task Force (EMTF--a joint technical and planning staff made up of personnel from the Association of Bay Area Governments (ABAG), Bay Area Air Pollution Control District (BAAPCD), and Metropolitan Transportation Commission (MTC)--See "AIR QUALITY MANAGEMENT", following). This document points out that in the past six years there have been no CO excesses in the Bay Area from March through August. Over 80% of CO levels in excess of standards occur in November, December and January.

On a daily basis, over 90% of the eight-hour excesses occur between 4 p.m. and 2 a.m., with an intense, short maximum from 7 to 9 a.m. followed by low-levels from 10 a.m. to 4 p.m. As the winter season formation of low-level radiation inversions corresponds to the evening traffic maximum, the build-up of CO levels occurs then. There is also a day-of-the-week factor, with the greatest frequency of excesses or of levels approaching standards occurring on Friday, the maximum vehicle use day.

Nitrogen Dioxide (NO_2)

NO_2 develops in the atmosphere from nitric oxide (NO), emitted by motor vehicles. NO_2 is involved in photochemical smog formation and causes brown discoloration of the air. Table 26 shows that San Francisco is near average in the Bay Area with respect to nitrogen dioxide.

TABLE 24

SAN FRANCISCO POLLUTANT SUMMARY (1974-1976)*

Station: B.A.A.P.C.D., 939 Ellis Street, San Francisco, California

	1974			1975			1976		
Oxidant	Max 1-hr Conc (ppm)		Days >0.08 ppm	Max 1-hr Conc (ppm)		Days >0.08 ppm	Max 1-hr Conc (ppm)		Days >0.08 ppm
	0.11		1.	0.05		0	0.13		2.
Carbon Monoxide (CO)	Max 1-hr Conc (ppm)	Max 8-hr Conc (ppm)	Days >9 ppm (8-hr std)	Max 1-hr Conc (ppm)	Max 8-hr Conc (ppm)	Days >9 ppm (8-hr std)	Max 1-hr Conc (ppm)	Max 8-hr Conc (ppm)	Days >9 ppm (8-hr std)
	15.	9.9	2.	31.	12.9	3.	22.	11.	4.
Nitrogen Dioxide (NO_2)	Max 1-hr Conc (ppm)		Days > 0.25 ppm	Max 1-hr Conc (ppm)		Days >0.25 ppm	Max 1-hr Conc (ppm)		Days >0.25 ppm
	0.16		0	0.23		0	0.25		1.
Sulfur Dioxide (SO_2)	Max 24-hr Conc (ppm)		No. of Observed Days** >0.10 ppm	Max 24-hr Conc (ppm)		No. of Observed Days** >0.04 ppm	Max 24-hr Conc (ppm)		No. of Observed Days** > 0.04 ppm
	0.070		0	0.042		2.	0.053		2.
Suspended Particulates	Max 24-hr Conc (ug/m^3)	Annual Geom Mean	No. of Observed Days >100 ug/m^3 (24-hr)	Max 24-hr Conc (ug/m^3)	Annual Geom Mean	No. of Observed Days >100 ug/m^3 (24-hr)	Max 24-hr Conc (ug/m^3)	Annual Geom Mean	No. of Observed Days >100 ug/m^3 (24-hr)
	154.	57. ug/m^3	7.	113.	49.	3.	136.	51.	8.

FOOTNOTES FOR TABLE 24

ppm = parts per million
ug/m3 = micrograms per cubic meter
= greater than (exceeding)
geometric mean - a type of average: The "nth" root of the product of "n" measurements.

NOTE: Neither the state suspended particulate standard of 60 ug/m^3 (annual geometric mean) nor the federal one-hour carbon monoxide standard of 35 ppm was exceeded during the period shown.

*Source: Bay Area Air Pollution Control District, Contaminant and Weather Summaries, for individual months, 1974, 1975, 1976.
**The state 24-hour sulfur dioxide standard of 0.04 ppm was changed to 0.10 ppm from September 1974 through June 1975 at which time it again became 0.04 ppm. Recently (July 1977) the SO_2 standard was again changed and is now 0.05 ppm. Under the new standard the number of observed days during 1976 in which the SO_2 standard was exceeded would be one instead of two as shown under the 0.04 ppm standard.

TABLE 25

APPLICABLE FEDERAL OR STATE STANDARDS

Oxidant (OX):

0.08 ppm for 1 hour (F)*

Carbon Monoxide (CO):

35 ppm for 1 hour
9 ppm for 8 hours (F)
10 ppm for 12 hours (S)

Nitrogen Dioxide (NO_2):

.25 ppm for 1 hour (S)
.05 ppm annual average (F)

Sulfur Dioxide (SO_2):

0.50 ppm for 1 hour
0.04 ppm for 24 hours except
0.10 ppm for 24 hours September 1974 through June 1975
0.05 ppm for 24 hours; new state standard - July 1977 (S)**

Suspended Particulates (SP):

100 micrograms/cubic meter for 24 hours
60 micrograms/cubic meter annual geometric mean (S)

*State (S) or Federal (F)
**Such an occurrence must be simultaneous with either 1) an excess of the State oxidant standard of 0.10 ppm averaged over 1-hour, or 2) an excess of the State particulate standard of 100 ug/m^3 averaged over 24-hours.

TABLE 26

NUMBER OF DAYS SELECTED POLLUTANTS EXCEEDED DISTRICT STANDARDS*, 1976

District Monitoring Station	Pollutant				
	Oxidant	Carbon Monoxide	Nitrogen Dioxide	Sulfur Dioxide***	Suspended Particulate***
San Francisco (939 Ellis St.)	2	4	1	2	8
Oakland	6	7	N.M.**	N.M.	N.M.
San Rafael	5	7	0	0	6
Redwood City	16	10	0	0	12
San Jose	32	61	3	0	16
Pittsburg	29	0	0	0	13
Fremont	21	1	2	0	17
Livermore	29	0	0	0	38

*See Table 25 for applicable standards.
** No measurements shown in the cited source. ARB measurements are available for NO_2.
***Number of observed days exceeding standards. Measurements were made every third day (1, 4, 7 . . .).

Source: B.A.A.P.C.D., Contaminant and Weather Summaries, 1976.

Sulfur Dioxide (SO_2)

Table 26 shows that in 1976 San Francisco was the only listed Bay Area station in which the 24-hour state standard of 0.04 ppm was exceeded. SO_2 is produced primarily by stationary sources, such as refineries and other industries, power plants and other concentrated combustion operations. No major point sources listed in the BAAPCD Emission Inventory Summary for Base Year 1975 are located in or near San Francisco; thus, there is no way to account locally for the SO_2 levels.

However, northeast wind patterns occurring primarily in December and January can transport SO_2 emissions to San Francisco from point sources (such as refineries) located in the Richmond/Crockett area.[8]

Suspended Particulates

Tables 24 and 26 show that suspended particulate is the pollutant whose levels most often exceed standards in San Francisco and that this occurs less often than the average of the other Bay Area stations listed.

Oxidant

Photochemical oxidant is the contaminant of most concern in California, because of its effects on people and on vegetation, and because climatic conditions in California air basins and dependence on the automobile maximize its production. It has been continuously monitored for 15 years by BAAPCD. As the formation of oxidant is weather-dependent, BAAPCD has instituted a "trend study" technique to remove the primary weather factors (temperature and inversion height) and compare the oxidant levels for days when conditions favor its formation. Figure G-1 in Appendix G shows the trend of average high-hour oxidant concentrations for days with comparable temperature and inversion conditions (April through October, 1962-1976). After peaking in 1965, the oxidant levels have shown a downward trend for the past 11 years, despite annual weather-induced fluctuations. San Francisco has experienced this decline and in recent years (1972-76) has reported the lowest levels for all Bay Area stations. Table 26 shows also that for 1976, San Francisco was the cleanest location among the listed stations with respect to oxidant violations; the oxidant standard was exceeded on two occasions in San Francisco, as compared to 5-32 for the other listed cities. Two Bay Area locations had fewer violations of the oxidant standard in 1976; they were Kentfield and Santa Rosa, with one violation each.

HUD Isopleths

A more-localized picture of selected pollutant levels in the general vicinity of the YBC area is available from the 1977 Bay Area Pollutant

Isopleth Maps and Supplementary Report, prepared by URS Research Company for HUD and the U.S. Army Corps of Engineers. Isopleths are lines (contours) drawn on maps, connecting points of equal pollutant concentrations. A complete copy of the HUD isopleths and supporting documents is on file with the Department of City Planning. A description appears in Appendix G.

The annual maximum eight-hour concentrations of CO shown on the maps (for year 1973) for the YBC area range from 11 ppm to 14 ppm. These values exceed the eight-hour Federal standard of 9 ppm, which was exceeded on three days in 1973. The corresponding one-hour annual maximum concentration (1973 isopleth) was 18 ppm, as compared to the Federal one-hour standard of 35 ppm.

On the maps the annual geometric mean concentrations for suspended particulate range from 50 to 60 ug/m^3. These values approach or are at the California standard of 60 ug/m^3. The maximum annual 24-hour concentration is shown on the maps to range from 181 to 218 ug/m^3, as compared to the California standard of 100 ug/m^3. The values expressed in the isopleths are higher than the BAAPCD monitoring station recorded values shown in Table 24. As the isopleths were modeled with 1973 emission data, this may account for higher modeled values; current actual values are probably lower, because of gradual declines in emission patterns. Variable meteorological conditions will also cause year-to-year variations in air quality. Conversely, as noted earlier, the BAAPCD station values, measured nine stories above the street, may not represent street-level concentrations. Other limitations of the model are discussed in Appendix G.

AIR QUALITY MANAGEMENT

On June 13, 1974, the California Air Resources Board (ARB), the state agency responsible for air quality management, designated the nine counties of the San Francisco Bay Area Air Basin as an Air Quality Maintenance Area for particulate matter, oxidants and sulfur dioxide. An air quality maintenance area (AQMA) is an area which either: a) currently

exceeds one or more national air quality standards and is not expected to achieve the national standard by 1980 or b) currently meets all national air quality standards but is expected to exceed one or more standards by 1985. San Francisco is in Category "a".

● Since the Bay Area was designated as an AQMA, the Environmental Management Task Force (EMTF) has begun development of an Air Quality Maintenance Plan (AQMP). The goals of the plan are the attainment and maintenance of State and Federal air quality standards as effectively as possible through the development of a series of alternative control strategies. Each strategy developed will consist of direct emission controls and indirect land use and transportation-related measures. The differences among the strategies will be the degree of emphasis placed on each area of possible control. A preliminary AQMP for the Bay Area was completed by the EMTF in December, 1977, as part of the regional environmental management plan. Public hearings on the draft AQMP were held in January and February, 1978. The AQMA designation for SO_2 will probably be dropped, and a designation for CO will probably be added (see Comment No. 120). The relationship between further YBC development and the AQMP is presented in Section VII.G., pp. 482 and 485-488.

EMISSION INVENTORY

Emission sources are divided into two main categories: stationary sources and mobile sources.

Table G-6, Appendix G (from BAAPCD Emissions Inventory, Summary Report 1976) shows the annual average emissions in San Francisco for 1975. In San Francisco the major mobile sources are automobiles and light-duty trucks. Major stationary source emissions are attributable to the combustion of fuels primarily associated with heating/cooling and power generation (Hunter's Point and Potrero PG&E plants), with some contribution from light-industrial uses.

Emissions in YBC are mainly the result of vehicular traffic. No major stationary sources are located in or upwind of the area.[9] Most of the nearby major sources are located downwind (south) of the site.[10]

FOOTNOTES

[1]July 1975-June 1977, inclusive.

[2]U.S. Department of Commerce, 1973, National Oceanographic and Atmospheric Administration, Local Climatological Data, Annual Summary With Comparative Data, San Francisco, CA.

[3]U.S. Department of Commerce, 1976, National Oceanographic and Atmospheric Administration, Local Climatological Data, Annual Summary with Comparative Data, Narrative Climatological Summary, San Francisco, CA.

[4]These statements and the remainder of this subsection are based on San Francisco Department of City Planning November 1974, EIR EE74.71 on Home Office Building for State Compensation Insurance Fund, 9th and Market Streets, a nearby and similar urban area.

[5]See Tables G-1, G-4, and G-5, Appendix G.

[6]See Tables G-1 and G-2, Appendix G.

[7]See Table G-4, Appendix G.

[8]Sandberg, J., Chief, Meteorology and Data Analysis Section, Technical Services Division, BAAPCD, telephone communications July 20, 1977 and November 18, 1977, plus BAAPCD Contaminant and Weather Summaries for 1976. SO_2 exceedances occurred on two observed days in San Francisco during 1976; on January 16, an SO_2 exceedance was recorded at the San Francisco station, associated with a strong low-level inversion and airflow from the northeast across major industrial areas near Crockett and Richmond. Similarly, an SO_2 exceedance was recorded on December 1, 1976 with a northeast wind from Contra Costa County and stagnant air conditions. No SO_2 exceedances were recorded at the Richmond station; possibly SO_2 released from stacks did not reach the ground-level station there in quantity, but was channeled over the Bay to San Francisco.

[9]Minor stationary sources are listed in Table G-7, Appendix G.

[10]J. Moorad, Field Inspector, BAAPCD, telephone communication, July 24, 1977.

H. NOISE

To quantify the existing YBC noise environment, a noise survey was conducted between June 8 and August 8, 1977. (Previous studies done in the area had covered only a few locations.[1]) Twenty-five monitoring sites were selected with emphasis on monitoring the noise environment in the vicinity of existing housing and in the area where future housing development may occur (See Figure 18). Periodic samples were taken at 19 locations during weekday morning, afternoon and evening hours, including peak and off-peak traffic hours. Continuous 24-hour measurements were taken at six sites, covering all days of the week. Additional information about the measurements is presented in Appendix H. This includes times at which measurements were taken, and descriptions of measurement sites.

The L_{10}, L_{50}, and L_{90} decibel (dBA) values for all the measurements have been computed; for the 24-hour measurements, the CNEL and the 24-hour L_{33} have been computed. The decibel (dB) is a logarithmic unit of sound power expressing relative differences in sound levels. The dBA (A-weighted decibel) is a unit of loudness corrected for the variation in response of the typical human ear at commonly encountered noise levels. The L_{dn} is the descriptor established by the U.S. Environmental Protection Agency (EPA) to describe the average day-night level with a weighting applied to noise occurring during the nighttime hours (10:00 p.m. to 7:00 a.m.). The L_{10}, L_{33}, L_{50}, and L_{90} are the levels exceeded 10%, 33%, 50%, and 90% of the time, respectively. The CNEL (Community Noise Equivalent Level) is the 24-hour average level adjusted to an equivalent level with a weighting applied to noise occurring during the evening and nighttime hours to account for the lower tolerance of people during those periods. The CNEL is typically within $\pm$ 1 dBA of the L_{dn} for community noise measurements.

Existing YBC noise is dominated by traffic on local streets. Thus, noise is primarily a local problem. Buses, trucks and motorcycles cause the peak levels; background noise levels are controlled by automobiles. In

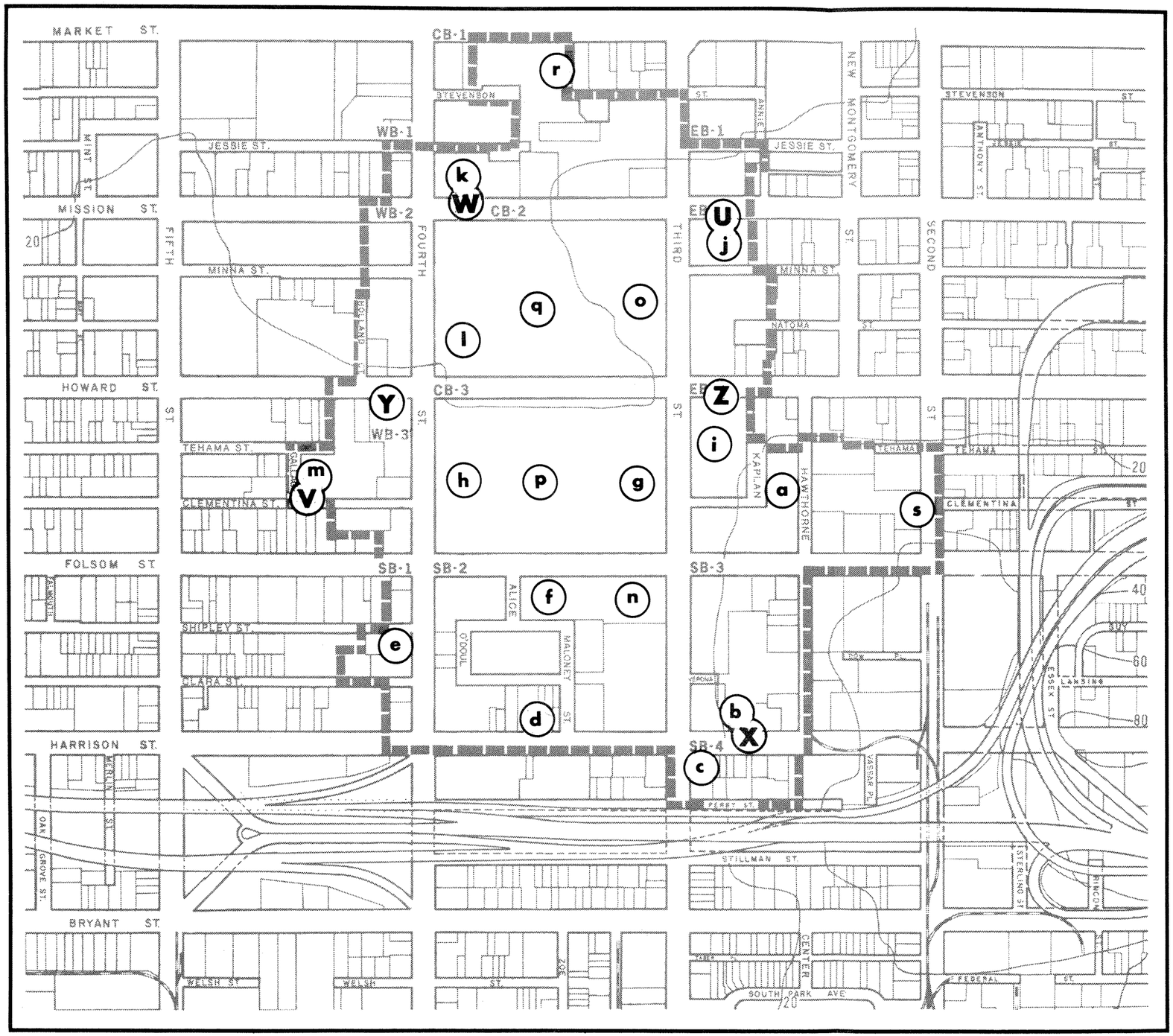
the southeastern portion of YBC, noise from the I-80 freeway is noticeable. Figure 19 (page 175) displays typical levels of the predominant individual noise sources in the YBC area.

The San Francisco Department of Public Works has developed noise zones for the city.[2] These zones are described in terms of minimum L_{10}s and L_{90}s for the daytime and nighttime periods. The City's data show that the YBC area falls within the following zones:

Daytime	Nighttime
L_{10}, 75 dBA	L_{10}, 70 dBA
L_{90}, 60 dBA	L_{90}, 60 dBA

Figures 20 through 23 (pages 177 through 183) show the minimum (for comparison with the City's areawide values) day and night L_{10} and L_{90} values measured at each of the sites during the measurement period. The highest noise levels were recorded adjacent to the most heavily traveled streets: for example, the highest minimum daytime L_{10} was measured at Site U, which is located on the south side of Mission St. between Third and New Montgomery Sts., at curbside. The lowest YBC noise levels occurred along the streets with the least traffic and at those sites most remote from traffic. The lowest minimum daytime L_{10} was measured at Site P, located in the middle of the block bounded by Howard, Folsom, Third and Fourth Sts.

Variations in the day-to-day noise levels were on the order of 1-4 dBA due to the consistent levels of traffic existing in the area. A 10 dBA difference measures a ten-fold difference in sound power, but is perceived as about a two-fold difference by the human ear. The average human ear can barely perceive differences of about 3 dBA. Weekend noise levels tend to be about 4 dBA below weekday levels due to the reduced traffic activity in the area on weekends. The relation of existing noise levels to City and HUD standards for various land uses is discussed in Section VI.H (Impacts), for comparison with future relationships (remaining and proposed uses, future noise levels).



LEGEND

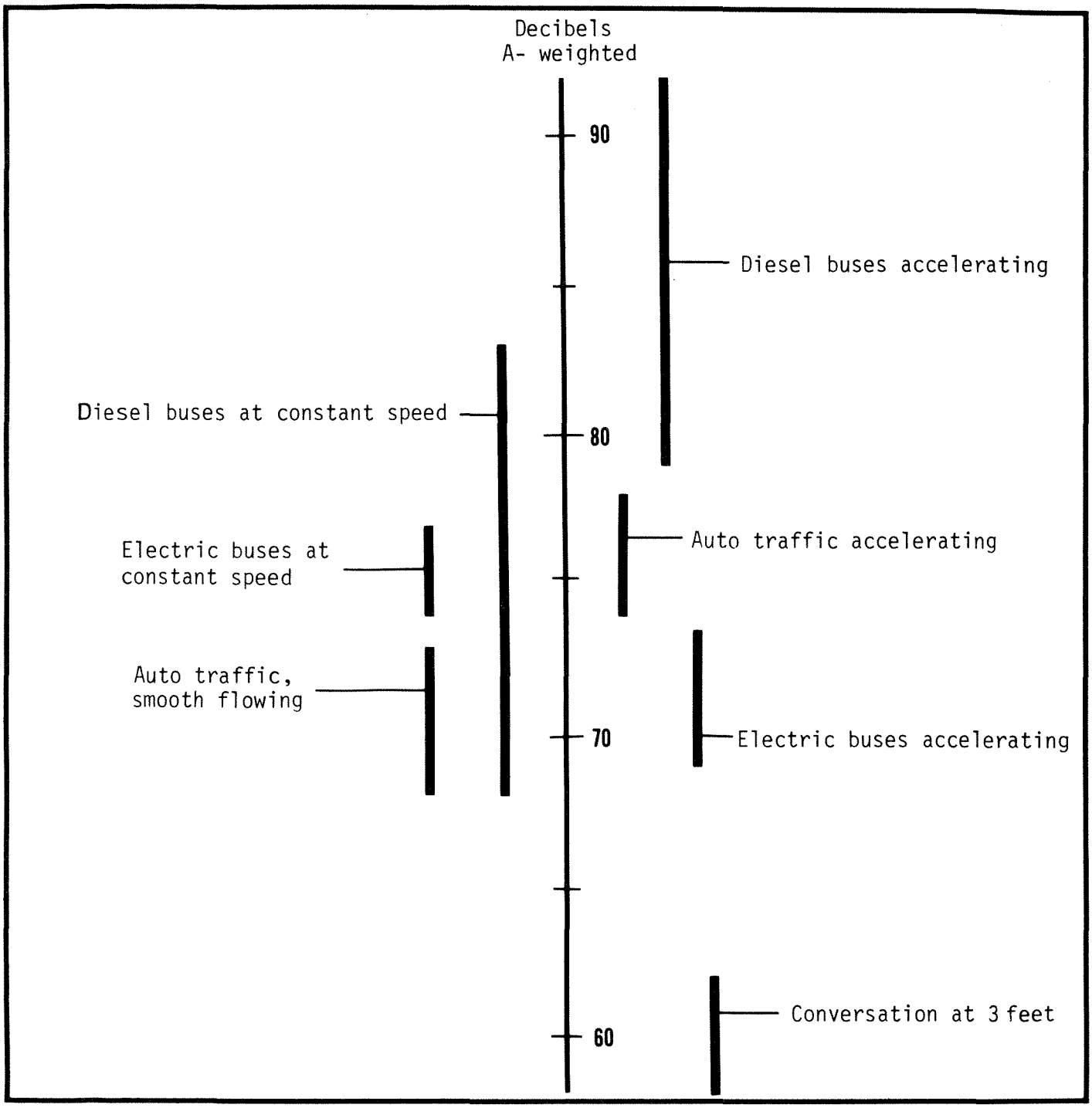
(d) Lower case letter: periodic measurement sites

(Z) Upper case letter: 24 hour measurement sites

0 0.5 Kilometer

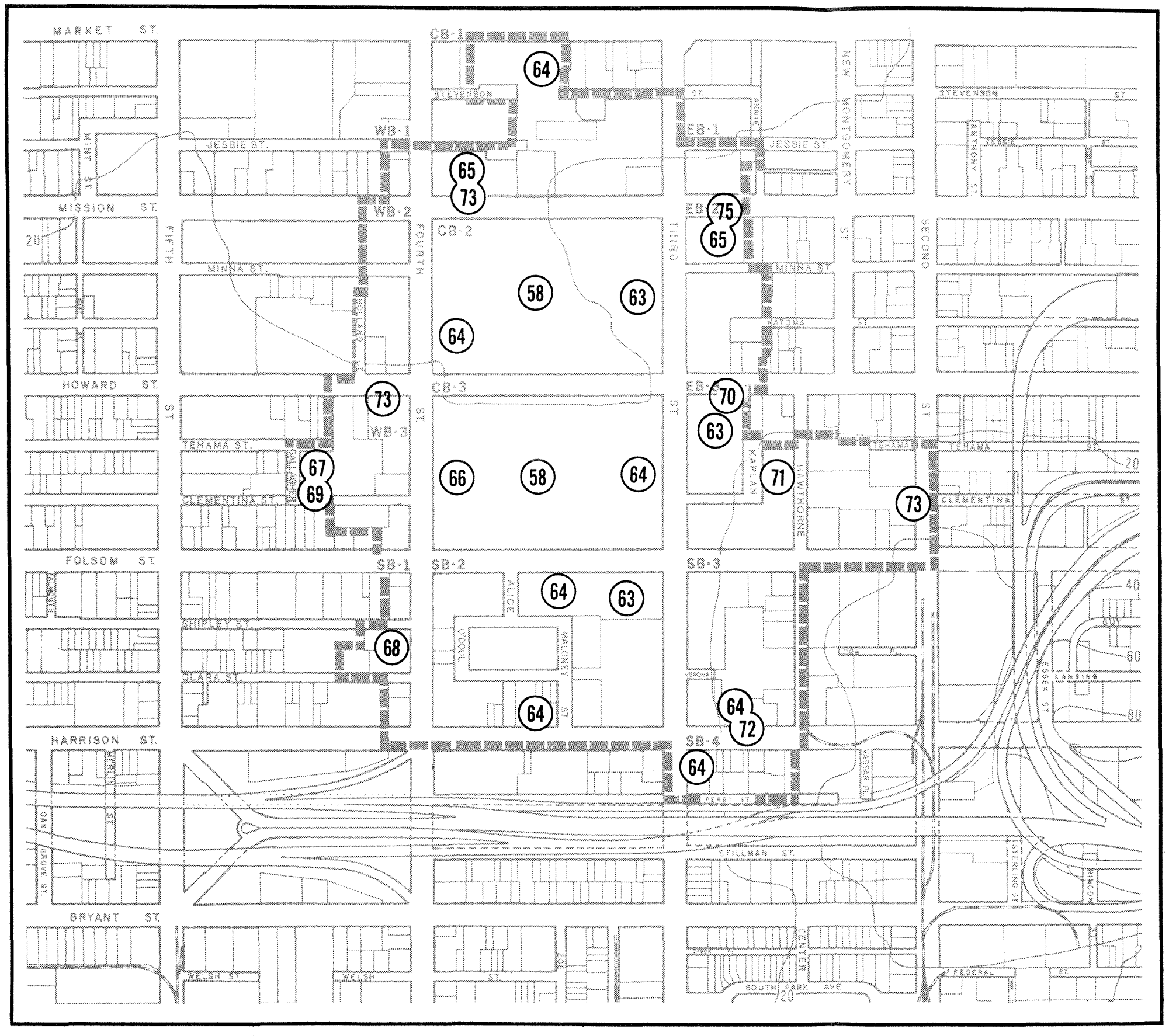
0 1800 Feet

NOISE MEASUREMENT LOCATIONS	18



Typical Levels of Predominant Noise Sources in Yerba Buena Center.
(Measured at 25' from the center line of the near lane);
Conversation level shown for comparison

TYPICAL YBC NOISE LEVELS	19



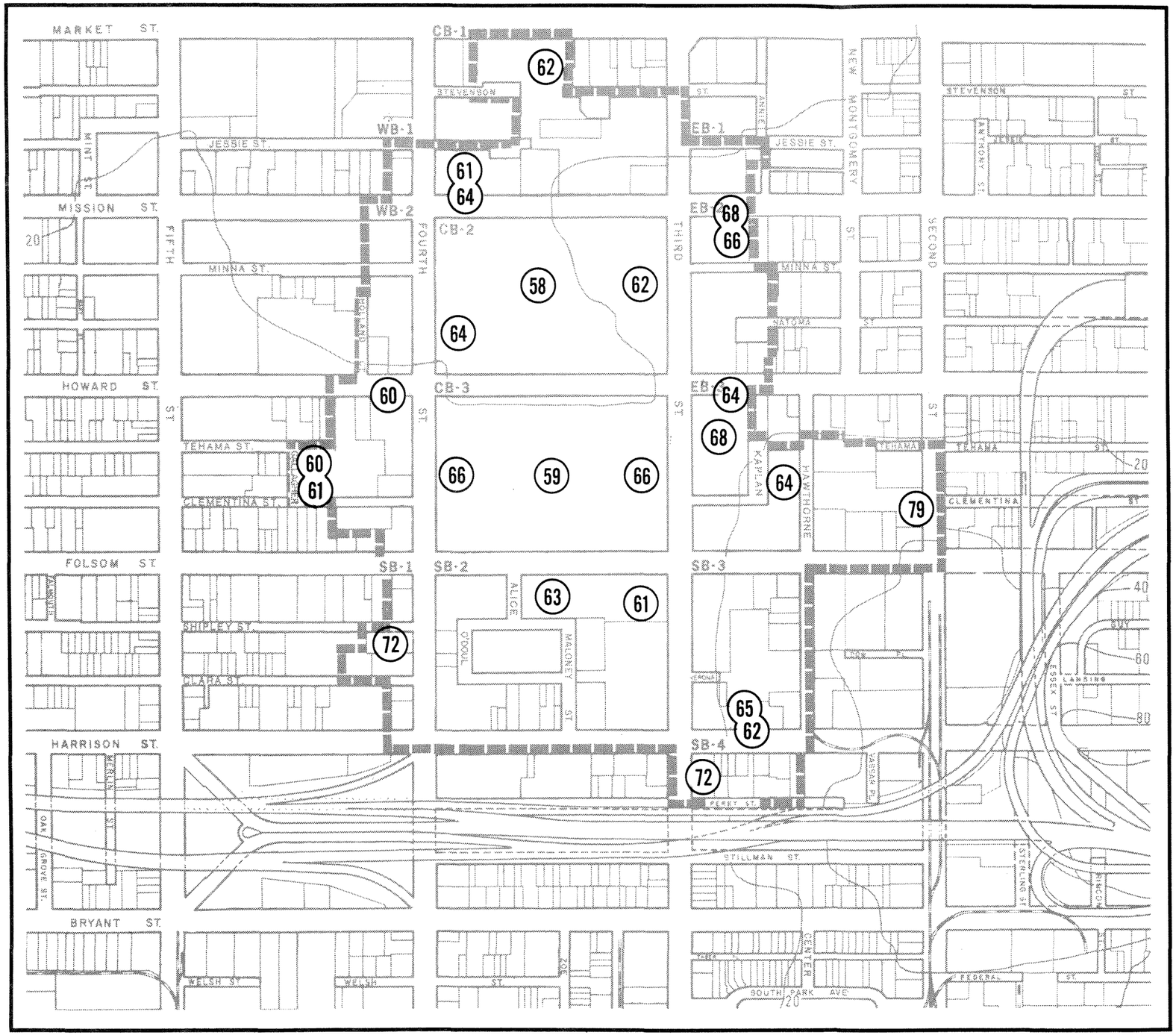
LEGEND

(66) Daytime Minimum L_{10} Levels by Site (dBA)

0 0.5 Kilometer

0 1800 Feet

DAYTIME MINIMUM L_{10} LEVELS	20



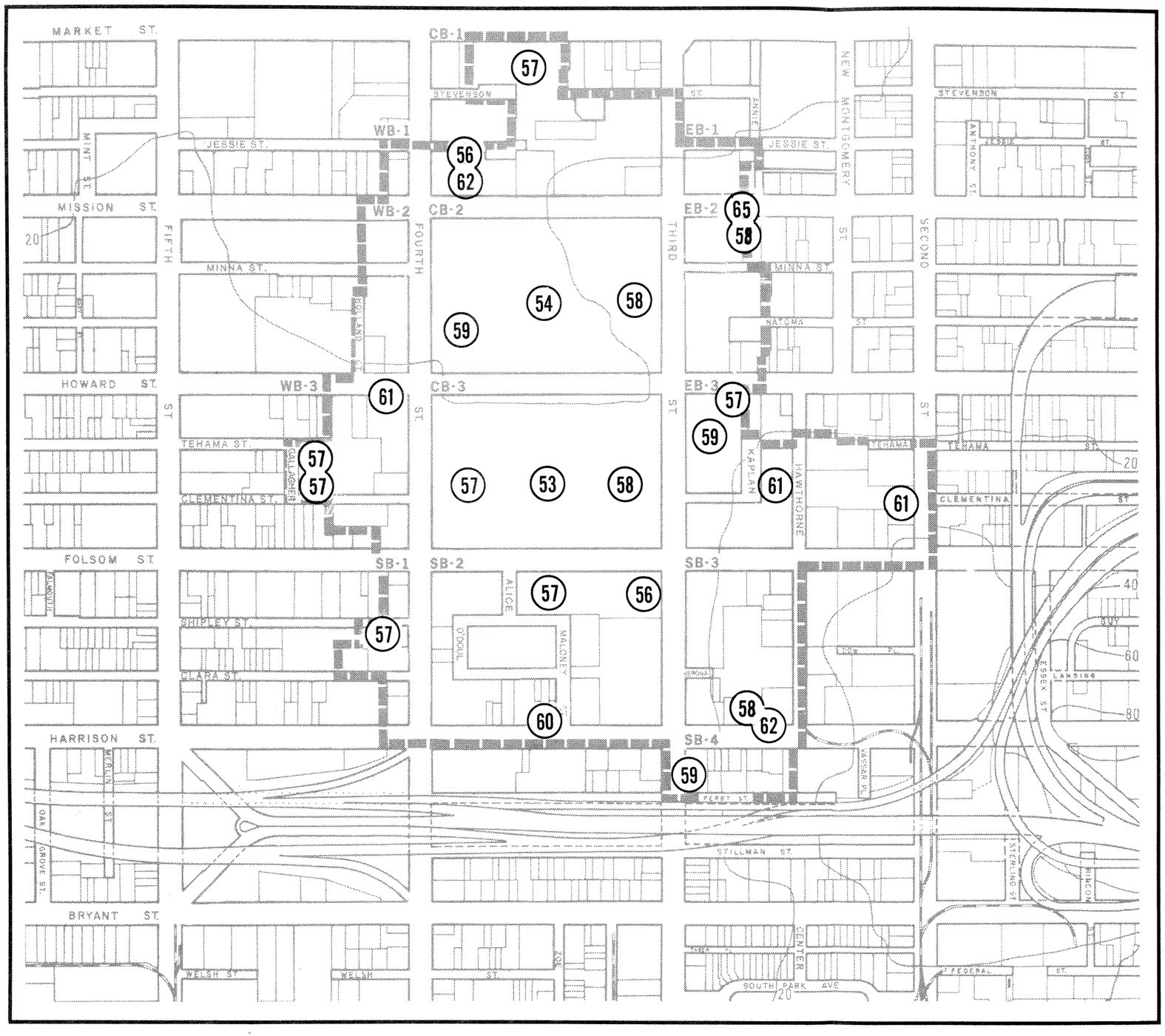
LEGEND

(61) Nighttime Minimum L_{10} Levels by Site (dBA)

0 0.5 Kilometer

0 1800 Feet

NIGHTTIME MINIMUM L_{10} LEVELS	21



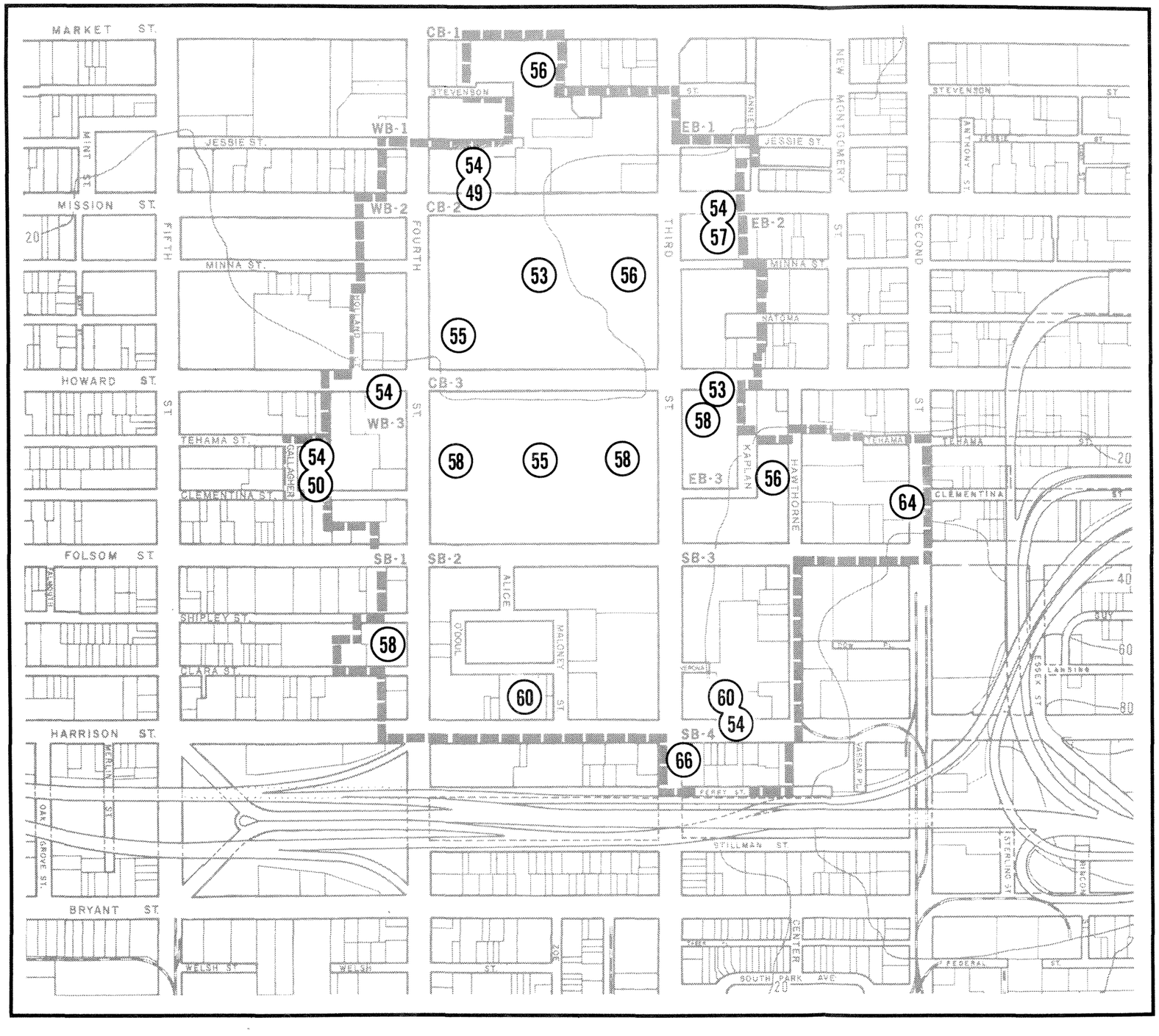
LEGEND

(56) Daytime Minimum L_{90} Levels by Site (dBA)

0 0.5 Kilometer

0 1800 Feet

DAYTIME MINIMUM L_{90} LEVELS	22



LEGEND

(66) Nighttime Minimum L_{90} Levels by Site (dBA)

0 0.5 Kilometer

0 1800 Feet

NIGHTTIME MINIMUM L_{90} LEVELS	23

FOOTNOTES

[1]Arthur D. Little, Inc., URS Research Company, 1973, Yerba Buena Center Public Facilities and Private Development, Draft Environmental Impact Report; U.S. Department of Housing and Urban Development, 1974, Yerba Buena Center Final Environmental Impact Statement.

[2]The noise zone maps are available for inspection at the Department of Public Works, Bureau of Engineering, 45 Hyde Street, Room 222, San Francisco.

I. RESOURCE USE

1. ENERGY RESOURCES

Electricity

Electricity supplies come to San Francisco from a variety of generation facilities, including hydroelectric, geothermal, fossil fuel and nuclear power plants. Most of the electricity comes from fossil-fuel-fired generation facilities, most of which use natural gas as a fuel. San Francisco generates hydro-electricity at its Hetch Hetchy reservoir. This is distributed by Pacific Gas and Electric Company (PG&E). This electricity is available at reduced rates for municipal purposes; excess is sold to other customers. Additional municipal use would imply that these other customers would have to be served from new resources. Within the near future, additional demands for electricity will probably be met primarily by the burning of more fossil fuel and secondarily from new geothermal sources and from new nuclear power plants (e.g., Diablo Canyon). Demand for electricity for existing structures is shown in Table 27. Demand for electricity from street lights and electric buses was not estimated.

Natural Gas

Natural gas supplies come to San Francisco from gas-producing wells in Texas and Canada via transmission pipelines and the Pacific Gas and Electric Company's (PG&E) distribution system. The availability of natural gas from these sources is limited both by contract and (ultimately) by the limited amount of natural gas in the wells themselves. Thus, recent rulings of the State Public Utilities Commission have specified that only 50,000 cubic feet of natural gas per day (for an average day during the peak demand month) can be made available to any single customer unless it can be demonstrated that no other fuel can meet the need (P.U.C.

TABLE 27

ESTIMATED EXISTING ANNUAL ENERGY CONSUMPTION

	Electric	Natural Gas	Vehicle Energy	Total (BTU)
Direct Energy Use	31.0×10^6 KWH	166×10^6 cu.ft.	4.3×10^6 gal	
	x	x	x	
Conversion Factor (from direct use to "at-source use" (total energy cost))*	10,239 BTU/KWH	1,100 BTU/cu.ft.	215,350 BTU/gal.	
	=	=	=	
Equivalent Energy Use (BTU) (at source)	0.32×10^{12}	0.183×10^{12}	0.926×10^{12}	1.43×10^{12}

*These factors adjust for conversion of units (to BTU--British Thermal Units) and for energy losses in generation, transmission, distribution, maintenance, etc. as specified by the State Energy Commission and CALTRANS,[1] to give the total energy cost, in BTU, of providing the energy used in YBC.

Decision No. 85189, December 2, 1975). Demand for natural gas for existing structures is shown in Table 27.

Steam

Steam was formerly supplied to the area between Howard St. and Market St. from natural-gas-fired boilers in two PG&E steam generation plants. Since the source of this form of energy is natural gas, any additional commitment to provide steam represents an increase in demand for natural gas. There is no demand for steam from existing YBC structures. The recent addition of a new boiler to one of the plants was done to provide back-up capacity for the system and does not provide capacity to serve new customers.

Gasoline and Diesel Fuel

Gasoline and diesel fuel is used on-site and in transit to it by vehicles owned by people who live or work in the area or who park in it (See Table 27).

2. WATER

The San Francisco Water Department, under the control of the San Francisco Public Utilities Commission, provides water to the City of San Francisco and areas of the Peninsula and Alameda County. Water stored in the Hetch Hetchy reservoir system in the Sierra Nevada is brought to Crystal Springs and San Andreas Reservoirs on the Peninsula. The Hetch Hetchy water system pipeline has a delivery capacity of approximately 350 million gallons of water per day (mgd); 300 mgd comes from the reservoir system in the Sierra and 50 mgd is contributed by Bay Area reservoir watersheds.[2]

The storage capacity of the Hetch Hetchy System is 214,000 million gallons (mg); the Alameda County and Peninsula reservoirs have a storage capacity of 78,000 million gallons; the capacity of the Peninsula reservoirs alone is 29,800 million gallons.[3] During years of normal precipitation, the reservoir system would be at 65-67% of capacity during July-August. As a result of two years of drought, as of July 29, 1977 the reservoir system was at 44% of capacity. A mandatory rationing program to reduce water consumption systemwide by 25 percent has been successful. Consumption has been reduced by approximately 40% and the water supply situation is not critical at the present time.[2] At a water consumption rate 25% below normal, the San Francisco Water Department expects to be able to continue to meet the system's demand for water, even if there is no relief from the drought for a third year. The YBC area has shown an estimated 25-30% decrease in consumption.[4]

Over half (68%) of YBC is vacant or used for parking; some of the buildings are also vacant. San Francisco Water Department records show

YBC consumption of 48.1 mg for the year from June 1976 through May 1977 (Refer to Table 28). The average daily demand of 0.13 mg represents 0.6% of the average consumption of 22 mgd from University Mound Reservoir (the YBC local source) and 0.05% of the total system consumption of 276 mgd; it is 0.12% of the 111 mgd used by San Francisco. Peak demand in the YBC area is estimated at 0.21 mgd.[3]

TABLE 28

CURRENT WATER CONSUMPTION BY LAND USE*
YERBA BUENA REDEVELOPMENT AREA

Land Use Category	Floor Space** sq. ft.	Annual Water Consumption mg.	Water Consumption $g/ft^2/year$
Community Service	102,000	.99	10
Office	1,413,000	29.96	21
Retail-Commercial	66,000	2.88	44
Retail-Office	89,000	0.68	8
Light Industrial	169,000	1.83	11
Downtown Support	88,000	1.59	18
Housing***	276 D.U.	10.15	36,800 g/DU/year (100 g/DU/day)
Total Annual Consumption:		48.08	
Average Daily Consumption:		0.132 mgd	

*From records of the San Francisco Water Department (June 1976-May 1977).
**Buildings which are vacant or under construction are not included.
***Clementina Towers only. 15,600 sq. ft. of garden space use included.

FOOTNOTES

[1]M.D. Batham, D.J. Ames, R.D. Smith, and E.C. Shirley, 1976, An Interim Procedure to Evaluate Transportation Energy, CALTRANS, Sacramento CA-DOT-7082-76 (Table 1 and Table 5). ERCDC, 1977, Energy Conservation Standards for Non-Residential Buildings and Staff Report, Energy Resources Conservation and Development Commission, Sacramento. (p. 2-3, Section T20-1474).

[2]J. Leonard, Public Service Director, San Francisco Public Utilities Commission, telephone conversation, August 10, 1977.

[3]San Francisco Public Utilities Commission, 1967, San Francisco Water and Power.

[4]R. Vasconcellos, Acting Manager, Commercial Division, San Francisco Water Department, letter dated August 3, 1977.

J. GEOLOGY AND SEISMOLOGY[1]

TOPOGRAPHY

Elevations in YBC range from about 12 feet above mean sea level (MSL) in the southwestern corner to over 50 feet in SB-3 (see Figure 24). Most of the area slopes gently down to the southwest.

GEOLOGIC MATERIALS

Yerba Buena Center is located in a geologic area in which unconsolidated (loose, non-rocklike) sediments rest upon bedrock (Figure 25, page 195). Bedrock forms the surface material in about ten percent of the project area, in SB-3 and SB-4, which form the southwestern flank of Rincon Hill. The bedrock is Franciscan formation rock, which is a mixture of dark colored muddy sediments, red, green and brown cherts and lava flows of black basalt. In this area of San Francisco the Franciscan formation is predominantly layered medium-grained sandstone and shale with lesser amounts of serpentine and volcanic greenstone. Fresh Franciscan rock is generally an excellent foundation base.[2] Weathered Franciscan rocks vary in stability. Weathering of the bedrock on Rincon Hill produces mostly sandy, silty clay soils.

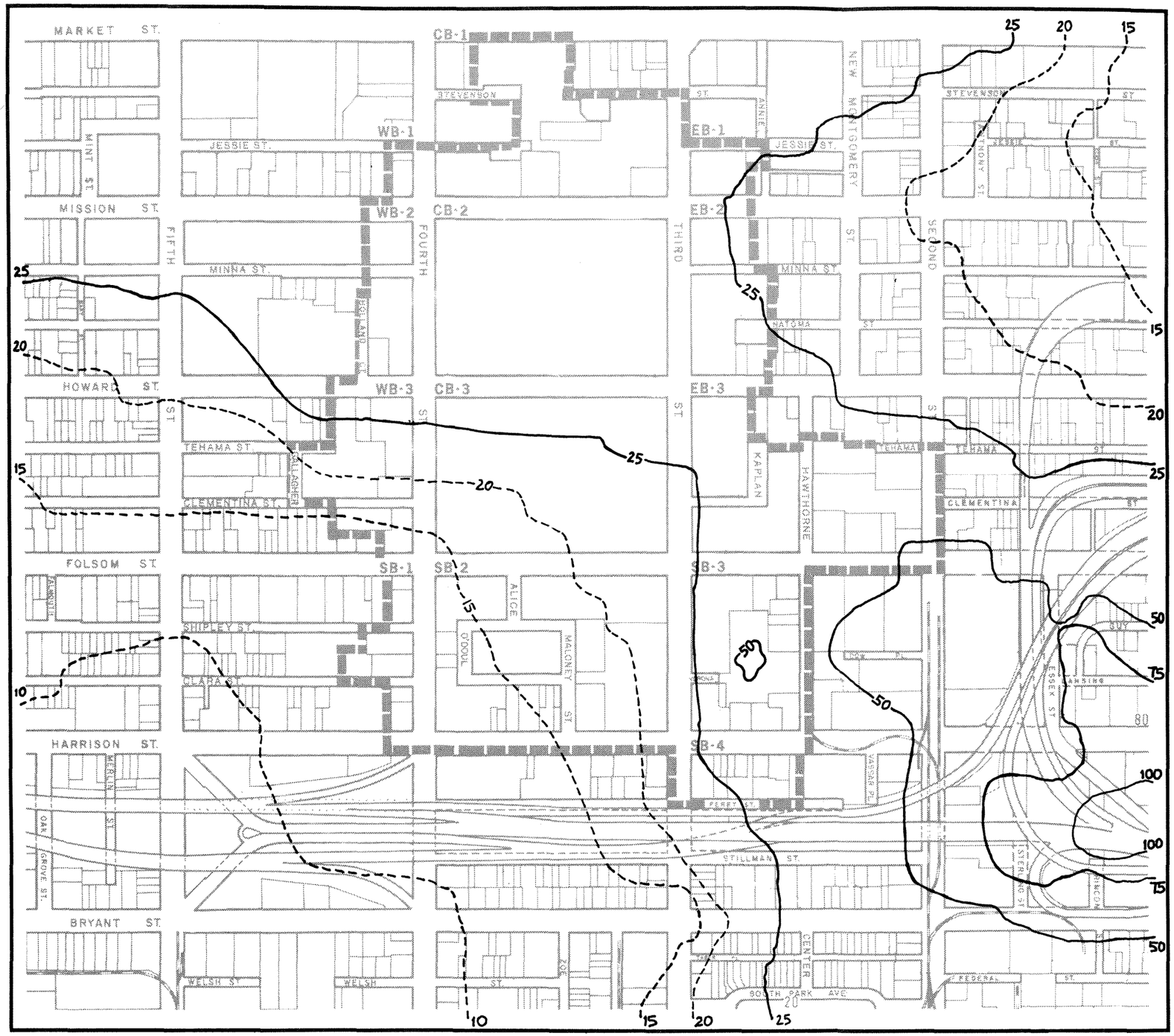
Bedrock lies buried beneath unconsolidated sands and mud in approximately 90 percent of YBC. The standard U.S. Geological Survey symbol for undifferentiated sands and muds of this age is "Qu". Undifferentiated means that the layers are intermixed so that they are difficult to distinguish. The depth to bedrock varies considerably and irregularly but generally increases toward the north to about 270 feet, away from Rincon Hill where bedrock is at the surface (Appendix J). The sediments overlying the bedrock are formed in a series of beds of muds, sand and gravel. The deposits are generally classified as follows (oldest and deepest-lying first): the older bay mud, the Colma Formation, and the younger bay mud. The Colma Formation is predominantly sand and is

the material upon which highrise buildings constructed upon bay sediments are usually founded. The younger bay mud is generally unstable and therefore unsuitable as a foundation base. Graded dune sands form the surface material over most of YBC. The standard U.S. Geological Survey map symbol for dune sand of this age is "Qd".

Two areas in YBC are covered with artificial fill, composed of dune sand, silt, clay, rock waste from excavations, man-made debris, and organic waste. The standard U.S. Geological Survey map symbol for artificial fill is "Qaf". In the eastern portion of the project area, in EB-2 and EB-3, the artificial fill was dumped on low-lying land to a depth of 30 feet (Figure 26, page 197). In the southwestern portion of the area, in SB-1, SB-2 and WB-3, the artificial fill was dumped on tidal marsh (younger bay mud) to a depth of 10 to 20 feet. As the younger bay mud and the artificial fill are unstable, the engineering properties of these surfaces are poor. (See Appendix J for further information on the unconsolidated sediments of the area.)

SEISMOLOGY

No active faults (faults which have a historic record or geomorphic (structural) evidence of movement within the last 10,000 years) are known to exist within the City of San Francisco. A small inactive fault (a fault which geologists regard as incapable of producing seismic movements) is mapped on Rincon Hill to the east of the project area. Several important active fault zones which affect the area include: the San Andreas Fault, about 15 miles west of downtown San Francisco; the Hayward Fault, about 15 miles to the east; and the Sunol-Calaveras Fault, about 30 miles to the east. (See Figure 27, page 199.) Other active faults may exist in the area. Both the San Andreas and the Hayward Faults have a history of major and minor movements (see Appendix J). Both large and small earthquakes can be expected in this region in the future. Within the next 60 to 170 years, (estimates of recurrence intervals vary) at least one earthquake of the magnitude of the 1906 San Francisco earthquake (about 8.3 on the Richter scale of magnitude - a measure of the total energy



LEGEND

——— Contour Interval 25 feet

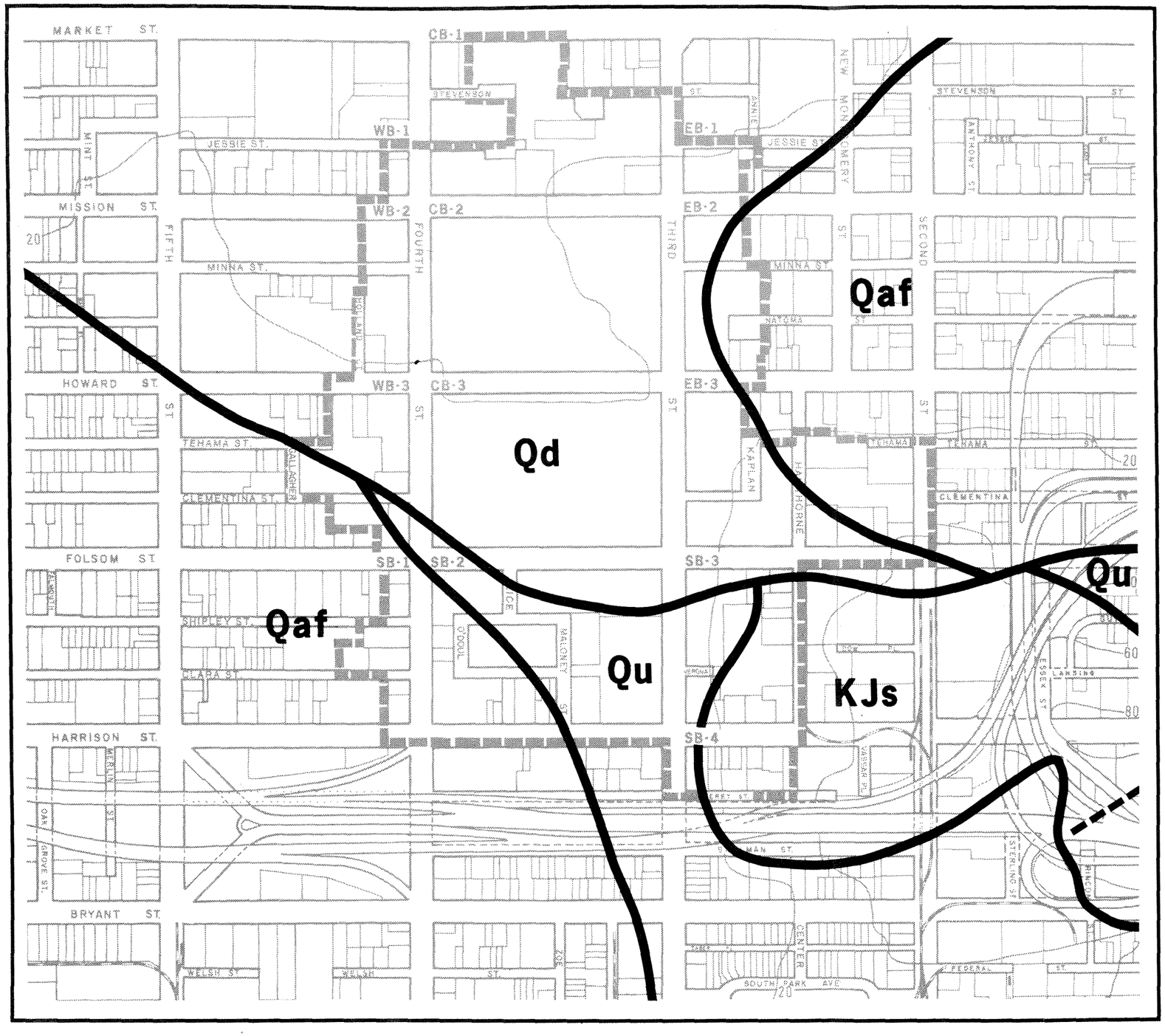
------ Supplementary Contour Interval 5 feet

Source - U.S. Geological Survey 7.5 Minute Topographic Map, 1968
Datum: Mean Sea Level
(for elevations in reference to San Francisco City Datum subtract 8.69 feet)

0 0.5 Kilometer

0 1800 Feet

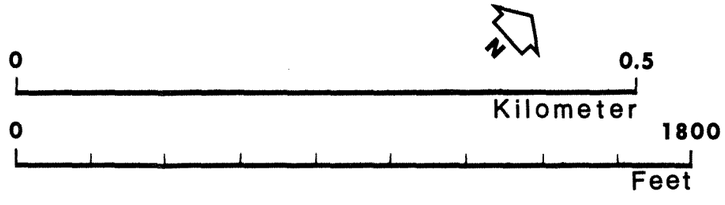
TOPOGRAPHY	24



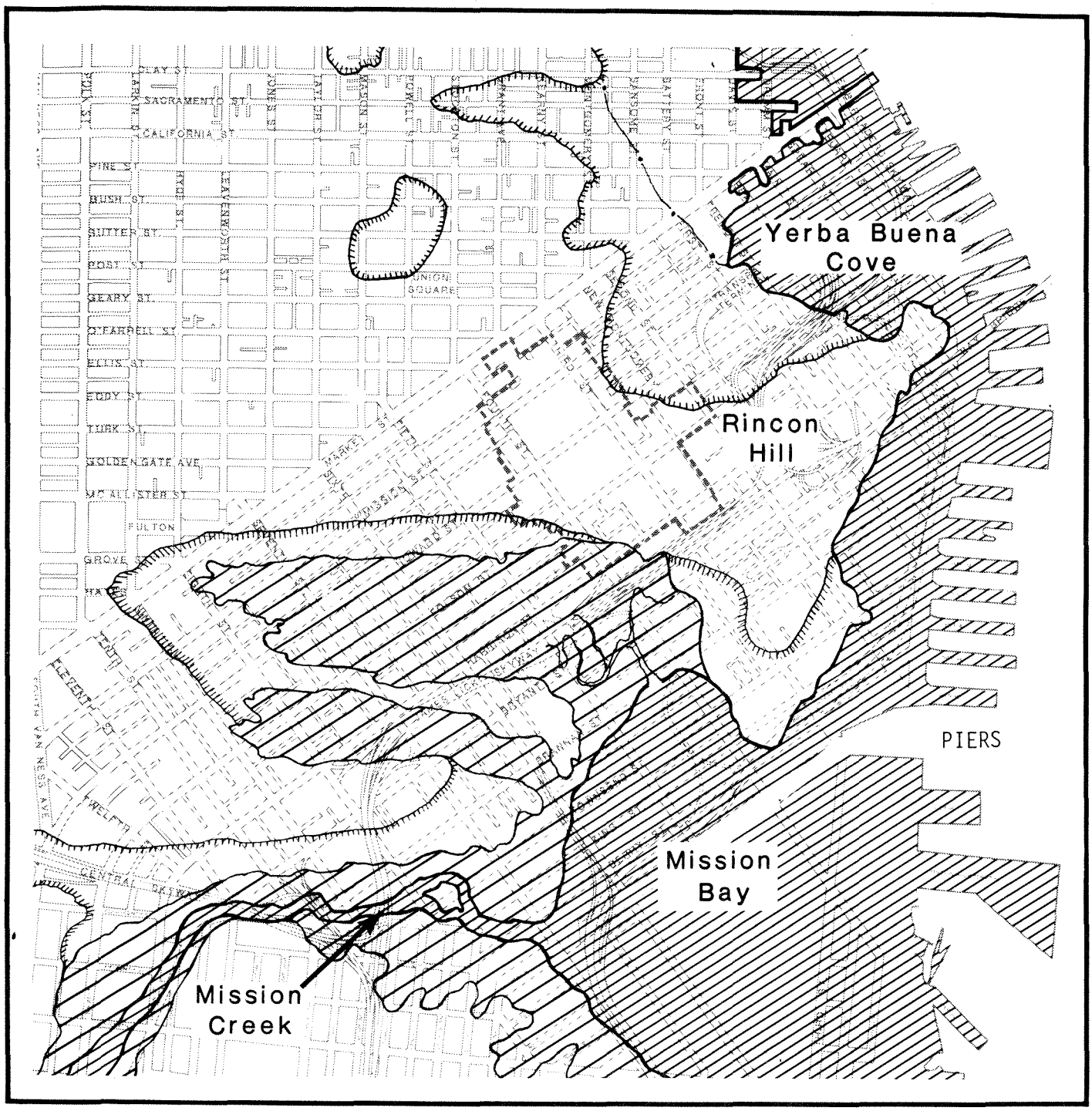
LEGEND

Qaf	Artificial fill (dune sand, including silt, clay, rock and organic waste, man-made debris)
Qd	Dune sand
Qu	Undifferentiated sediments (intermixed sand, silt, and clay; distinct layers difficult to distinguish)
▬ ▬	Inactive fault (a fault which is probably incapable of producing an earthquake and having no record or geomorphic evidence of movement in about the last 11 thousand years)

Source - Schlocker, J., 1974, Geology of the San Francisco North Quadrangle, California, Professional Paper 782, U.S. Geological Survey, Washington, D.C.



GEOLOGY 25



LEGEND

- Former bay & creek, now artificially filled
- Former marsh, now artificially filled
- Limit of artificial fill on land areas
- 1849 Shoreline

0 0.5 Kilometer

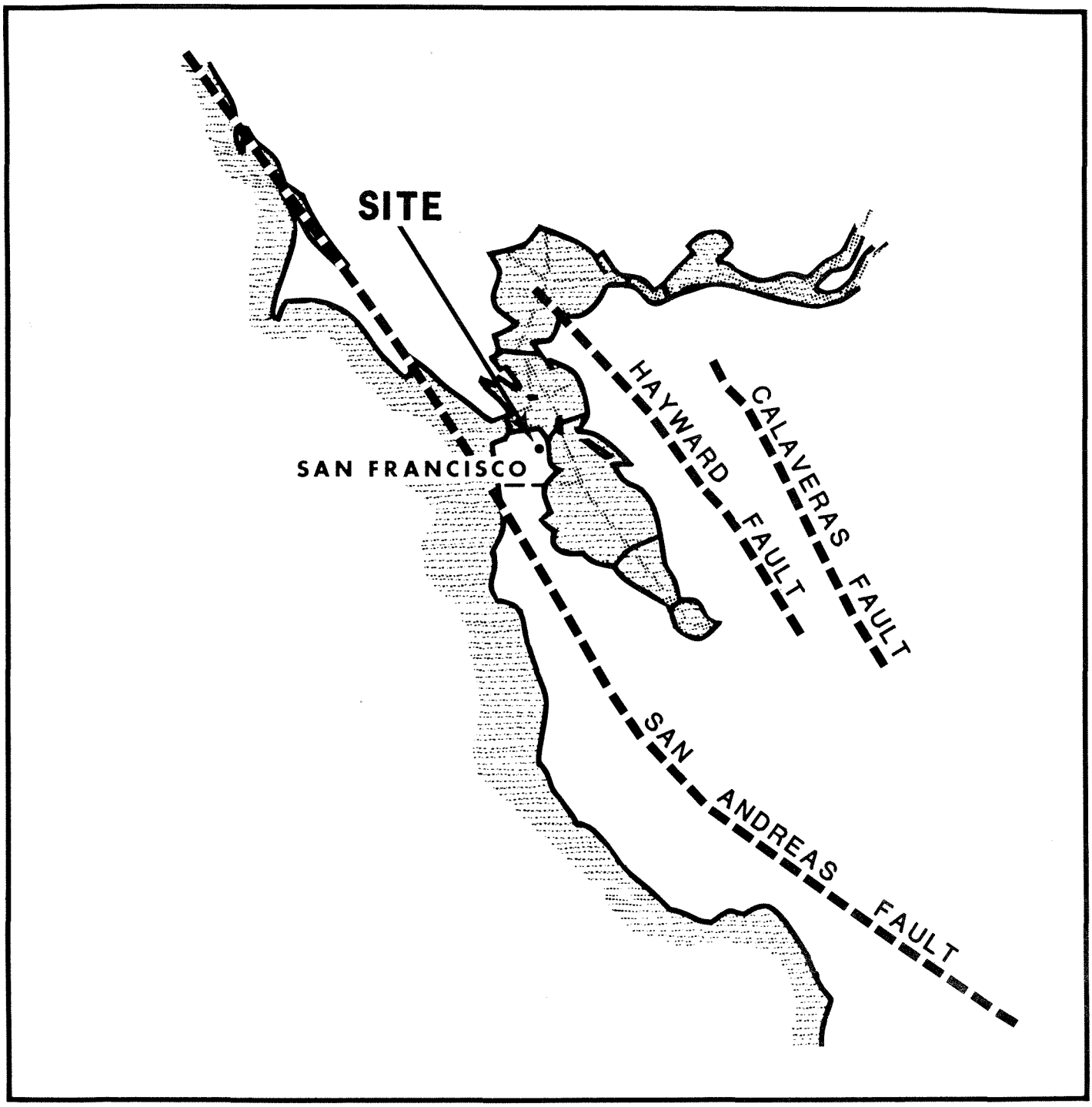
0 1800 Feet

N

SHORELINE OF SAN FRANCISCO IN 1853

26

Source - Schlocker, J., 1974, op. cit.



Source-Schlocker, J., 1974, op. cit.

0 10
Miles

MAJOR ACTIVE FAULTS IN SAN FRANCISCO BAY AREA	27

released by an earthquake), and several earthquakes comparable to the 1957 Daly City earthquake (about 5.3 on the Richter scale of magnitude) can be expected to affect the Yerba Buena Center site.[3&4]

Potential earthquake hazards in YBC include: ground shaking; liquefaction of unconsolidated materials (the transformation of granular material, such as loose wet sand, into a fluid-like state similar to quicksand) with resultant lateral landsliding and bearing capacity failure; and subsidence (sinking of the land surface due to settling of compressible earth materials). The degree of hazard depends upon the location of the earthquake epicenter (the point on the earth's surface directly above the focus of an earthquake) relative to the site, the magnitude and duration of ground-shaking, the nature of the topography, the type of ground material in the area, and the groundwater conditions (which affect landsliding and liquefaction). The importance of the ground material in relation to seismic hazard is stressed in many reports on damage resulting from an earthquake. The key conclusion of the Carnegie Report[5] was that the amount of damage produced by the 1906 earthquake in San Francisco ". . . depended chiefly upon the geological character of the ground. Where the surface was solid rock, the shock produced little damage; whereas upon 'made' land, great violence was manifested. Other conditions, however, exerted a controlling influence." Building construction technique was one such controlling influence. The chief types of material described earlier and their relative stabilities under seismic movement are as follows:

Artificial Fill (Qaf): susceptible to failure, buckling on the ground surface, fissuring, cracking, bending of rails, liquefaction and subsidence[6].

Dune Sand (Qd): In general, a low potential for failure. If the groundwater table is near the surface and the sand is loose, a high potential for liquefaction exists.[7]

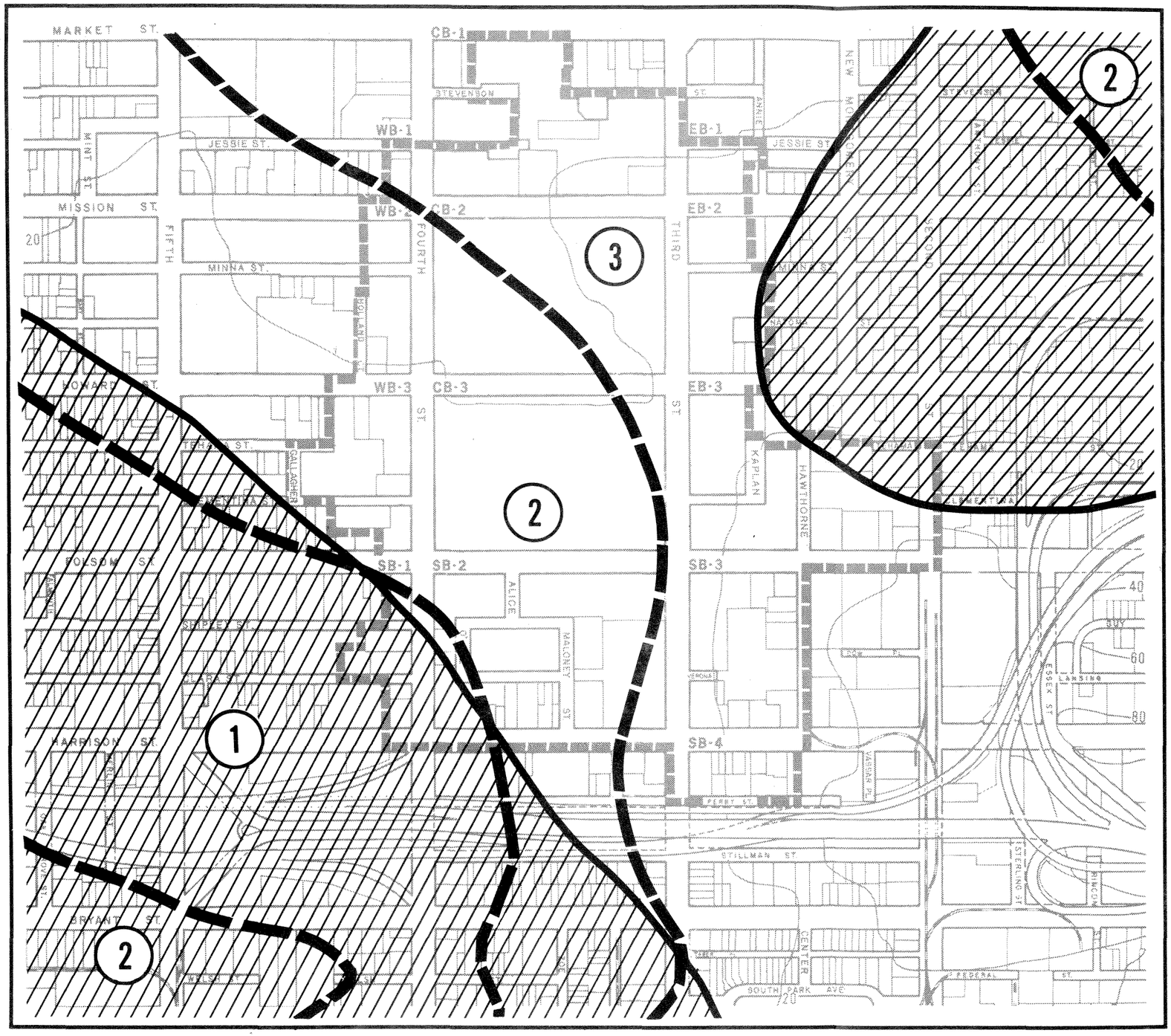
Undifferentiated Deposits (Qu): Mostly have fair to good stability.[7]

Franciscan Rock (KJs): If fresh, good stability. Sheared Franciscan rock has relatively low stability[8].

The probable maximum intensity of a future earthquake within the San Francisco Bay region can be expected to be comparable in magnitude and duration to the 1906 San Francisco earthquake. Figure 28 maps the areas of potential ground shaking, liquefaction and subsidence hazard which could affect the area. The map largely reflects the control of the geologic materials over seismic hazard potential.

The most-hazardous zone (Zone 1) during an earthquake is the southwestern portion, including parts of SB-1 and SB-2. Zone 1 is an area in which "violent" ground shaking is expected with general collapse of brick and wood-frame structures, when not unusually strong, and cracking of better buildings. Lateral displacement of streets, bending of rails, and ground fissuring might occur. The violent ground shaking is expected here because of the presence of unstable artificial fill which was dumped upon soft bay mud.

The area is low-lying and receives the subsurface drainage of groundwater from the surrounding higher areas. The groundwater table is near the surface so liquefaction is also a potential hazard. Liquefaction induced by a major earthquake could result in lateral-spreading landsliding (landsliding with primarily horizontal displacement and little vertical movement) and bearing capacity failure. During the 1906 earthquake, liquefaction produced lateral displacements of about six feet and vertical displacements as large as three feet in the area.[9] Such lateral displacements could cause collapse of buildings, buckling of curbs, walls and rails, and breaking of water and utility lines. Subsidence is an additional hazard which could result in loss of foundation support, differential settling of structures and buoyant rise of buried objects wherever bearing capacity fails. Quicksand conditions might occur locally. Slow subsidence is occurring presently in the area. The amount of subsidence varies locally, with as much as seven feet of settlement having occurred since the 1906 earthquake in the South-of-Market area.[10]



LEGEND

1 Violent Ground Shaking

2 Very Strong Ground Shaking

3 Strong Ground Shaking

Boundaries of Ground Shaking Areas

Area of Liquefaction and Subsidence Potential

Boundaries of Liquefaction/ Subsidence Potential Areas

Source - San Francisco Seismic Safety Investigation Geologic Evaluation, 1974. John A. Blume & Associates

0 0.5 Kilometer

0 1800 Feet

AREAS OF POTENTIAL SEISMIC HAZARD | 28

No portion of YBC is within the estimated run-up area of a 500-year tsunami (a series of sea waves created by an earthquake, a coastal or submarine landslide or a volcanic eruption at some distance from the point of run up) or a seiche (a "sloshing" of water in a confined basin, such as San Francisco Bay, caused by an earthquake or landslide within or near the basin).[11]

In Zone 2, including portions of CB-2, CB-3, SB-1, and SB-2 and all of WB-2 and WB-3, ground shaking in a major earthquake is expected to be "very strong" and result in possible cracking of masonry and occasional collapse of structures. Frame buildings might lurch if they are on a weak underpinning. The area is underlain by deep, unconsolidated mud and sand, covered for the most part with loose dune sand. Liquefaction and subsidence probably pose no general hazard because the geologic material is more stable and the groundwater table is lower than that in Zone 1. Some lateral landsliding might occur as it did in this area in the 1906 earthquake. Sidewalks and streets might crack and buckle, and water mains and utility lines might break. Local differential subsidence of structures might occur.

Zone 3, including portions of CB-2, CB-3 and SB-2, and all of CB-1, WB-1, EB-1, EB-2, EB-3, SB-3 and SB-4, is expected to experience the least potential hazard in a major earthquake. "Strong" ground shaking is anticipated; it may be expected to produce general, but not universal falling of brick chimneys, and to crack masonry and brickwork. Collapse of structures due to ground shaking would probably be uncommon. Most of the area is covered by unconsolidated sediments which are more stable and/or shallower than those in Zones 1 and 2. The lowest intensity of shaking may be expected in the southeastern portion of the area on the flank of Rincon Hill, where bedrock lies at the surface. Potential liquefaction and subsidence might occur in EB-2 and EB-3, where artificial fill forms the surface material. That area is higher-lying, the water table is lower, and the geologic materials are probably a little more stable than in Zone 1. Thus, the hazard may not be as great as in Zone 1, but local ground failure could occur. Quicksand conditions might occur locally.

FOOTNOTES

[1]Appendix J contains information on which this section is based.

[2]U.R.S. and Arthur D. Little Company, 1973, Draft Environmental Impact Report, Yerba Buena Center Public Facilities and Private Development, prepared for the City and County of San Francisco, p.V-L-1.

[3]U.R.S. and Arthur D. Little Company, op cit, p. V-L-6.

[4]U.R.S. and John A. Blume Associates, 1974, San Francisco Seismic Safety Investigation, prepared for the City of San Francisco, p.13.

[5]Wood, H.O., 1908, "Isoseismals: Distribution of Apparent Intensity in the California Earthquake of April 18, 1906", in Report of the State Earthquake Investigation Committee, Carnegie Institution of Washington.

[6]U.R.S. and John A. Blume Associates, op cit., p.4.

[7]U.R.S. and John A. Blume Associates, op cit., p.5.

[8]U.R.S. and John A. Blume Associates, op cit., p.6.

[9]Youd, T.L., and S.N.Hoose, 1976, "Liquefaction during 1906 San Francisco Earthquake", Journal of the Geotechnical Engineering Division ASCE, Vol. 102, No. GT5, Proceedings Paper 12143, May 1976, p.425-439.

[10]Bonilla, M.G., and J. Schlocker, 1966, "Field Trip San Francisco Peninsula," in Geology of Northern California, Bulletin 190, California Division of Mines and Geology, pp.441-452.

[11]Garcia, A.W., and J.R. Houston, 1975, Type 16 Flood Insurance Study, Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound, Technical Report H-75-17, Hydraulics Laboratory, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

K. HYDROLOGY

There are currently no water courses, springs or lakes in the YBC area. The area is low-lying and under natural drainage would receive the surface runoff from the surrounding areas to the north and east. Surface runoff is generally greatest during the wet-weather winter months and least during the summer dry-weather period.

Stormwater runoff is discharged into a combined sanitary sewer and storm drain system and is transported to the North Point Water Pollution Control Plant. The storm and sewer system is designed to handle the storm runoff which might occur during the five-year storm. A five-year storm is the largest storm which could occur in a geographic area approximately once in five years, or has a probability of one in five (20%) of occurring in any given year. Similarly, the 100-year storm has a probability of 1% of occurrence in a given year and is often called the 1% storm. During large storms, the capacity of the sewer and storm drain system is exceeded; this results in overflows of sewage into San Francisco Bay. The ongoing wastewater management (WWM) system improvements would reduce, but not eliminate, the number of overflows from large storms (WWM documents cited in Section V.E.-2).

During periods of intense rainfall in large storms, excess runoff which does not drain into the storm drains flows in the streets as it does in cities which have no storm drain system. In addition, light waste matter which is normally contained in the sewer lines could sometimes surface through popped manholes and catchbasins.[1] For example, during peak flows in 50- and 100-year storms, raw sewage might flow in low-lying streets of the area until the storm subsided.[2] The sewage would be diluted by the runoff, but a potential health hazard would exist. It is likely that some catchbasins would be clogged before such storms and ponding would be expected in low-lying areas.

No part of San Francisco is considered to be in a flood plain zone,[3] and a flood hazard boundary map has not been issued by H.U.D.[4] Studies conducted by the City of San Francisco and rainfall records

indicate that no major flooding in the YBC area has occurred since 1944, when record keeping began.[5]

The groundwater table in the area ranged from 8-13 feet below the surface in 1964; that is, near sea level.[6] Intentional dewatering during large-scale construction and subsequently to prevent floor buckling and flooding lowered the water table. During construction of the BART subway stations at Powell and Montgomery Sts. (near YBC) the groundwater table was lowered to 70 feet below the surface with no adverse permanent effects upon nearby buildings.[7] A soils report indicates: "Readings taken on Natoma Street between New Montgomery Street and Third Street were at elevation -26 in January of 1970, and are presently (1972) at elevation -16" (elevations are with respect to the San Francisco datum which is 8.7 ft. above mean sea level, so that -16 means 7.3 ft. below sea level).[8]

Salt water from San Francisco Bay penetrates some distance inland from the shoreline, but it does not reach YBC. The seawall restricts the movement of the saltwater. The seawall is a structure of rubble and fill which extends from Fort Mason to China Point. The wall was built to protect the artificially filled land from wave erosion at the shoreline. The engineering of the seawall varies in different areas. Between the seawall and YBC, the bay mud is relatively impervious and resistant to movement of groundwater or sea water. The sand deposits are permeable; groundwater migrates through and is retained in such material. There are no wells on the site.

FOOTNOTES

[1]M. Francies, Associate Engineer, San Francisco Department of Public Works, letter of August 31, 1977.

[2]M. Francies, Associate Engineer, San Francisco Department of Public Works, telephone conversation, August 16, 1977. With respect to ongoing improvements, confirmed by D. Birrer, Engineer, San Francisco Bureau of Sanitary Engineering, telephone conversation, August 17, 1977.

[3]A. Brandow, Administrative Engineer, San Francisco Department of Public Works, telephone conversation, August 16, 1977.

[4]J. R. Hunter, Acting Federal Insurance Administrator, letter of October 21, 1975 to then Mayor Alioto.

[5]U.S. Department of Housing and Urban Development, 1974, Final Environmental Impact Statement, Yerba Buena Center, HUD-R09-EIS-74-IF, p. 46.

[6]Youd, T.L., and S.N. Hoose, 1976, "Liquefaction during 1906 San Francisco Earthquake", Journal of the Geotechnical Engineering Division ASCE Vol. 102, No. GT5, Proceedings Paper 12143, May, 1976, p. 425-439.

[7]U.R.S. and Arthur D. Little Company, 1973, Draft Environmental Impact Report, Yerba Buena Center Public Facilities and Private Development, prepared for the City and County of San Francisco.

[8]Dames and Moore, 1972, Foundation Investigations, Yerba Buena Center, Exhibit Hall and Sports Arena, prepared for the City and County of San Francisco.

L. ECOLOGY

Since the YBC area is within the heavily urbanized setting of San Francisco, much of the area lacks vegetation entirely, except for some street trees.

The redevelopment area as a whole can be characterized as vacant land consisting of paved parking areas or the rubble-strewn foundations of demolished buildings. In about 20 percent of the site where the soil has been left open, invasions of primarily non-native weedy herbs, shrubs, and grasses have occurred. There are also occasional remnants of past landscaping vegetation; the most notable example of this is a fig tree in SB-3 above Verona Place.

In some areas, primarily around the southerly and easterly edges of the site, new structures have been built and some landscaping consisting of street trees and planter strips covering less than 5% of each site has been provided.

The landscaping associated with the Clementina Towers housing development in WB-3 includes lawn grasses and landscaping trees. There is also a garden area in this block on the south side of Clementina St. which produces a variety of fruits and vegetables.

Wildlife under these conditions is substantially restricted; it consists primarily of insects, birds, and rodents. The area supports a Norway rat population which lives in the old sewer lines that were not removed when buildings were demolished, and feeds on food waste from disposals which enters the sewage system[1].

No rare or endangered plant or animal species[2] were noted on the site. Judging from the habitat, none are considered likely to be associated with it.

FOOTNOTES

[1]D. Crociani, Program Manager of Vector Control, San Francisco Department of Public Environmental Health, telephone communication, July 20, 1977.

[2]Leach, H.R.; J.M. Brode; S.I. Nicola, 1976, At the Crossroads, California Department of Fish and Game, Sacramento. Powell, Robert W., 1974, Inventory of Rare and Endangered Vascular Plants of California, California Native Plant Society Special Publication #1, Berkeley. Smithsonian Institution, 1975, Endangered and Threatened Plant Species of the United States, U.S. Government Printing Office, Washington, D.C., #94-A. U.S. Fish and Wildlife Service, 1976a Proposed List "Endangered and Threatened Species--Plants", Federal Register, Vol. 41, No. 117, June 16, 1976. U.S. Fish and Wildlife Service, 1976b, "Endangered and Threatened Wildlife and Plants", Federal Register, Vol. 41. No. 208, October 20, 1976.

M. ARCHAEOLOGIC AND HISTORIC ASPECTS

1. ARCHAEOLOGICAL RESOURCES

The South-of-Market area is known to have been the site of human activity from prehistoric times to the present. Several archaeological discoveries attest to the indigenous Indian population which once lived there.

In 1926 a shellmound some 10 feet deep was discovered on the south side of Harrison St. west of Third St., directly opposite the site of the new Pacific Telephone building. This site is recorded as 4-SFr-2. There is no evidence to suggest that any vestige of the shellmound has survived the various stages of construction and reconstruction in the area of YBC.[1] A more recent discovery was made at the corner of Market and Seventh Sts., three blocks west of YBC, during excavation for the BART Civic Center Station. Portions of the skeleton of a young adult woman were recovered which were dated to 4,900 ± 250 radiocarbon years before the present. They represent one of the oldest evidences of human occupation of the San Francisco Bay Area.[2] The find was at a depth of 75 feet below the present ground surface in a brackish, clayey silt that was once a part of the same marsh which covered the southwestern part of YBC. Since the discovery site of the skeleton is only three blocks from YBC, the possibility of similar discoveries' being made in the course of construction for YBC cannot be entirely discounted.[1] Further, as the probability of topographic changes in the sand hills increases as one proceeds backward in time, it is possible that artifacts dating from the prehistoric period exist within YBC. On the basis of present evidence it is impossible to document this possibility or to identify precise locations for potential sites.[3]

In the Spanish and Mexican periods, extending from 1776 to 1845, there was no activity that would regularly or even infrequently have brought anybody to the YBC area. The road between Mission Dolores and the town of Yerba Buena one mile to the north of YBC passes west and north of the area. The only potential cultural remains from this period

would be individual items placed or lost in an unfrequented spot.[4]

The southwestern portion of YBC was originally part of a 330-acre saltmarsh which surrounded Mission Bay (See Section V.J, Figure 26, page 197). These marshlands were an obstacle to travel in the area. In 1852, in order to make the area more passable, the first landfill was made to anchor a plank road from Third St. to Eighth St. along what is now Folsom St. In 1862 a more extensive fill, using 150,000 cubic yards of sand, was placed on the gullies and marshes to accommodate the extension of Harrison St. between Third and Eighth Sts.

In the early American and Gold Rush period, extending from 1846 to 1852, there were no structures south of Market St. before 1849. By the end of this Gold Rush period, there were about 50 structures in the YBC area, mostly small houses. Materials associated with their use left on or below the surface may still be present.[4] Between 1853 and 1906, building and rebuilding occurred in the South-of-Market district and the YBC area. The YBC area was an important portion of the South-of-Market District which contained residential, commercial, and industrial uses and maintained a distinctive community identity.

From the standpoint of the existence of cultural remains, privy and privy-vault sites of the earlier part of the period are a likely possibility, except where basements were excavated subsequently. There could be small backyard dumps of the 1850's, even small basements that were graded over when structures of the 1860's and 1870's were erected. The entire YBC area was destroyed in the 1906 earthquake and fire, and some buildings which had basements were replaced by new structures that did not have basements. These old basements were probably filled with debris from the site as the lots were prepared for rebuilding. These would be the most likely sites in which cultural materials from this period might be encountered.

By 1912 the rebuilding effort left little unoccupied land. There were twenty hotels in the area, mixed with light industries, warehouses, flats and apartments. Most of these structures remained until the area was razed in 1970-1973 to make way for the YBC redevelopment project.

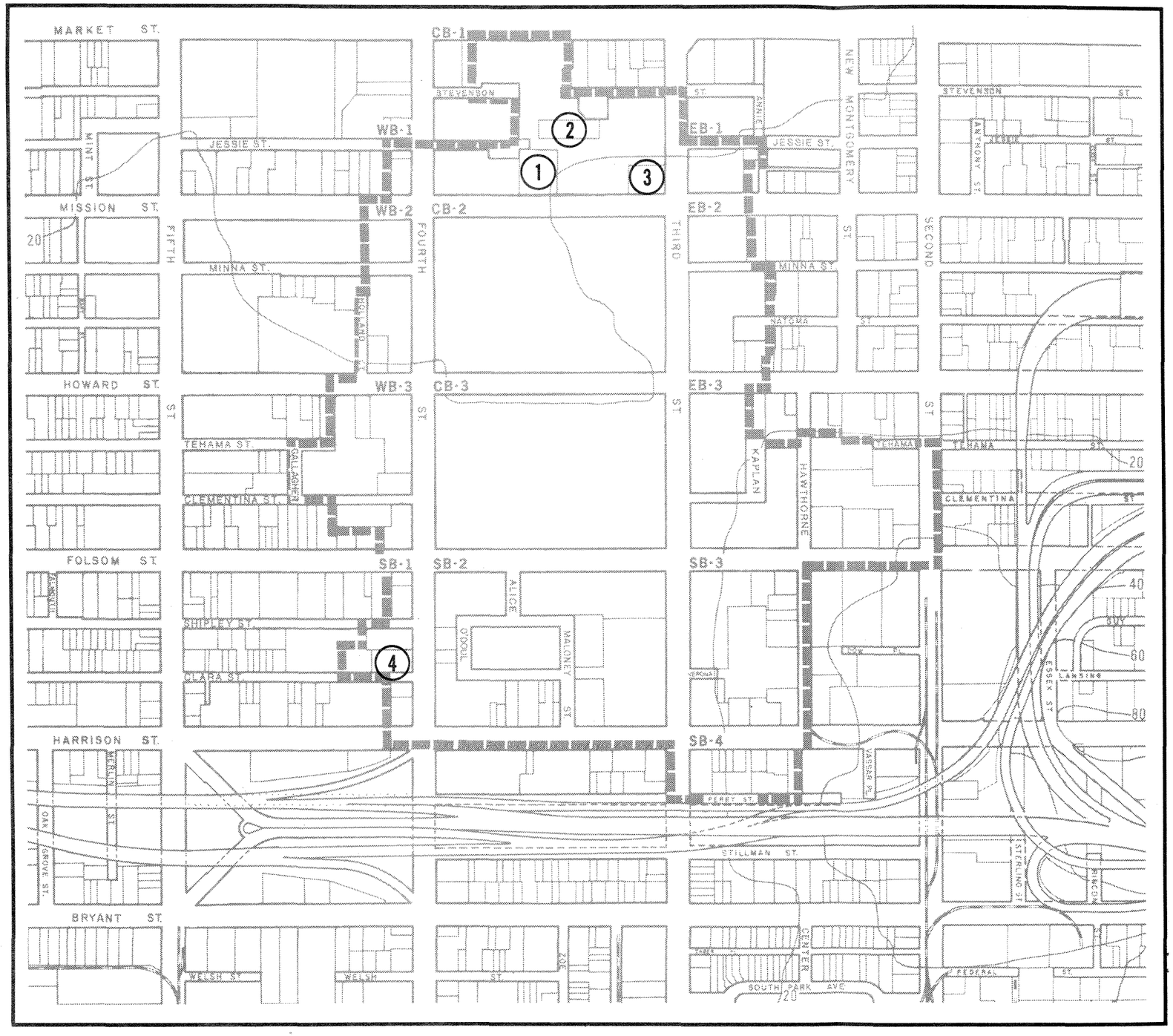
Cultural remains of the post-1906 era may be found in basements which were filled or partially filled during the razing of buildings in YBC for redevelopment purposes, but there is little possibility that a systematic investigation of cultural materials from this period would add meaningfully to an understanding of the human experience in San Francisco.[5]

When the YBC site was first cleared for redevelopment, it was the scene of unauthorized searching and sifting by persons in search of historic relics. According to unconfirmed accounts, old coins, some dating back to the gold rush period, were found, as well as vases, bottles, and similar artifacts of the pre-1906 and post-1906 periods. The individual, unmanaged, non-professional type of searching which resulted in the scattered finds described above was stopped by the Redevelopment Agency which fenced and posted the vacant parcels against trespassing, as well as increased police surveillance of the cleared sites.

After consultation with the State Office of Historic Preservation in September 1977, a report was prepared for the City of San Francisco by Roger R. Olmsted, Nancy L. Olmsted and Allen Pastron[3] on the potential cultural resources of an archaeological nature that may be encountered in the course of construction of the convention center. This report was based on an investigation of archival sources on the history and historic development of the convention center block and was prepared to determine whether potential cultural resources might exist on the site and where archaeological testing may be indicated for the possibility of recovery of various types of deposits of the several historic periods of development of the block.

2. HISTORIC BUILDINGS

Within YBC there are buildings which have been variously identified as having historic or architectural interest and value The locations, by status or type, are shown in Figure 29, page 215; photographs of four of the buildings are presented in Figure 13, page 81.



LEGEND

1. St. Patrick's Church
2. Jessie Street Substation
3. Mercantile Building
4. Senior Activities Center (formerly Southern Police Station)

0 0.5 Kilometer

0 1800 Feet

HISTORIC STRUCTURES
YERBA BUENA CENTER

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Two of the buildings have been designated as landmarks by the Board of Supervisors upon the recommendation of the San Francisco Landmarks Preservation Advisory Board and the San Francisco City Planning Commission. These are St. Patrick's Church (Ordinance No. 229-68, August 1968) and the Jessie Street Substation (Ordinance No. 210-77, July 9, 1977). Both are in CB-1. These two buildings are also listed in the California Inventory of Historic Resources published in March 1976 by the California Department of Parks and Recreation.

St. Patrick's Church, fronting on the north side of Mission St. between Third and Fourth Sts., is the oldest building in YBC. The main facade and tower, faced with red brick, were built in 1872 and survived the earthquake and fire of 1906. The nave and apse were destroyed, and then were rebuilt in the neo-Gothic style which characterized the earlier Church. The present Church was one of the first buildings designated as a landmark by the Board of Supervisors upon the recommendation of the then newly created Landmarks Preservation Advisory Board. Although a committee established by the Landmarks Board has subsequently recommended that it be placed on the National Register of Historic Places, no formal action has been taken in this regard. The Church and the adjoining rectory are intended to be continued in use as a parish church of the Archdiocese of San Francisco under an owner-participation agreement. Portions of the concrete building which are not surfaced in brick would be so improved.

The Jessie Street Substation was first built in 1881 to serve the San Francisco Gas and Electric Company. It was enlarged and modified in 1883, 1892, and 1905. It was redesigned and rebuilt in 1907, under the guidance of Willis Polk, a San Francisco architect of the late nineteenth and early twentieth century. The south side of the structure, fronting on Jessie Street, has a red brick facade with glazed terra cotta cornices, four cherubs over the classical entranceway, and other decorative forms. In September 1974, the Jessie Street Substation was placed on the National Register of Historic Places. Recommendations for the preservation of the Jessie Street facade only were rejected by the San Francisco Landmarks Preservation Advisory Board in 1975. On July 9, 1977, the building was

recognized by the San Francisco Board of Supervisors as a designated landmark. The Foundation for San Francisco's Architectural Heritage, with assistance from the National Trust for Historic Preservation, in June 1977 published the results of its study of the feasibility of adaptive reuse in which a combination of retail and office uses is recommended.[6] Such use is indicated in each of the alternatives considered in this report.

The Mercantile Building, at the northwest corner of Mission and Third Sts. in CB-1 (710 Mission St.), is a ten-story building built in 1904, and rebuilt after the earthquake and fire of 1906, in the Chicago style[7] of early skyscraper design; it contains rich ornamentation at the upper floor levels.

The Mercantile Building is not on local, state or national lists or registers. The Landmarks Preservation Advisory Board in September 1975 recommended that National Register eligibility of this building be determined. The State Historic Preservation Officer on February 14, 1978, determined that "the Mercantile Building is eligible for the National Register as an architecturally significant structure."[8] It would be retained in Alternatives A, B, C, and the Redevelopment Agency tentative proposal under a disposition agreement for rehabilitation and adaptive reuse as an office building with ground floor retail space.

The former Southern Police Station at 460 Fourth St., built in 1925, combines the elements of Spanish Baroque and Mission Revival styles,[9] popular at that time, and is the only building of its architectural style in YBC. It is currently owned and maintained by the Salvation Army as a recreation center for the elderly. Although the disposition agreement between the Redevelopment Agency and the Salvation Army states that the building may be razed by February 1980, the Salvation Army presently does not wish to demolish the building.[10] It has partially completed rehabilitation work on the structure.[11] The Salvation Army, under terms of the disposition agreement, is obligated to submit preliminary plans to the Redevelopment Agency for long-term use of the building and the adjacent site to the north. The State Historic Preservation Officer on February 14, 1978, stated that "demolition of the

Salvation Army Building would adversely affect a property eligible for the National Register."

In consultation with the State Historic Preservation Officer, in compliance with National Advisory Council Procedures, 36 C.F.R., Part 800, the San Francisco Area Office of HUD recommended that buildings on the northeast corner of Third and Mission Sts. (the Blumenthal Building, 87 Third St.) and the southeast corner of Third and Mission Sts. (the Williams Building, 693 Mission St.), together with the Mercantile Building, be included in the National Register as an historic district. HUD suggested that there was no reasonable approach for the preservation of the district as a whole, but that records be established of each of the buildings and of the district for future public review. The State Historic Preservation Officer stated on February 14, 1978, that "the proposed demolition of the buildings located at 693 Mission Street and 87 Third Street will adversely affect the . . . historic district . . . . A new cost evaluation is requested."[8] These latter two buildings were noted in the 1974 EIS as architecturally interesting as part of an "urbanistic ensemble" but of less significance individually by architectural consultant Paul V. Turner. This evaluation was the basis for consideration by HUD of the historic district listing on the National Register.

In consultation with the State Historic Preservation Officer, HUD recommended that the Jessie Hotel at 179-81 Jessie St. in EB-1 is not eligible for the National Register. This building is slated for demolition in accordance with the redevelopment plan and program. The State Historic Preservation Officer on February 14, 1978, stated that "the Jessie Hotel at 179-81 Jessie Street is also a property eligible for the National Register as an architecturally notable structure that embodies distinctive characteristics of the type, period, and method of construction based on Italian Renaissance origins."[8]

Other buildings of architectural interest were noted in the 1974 EIS. These included four light-industrial buildings at 653, 657, and 665 Harrison St. and 250 Fourth St., which are under owner-participation agreements. On February 14, 1978, the State Historic Preservation Officer

stated that "properties located at 250 Fourth Street and 653, 657, and 665 Harrison Street are not eligible for the National Register." Four other buildings noted in the 1974 EIS have subsequently been razed. These were located at 240 Fourth St., 244 Stevenson St., 315 Fourth St., and the "Place of New Beginnings" on Fourth St. between Howard and Folsom Sts. One other building, noted for its international style interpreted in an "almost classical way", has been retained and rehabilitated under an owner-participation agreement. It is located at 250 Fourth St.

In 1974, 1975, and 1976, the San Francisco Department of City Planning conducted, under the direction of Richard Hedman, a parcel by parcel, citywide inventory of architecturally significant buildings.[12] An advisory review committee of architects and architectural historians[13] assisted in the final evaluative determination of ratings for the 10,000 buildings that have been entered in an unpublished 60-volume record of the inventory. The buildings have also been mapped on a set of color-coded maps which identify locations and relative significance.

The inventory was not an historical inventory; rather, it was an inventory of buildings that were considered to be architecturally significant from the standpoint of overall design, or particular design features. Contemporary buildings were included as well as those more than 50 years old. Each building was coded as to its overall architectural rating, ranging from a low of "0" to a high of "5", by its style, and by a summary rating, based on the first two codes as well as on the building's environmental and urban design setting, and also ranging from "0" to "5". Within YBC, eleven buildings were included in the inventory. Of these, one is listed in the National Register of Historical Places. The eleven buildings are listed below, each with its architectural rating, style key and summary rating.

Central Block 1 (A.B. 3706):

(1) St. Patrick's Church, 2-B1-3 (B1 indicates Gothic Revival style)

(2) Jessie Street Substation, 4-D7-5 (D7 indicates a vernacular variation of a classical root style)

(3) Mercantile Building, 3-D7-4

Eastern Block 1 (A.B. 3707):

(4) Mission St. (Lot 23) (between Blumenthal Building, at northeast corner of Mission and Third Sts., and 676-78 Mission St., following), 1-F3-1 (F3 indicates the Prairie School of Modern Root Style). This building has been razed.

(5) 676-78 Mission St. (Lot 22), 1-D7-1. Intended by San Francisco Redevelopment Agency to be razed.

Eastern Block 2 (A.B. 3722):

(6) Southeast corner of Mission and Third Sts., 2-D7-3

Southern Block 1 (A.B. 3752):

(7) Southern Police Station, 2-A4-3 (A4 indicates Spanish Colonial Revival in the California Tradition)

Southern Block 3 (A.B. 3750):

(8) New telephone building at Third and Harrison Sts., 1-F8-1 (F8 indicates a related variation of a Modern Root Style). This new building was developed as a part of the redevelopment process.

Western Block 2 (A.B. 3724):

(9) Imperial Hotel, 1-D7-1. This has a low overall rating. The building is intended to be razed.

(10) #1 Holland Court, 2-D1-3. (D1 indicates a Beaux Arts-Neoclassic or later Greek Revival style.) Under owner-participation agreement.

Western Block 3 (A.B. 3733):

(11) Clementina Towers, 0-F8-0 (F8 indicates related variations of Modern Root Style)

Among buildings which were identified in the 1974 EIS, but were not included in the City inventory, is the Blumenthal Building (87 Third St.) at the northeast corner of Mission and Third Sts.

FOOTNOTES

[1]Jackson, Thomas L., Archaeological Consulting and Research Services, Inc., July 28, 1977, letter report to Environmental Science Associates, Inc.

[2]Henn, Winfield, Jackson and Schlocker, 1972, Buried Human Bones at the BART Site, San Francisco, California Geology, Vol. 25, No. 9, pp. 208-209, California Division of Mines and Geology, Sacramento.

[3]Olmsted, R. R. and N. L., and A. Pastron, November 1977, Yerba Buena Convention Center, Report on Historical Cultural Resources, p. 28. On file at the Office of Environmental Review, San Francisco Department of City Planning.

[4]Ibid, p. 22.

[5]Ibid, p. 133.

[6]The Foundation for San Francisco's Architectural Heritage, June 1977, Adaptive Reuse Feasibility Study and Proposal, Jessie Street Substation. On file at the Department of City Planning.

[7]Chicago was the city in which skyscrapers were first extensively developed in the late nineteenth and early twentieth centuries after the perfection of the elevator. The buildings ranged in height from eight to twelve stories and had a common style which became known as the Chicago style.

[8]Mellon, Knox, State Historic Preservation Officer, February 14, 1978, letter to Tad Masaoka, Environmental Clearance Officer, San Francisco Area Office, HUD.

[9]The Baroque style was prevalent in the seventeenth century and was marked by elaborate ornamentation and the use of curved figures. The Mission Revival style is an early twentieth century adaptation of a style used in early Spanish missions in the southwest United States and Mexico.

[10]Thomas Conrad, Chief, Planning and Programming, San Francisco Redevelopment Agency, February 15, 1978, telephone communication.

[11]William F. McClure, Chief of Rehabilitation, San Francisco Redevelopment Agency, December 29, 1977, Memorandum report.

[12]Information for this subsection was obtained from Richard Hedman, San Francisco Department of City Planning, September 22, 1977, and February 14, 1978, personal communications.

[13]Members included John Beach, Architectural Historian; Michael Corbett, Architectural Historian; John Frisbee, Regional Director, National Trust for Historic Preservation; Mrs. G. Bland Platt, President, San Francisco Landmarks Preservation Board; James Ream, Architect; Judy Waldhorn, Architectural Historian; Francis Whisler, Architect; Sally Woodbridge, Architectural Historian; William Coburn, Architect; Robert Hersey, Architect; Al Lanier, Architect.

VI. ENVIRONMENTAL IMPACTS

A. LAND USE, ZONING AND VISUAL ASPECTS

1. LAND USE

● Alternatives A and B and the Redevelopment Agency November 1977 tentative proposal would make YBC primarily an activity center of citywide and regional importance. Alternative C would provide a pattern of uses that would be in part self-contained and in part ancillary to the downtown area and the Financial District. Alternative D would make YBC a high density ancillary area to the principal districts of Downtown. These differences are described below. If the Convention Center were built above ground, there would be a large building mass, less landscaping, and no rooftop use, resulting in less openness than would prevail under Alternative A.

● Alternative A, 1980. The principal changes in land use would result from completion of the convention center in CB-3 and two housing developments for the elderly in WB-3 and SB-2. The convention center would be serving a regional, national, and international clientele; supporting public facilities and private services might not be completed. Built in compliance with a settlement agreement resulting from litigation, the housing would extend and emphasize a type of residential use which existed before redevelopment was begun in the area but which, because it was more scattered, was not so evident. If the Redevelopment Agency tentative proposal were adopted the results would be about the same as in Alternatives A and B.

Alternative B, 1980. If Alternative B were implemented, the changes in land use would be the same as those resulting under Alternative A.

Alternative C, 1980. If Alternative C were implemented, changes in land use would have occurred at the housing sites in WB-3 and SB-2. The convention center, a dominant feature of Alternatives A and B, would not be built.

Alternative D, 1980. If Alternative D were implemented, changes in YBC would result from the two committed housing developments in WB-3 and SB-2.

● Alternative A, 1988. YBC would be developed with approximately 6,300,000 sq. ft. of new office space; a hotel serving, in part, users of the convention center; commercial entertainment; an apparel mart; and public open spaces. Public parking would be provided at two sites: in the office complex east of Third St. at Minna St., and in SB-3 with primary access from Hawthorne St. These uses would mark YBC as an expanded part of downtown San Francisco, a center of convention activity, and the southwestern edge of an expanded Financial District. New housing would be limited to four sites in the western and southern blocks; the remaining parcels would be filled with light industrial uses.

Services for elderly residents in and near YBC are inadequate in 1977 (See Section V. C, page 95), especially with respect to food stores, laundromats, and similar types of personal goods and service outlets. Alternative A, adding 600 (committed) elderly dwelling units and 50 market dwelling units, might not create a complete and unified residential environment of sufficient size, nor a sufficient number of residents, to attract a full range of neighborhood commercial services.

Although the housing provided in Alternative A responds to felt community needs and desires, the juxtaposition of industrial and residential uses in SB-2 might pose problems of incompatibility for both. The generation of industrial traffic and noise is not conducive to the creation of a tranquil residential environment, especially for the elderly, and responses to complaints to industries from residents could require the curtailment or less efficient operation of industries. Nighttime and weekend influxes of visitors to the convention center could reduce the

tranquility of the residential environment; another effect could be the creation of a safer nighttime and weekend environment for elderly residents.

Alternative B, 1988. YBC would have little more than half the office space provided under Alternative A, but would be a citywide and regional center of importance containing the convention center and the apparel mart. It would contain an 18-acre recreation/entertainment park with attractions catering to one-time visitors from afar and to daily or weekly local users with season tickets. The variety and types of uses which this recreation/entertainment park might contain could make YBC a unique activity center.

● The number of housing units would be increased over those provided in Alternative A by the addition of 300 subsidized units for families, and 600 market-rate units. This intensification and diversification of housing would tend to attract resident-serving commercial services. Industrial uses would be reduced to about one-third of those in Alternative A. This would reduce conflicts between industrial and residential uses. Public parking would be concentrated on one site across Third St. from the convention center and the recreation/entertainment park. Nighttime and weekend influx of visitors to the convention center and the recreation/entertainment park could reduce the tranquility of the residential environment, to a greater extent than in Alternative A; another effect could be to create a safer nighttime and weekend environment for elderly residents. If the variant addition of the General Services Administration parcel in CB-1 were effected, additional market-rate housing and office space would result. These new uses would intensify the impacts under Alternative B in CB-1 to a level approximating those under Alternative A.

The Redevelopment Agency tentative proposal would be similar to Alternatives A and B as a citywide and regional center with amounts of office space intermediate between A and B, a convention center, and either a recreation/entertainment park or office, hotel and public open space uses in the central blocks. The additional 900 housing units would make the YBC area under this plan similar to Alternative B and industrial uses would be reduced to about 15% less than those in Alternative B, thereby reducing conflicts with residential uses. Public parking could be provided on EB-2 as in Alternative A as well as on EB-3 as in Alternative B, concentrating parking on the eastern side of YBC, similar to Alternative B.

Alternative C, 1988. YBC would be a predominantly residential neighborhood with a mix of housing, including subsidized housing for the elderly and for families, plus 1,000 market-rate units. This complex of

[Text continues on page 222.]

housing would be concentrated around the 21-acre park in CB-2 and CB-3. Eight times larger than Union Square, the public park would be the dominant single physical feature in the YBC area. The park would provide an open setting for the encircling housing.

No public parking would be provided; private parking would be developed in accordance with City Planning Code requirements for each use. Up to 1.3 million sq. ft. of office space would be provided in the north and northeast edges of the area which, added to existing and committed office space, would lead to a total of almost three million sq. ft. of office space. If additional short-term public parking were created to serve this use, it would have to be outside YBC. Of all the alternatives, Alternative C would provide the smallest amount of space and activities of citywide and regional significance. Nighttime and weekend visitor activities would be less than in Alternatives A and B, but the (nighttime/weekend) residential population in Alternative C would be the highest of the four alternatives.

Alternative D, 1988. YBC would be built up to a maximum intensity of uses permitted by the City Planning Code. Instead of a public park, convention center, and/or recreation/entertainment park, CB-2 and CB-3 would contain a variety of downtown support uses, including offices. YBC would contain almost five million sq. ft. of office and retail commercial space. No public parking would be provided except by private entrepreneurs in response to potential demand. This alternative would pose the greatest demand for sites outside the area for use as parking lots or structures. Alternative D would contain no more housing than Alternative A, and would thus continue the condition of inadequate commercial services for existing residents of the area. The potential conflicts between residential and industrial uses would be heightened, especially in SB-2, for no uncommitted site which is classified M-1 could be used for housing; such sites would be reserved for permitted industrial, commercial or office uses. This would result in the development of up to 1.7 million sq. ft. for such uses. Coupling of this with the 6.4 million sq. ft. of downtown support uses in Alternative D would make YBC predominantly an intensively developed area ancillary to the principal

downtown activity centers. Nighttime and weekend visitor activity would be less than in Alternatives A and B; the (nighttime/weekend) residential population would be the lowest of the four alternatives.

2. ZONING

Except for the areas designated for housing in the alternative plans, the development of YBC would result in the creation and rehabilitation of structures and uses which would be allowed as principal uses under the City's zoning regulations and which would be consistent with the official Redevelopment Plan. Housing is permitted as a conditional use in the C-3-0, C-3-R, and C-3-S districts upon authorization by the City Planning Commission, and may be developed in an M-1 district in a redevelopment area as a Planned Unit Development (P.U.D.) upon authorization by the City Planning Commission. A P.U.D. is a form of conditional use based upon an overall site plan (arrangement or use) under regulations or requirements differing from those ordinarily applicable under the Planning Code. An amendment of the redevelopment plan would be required for housing on any sites not presently designated for housing.

Alternative A,1988. The central blocks would comply with the use and other provisions of the City Planning Code. The 50 dwelling units would require conditional use authorization by the City Planning Commission, however, in order to comply with the Planning Code.

EB-1, -2 and -3 would contain retail and office uses and a public parking garage. The garage would require review and conditional use authorization by the City Planning Commission. Retail and office uses would comply with pertinent provisions of the Planning Code.

In the southern blocks the housing at the northeast corner of Fourth and Harrison Sts. would require specific authorization by the City Planning Commission as a P.U.D. In WB-3, the housing on the south side of Clementina Street would require authorization by the City Planning Commission as a P.U.D.

Alternative B,1988. The central blocks as projected in Alternative B would comply with the pertinent Redevelopment Plan and Planning Code provisions except for the housing in CB-1 at the northeast corner of Fourth and Mission Sts., which would require an amendment to the Redevelopment Plan and conditional use authorization by the City Planning Commission.

In EB-1 the housing at the northeast corner of Third and Mission Sts. would require an amendment to the Redevelopment Plan and conditional use authorization. In EB-3 the public parking at Third and Howard Streets would require conditional use authorization.

Additional housing in SB-2 and -3, located in an M-1 zoning district, would require an amendment to the Redevelopment Plan and authorization by the City Planning Commission as P.U.D's.

Additional housing in WB-2 would require an amendment of the Redevelopment Plan and conditional use authorization as the site is in a C-3-S (Downtown Support) zoning district.

The Redevelopment Agency November 1977 tentative proposal providing housing and parking in the same locations as Alternative B would have the same approval requirements. Other components would be similar to Alternatives A or B.

Alternative C, 1988. The uses shown in the Central Blocks in Alternative C would comply with pertinent provisions of the Redevelopment Plan and the City Planning Code. In EB-2 and -3, the additional housing uses would require both an amendment of the Redevelopment Plan and conditional use authorizations by the City Planning Commission. The southern blocks and western blocks would require the same amendatory and authorization steps as indicated for Alternative B.

Alternative D, 1988. Alternative D would require an official rescission of the Redevelopment Plan. All uses would comply with the City Planning Code, but, as noted under Alternative A, P.U.D. authorization

by the City Planning Commission would be required for the two housing developments in WB-3 and SB-2. These two uses, committed by settlement agreements resulting from litigation, have not been subjected to such review and authorization to date. Such action would be required before the Redevelopment Plan was rescinded, as housing is permitted in an M-1 district only in a designated redevelopment area.

3. VISUAL ASPECTS

Under full development, Alternative A would result in the most extensive addition to the downtown highrise skyline when seen from a distance, and would provide micro-scaled views of both new and historic buildings and of landscaped walkways and plazas when seen from within at the pedestrian levels. Alternative C would provide a generally low- and medium-rise skyline and thus would provide a smaller change in the visual pattern of the South-of-Market district. The 21-acre open space in the center of YBC would provide macro-scaled views within the area and toward the Downtown and Nob Hill skyline to the north. Overall, the allocation of 1% of construction costs to the provision of art and embellishment, which is required by the Redevelopment Agency and by the City Charter for public buildings, and for private buildings by the Redevelopment Agency agreements, would be evident at various locations throughout YBC in Alternatives A, B, and C. The comparative impacts of each alternative are described below.

Alternative A, 1980. The visual character of CB-3, SB-2 and WB-3 would be altered. The underground convention center, with a park partially completed on the surface level, would replace the temporary parking areas which exist in the block in 1977. Although the convention center would be underground, its top would be 12-16 feet above Howard St. and 21-30 feet above Folsom St. Like the Union Square garage, it would create a mounded effect when compared with the topography existing prior to construction. An eight-story housing development would be completed at Shipley St., between Maloney St. and O'Doul Lane in SB-2, and a nine-story housing development would replace the temporary parking area at the southwest corner of Howard and Fourth Sts. in WB-3.

The initial development of a park on the surface level of the convention center would provide a permanent open space contrasting with the urban development surrounding it. The park would comply with policies of the Urban Design Element of the Comprehensive Plan which call for providing large-scale landscaping,[1] and of the Recreation and Open Space Element which call for acquiring new park space and giving priority for improvements in high-need neighborhoods.[2]

In 1980 much of the immediate area would remain undeveloped, and the park would be surrounded by vacant parcels and temporary uses or construction in progress and the visual character of YBC as an activity center would not have developed over the area as a whole.

If the Redevelopment Agency tentative proposal provided for public open space on top of the convention center and office and hotel uses in CB-2, the effect would be the same as that of Alternative A in 1980.

Alternative B, 1980. The principal visual difference which would result from implementing Alternative B rather than Alternative A would be at the flat top of the convention center which would be reserved for use by the recreation/entertainment park. The area might be bare or partially landscaped, or construction might have started on this portion of the park. If the Redevelopment Agency tentative proposal were to provide a recreation/entertainment park, the visual appearance in 1980 would be the same as that of Alternative B.

Alternative C, 1980. The only visual changes anticipated in YBC would be the completed housing developments at the southwest corner of Howard and Fourth Sts. and at Shipley and Maloney Sts. There would be no convention center, and the public park would not yet be developed. The existing desolation of the central blocks would be the dominant visual effect.

Alternative D, 1980. As with Alternative C, if Alternative D were to be pursued, the visual change in YBC would be the two TODCO housing developments in WB-3 and SB-2. The visual effect would be one of continued inaction.

● Alternative A, 1988. With full development of the area, the visual appearance and the aesthetic experience of entering and viewing YBC from all points would be changed. The impact of the development would be magnified due to the location of YBC along entrance routes to the City from points east and south. In general, the visual effect would be consistent with pertinent policies of the Urban Design Element of the Comprehensive Plan. The visual pattern of existing principal streets would be reinforced,[3] as buildings would form medium- and high-rise edges along most of the block faces of the grid of principal streets. Architectural landmarks would be apparent in the pedestrian concourse and on Mission, Third, and Fourth Sts.[4] The height and bulk of new buildings[5] would be related to the scale, form and proportion of older development nearby,[6] to the height and character of existing development,[7] and to the prevailing scale of development.[8] The quality of the total visual image would be dependent upon the architectural and design review procedures and standards to be applied by the Redevelopment Agency,[9] upon the form, bulk, materials and colors of buildings which have not yet been designed, and upon the inter-relationships of such buildings.

As stated in Section V. A-5, in 1977 YBC as a whole does not have a coherent, unified and harmonious urban design pattern. For purposes of this analysis it is assumed that the urban design consultant (Skidmore, Owings & Merrill) engaged by the Redevelopment Agency would have developed specific standards and procedures which would assure compliance with policies of the Urban Design Element of the Comprehensive Plan and attainment of accepted urban design objectives in accordance with the Agency's intent.

● By 1988, the character of the central blocks under Alternative A would be in marked contrast to the open and abandoned character prevailing in 1977. The pedestrian concourse would provide a new unifying focus and link from the Market St. gateway opposite Grant Ave. to the convention center south of Howard St. The red brick pavement of the Market St. side- and cross-walks would extend southward toward the rehabilitated red-brick Jessie St. substation and the red-brick St.

Patrick's Church in CB-1. Small plazas and sitting areas, with trees and fountains, would contrast visually with the existing parking lots and with the bare walls exposed by recent demolition.

A bridge over Mission St. would carry pedestrians to the second central block; a walkway, and perhaps a people mover, would continue through CB-2 at a mezzanine level adjacent to the nine-story apparel mart located between the concourse and Third St. The elevated walkway would connect to a bridge across Howard St. which would lead to the entrance lobby of the convention center. As the two bridges and the elevated walkway have not been designed, their visual quality is indeterminate. They could be visual intrusions when seen from Mission or Howard Sts. or they could be statements identifying YBC and the special kinds of activities occurring in the central blocks. Review by the City Planning Commission for conformity with the Master Plan would consider effects on views and sight lines. The Urban Design Element of the Comprehensive Plan, on page 35, states as a principle that elevated pedestrian levels in large developments, if they relate visually and functionally to the street level pedestrian system, are easy to find and use and contribute to the consistency of development.

On the west side of the concourse, opposite the apparel mart, an office building and hotel, or perhaps two office buildings, would rise above the concourse with low retail and entertainment buildings and connecting walkways providing a sense of enclosure. (Negotiations are under way between the Redevelopment Agency and Arcon/Pacific concerning relocating the committed hotel to a site on the west side of Third St. in CB-1.) In contrast, upon crossing Howard St., one would see a landscaped open space of almost 10 acres over the roof of the underground convention center. The center would be identified by the above-ground 300-foot long entrance lobby, with skylights above and escalators descending to the exhibit hall level below. The lobby would be the main evidence of the hidden activity below the surface park. The convention center exhibit hall and meeting rooms would attract some nighttime and weekend activity in the area, varying with scheduled use.

On the east side of the park, on Third St., office buildings would visually define the edge of the park. Continuing to the north, office buildings and towers, rising from 32 to 46 stories, in EB-2 and -1, would visually identify what would be the new western edge of the South-of-Market portion of the Financial District.

West of the park, above the convention center, the Fourth St. edge would be marked by the two Clementina Towers and the three medium-rise TODCO apartment buildings housing elderly residents on either side. This would be an open edge, providing views through it from the park to the hills of Twin Peaks and Diamond Heights to the west and southwest.

On the south side of the park, an industrial building or buildings up to five stories in height, in conjunction with the American Telephone Building, would block views of the area from the south. Views of the park from the lower floors of the housing units at Maloney and Shipley Sts. would also be completely cut off.

The November 1977 tentative proposal with a public park on top of the convention center would be visually similar to Alternative A, but the additional housing proposed would reduce the height and bulk around the central blocks to a level more like that of Alternative B. The housing, in place of light industrial uses, south of the public park could retain or obstruct views as described under Alternative B below.

Alternative B, 1988. With a lower intensity of office use and more housing than provided in Alternative A, the height and bulk of most buildings would be less than in Alternative A, but the presence of YBC as a new development would be visually apparent from a distance by the new forms and structures which would identify the site. From within, the recreation/entertainment park would be dominant, for it would occupy up to 18 acres in the central blocks.

Consisting of various types of open space for active and passive use, of one-, two- and three-story structures for restaurants, markets, retail outlets, theaters, and museums, and of symbolic architectural

expressions, the recreation/entertainment park would make a visual statement not only of its own functions but of YBC as a whole. The recreation/entertainment park would be bordered primarily by housing -- market-rate and subsidized -- on the northern, western, and southern sides, and could provide an outlook of open space and varied activities for the residents. The park would be a center of continuous nighttime (evening) and weekend activity, expecially during the peak period of summertime visitation.

In SB-2, the industrial uses along the south side of Folsom St. which are indicated in Alternative A would be replaced by housing in Alternative B. Depending upon the design and layout, this housing could result in the retention or obstruction of views of the park from the housing in the center of the block at Shipley and Maloney Sts. East of the convention center, a 1,250-space parking structure would border Third St. This would be the only public parking facility under Alternative B; unless carefully designed, this could add an intrusive visual element.

In SB-3, east of Third St., housing would replace the industrial and parking uses contained in Alternative A. If designed with highrise elements, this housing could capture the topographic advantage given the site by its positioning at the edge of Rincon Hill and provide dwelling units with views eastward to the Bay and Bay Bridge as well as westward over the recreation/entertainment park area.

If a recreation/entertainment park were constructed in CB-2 and -3 as a variant to Alternative A or as a component of the Redevelopment Agency tentative proposal, effects would be similar to those of Alternative B, but surrounding office buildings could be about four to ten stories higher than those in Alternative B. The variant of removing the apparel mart from CB-2 in Alternatives A or B or the tentative proposal would allow additional recreation/entertainment uses, with similar effects. If the 900 dwelling units were provided in the Redevelopment Agency tentative proposal, the visual effects would be similar to those of Alternative B, but with taller office buildings than Alternative B. The housing in EB-1, CB-1 and WB-2 would not have retail commercial uses on the ground floor in the tentative proposal; those uses are provided in Alternative B.

Alternative C, 1988. YBC would have a predominantly residential quality and a concomitant visual character. CB-2 and -3 would be a 21-acre public park with groves of trees and open lawns, punctuated by paved plazas. In addition to the housing surrounding the park site in Alternative B, there would be housing on the east side along Third St. from Minna St. southward, except for buildings existing in 1977 and committed for retention. Thus surrounded by predominantly medium-rise housing, the park would assume a residential quality rather than a downtown quality, except for midday use by Telephone Company employees and other office and retail workers, mostly from adjoining areas to the east and north. If large trees were sited so as not to impair sight lines from the principal surrounding and traversing streets, the park would afford views of the downtown and Nob Hill skyline, of Twin Peaks and Diamond Heights, and of the Financial District and Bay Bridge towers. The park would also provide the least impaired view of the four buildings of architectural or historic interest which surround it, especially the St. Patrick's Church - Jessie Street Substation - Mercantile Building complex in CB-1. In contrast to Alternatives A and B, there would be no special nighttime or weekend activity in the area. As the total development costs would be lower than Alternatives A or B, the quantity of art and embellishment would be comparatively reduced.

Alternative D, 1988. If Alternative D were to be implemented as an expression of uncoordinated development complying with permitted heights, bulk, and densities, YBC would be a high-density activity area. The visual experience of walking within YBC or viewing the area from outside would be one of heavily trafficked streets surrounded by massive buildings. There would be no guarantee of public open space, of pedestrian areas separated from vehicular traffic streams, and of vistas except those along the principal streets. As there would be no coordinated design plan, and no special design review, the total effect would be that of a conventional downtown. Structures of exceptional quality might stand out, but this would result from happenstance rather than deliberate public policy.

Unlike the three alternatives developed under Redevelopment Agency auspices, Alternative D would occur without an allocation of one percent of total costs to art and embellishment.

FOOTNOTES

[1]City Pattern Policy 4, page 10, Urban Design Element of the Comprehensive Plan, City Planning Commission Resolution No.6745, August 26, 1971.

[2]Neighborhood Policies 2 and 3, page 19, Recreation and Open Space Element. The western and southern portions of Yerba Buena Center are identified as "high-need" on the Neighborhood Recreation Open Space Plan, page 18. The Recreation and Open Space Element was adopted by City Planning Commission Resolution 7021, May 24, 1973.

[3]City Pattern Policy 2, page 10 (Urban Design Element).

[4]Conservation Policy 4, page 25 (Urban Design Element).

[5]The 36-story Market Street tower in CB-1 may exceed the prevailing 400-foot height limit, but approval granted prior to the effective date of the limit would govern.

[6]New Development Policy 1, page 36 (Urban Design Element).

[7]New Development Policy 5, page 36 (Urban Design Element).

[8]New Development Policy 6, page 37 (Urban Design Element).

[9]The Agency contracted with Skidmore Owings and Merrill in November 1977 to assist in formulating such standards and procedures.

B. HOUSING AND BUSINESS RELOCATION

1. HOUSING DESCRIPTION AND ANALYSIS

The distribution of housing and the number of units by type (subsidized elderly, subsidized family, market-rate) in each alternative are shown in Figure 30, page 235, and Table 29. Common to each alternative are 1,136 units of subsidized housing for the elderly. Nearly one-half (534) of these housing units have been completed (Silvercrest Residence, Clementina Towers). The sites which have been committed (as a result of the TOOR litigation settlement) for the remaining 602 elderly housing units are indicated in Table 7, page 88. The sites of housing units for the elderly are the same for all the alternatives, concentrated in the western and southern YBC blocks mainly adjacent to office and light industrial uses (see Figures 5, page 33, and 30, page 235).

TABLE 29

TOTAL DEVELOPED AND PROJECTED HOUSING UNITS
YERBA BUENA CENTER AREA

Alternative	Subsidized Elderly	Subsidized Family	Market Rate	Total
A	1,136	--	50	1,186
B	1,136	300	650	2,086
C	1,136	300	1,000	2,436
D	1,136	--	--	1,136

In Alternative A, 1,186 housing units would be provided: 1,136 units of subsidized elderly housing (previously described) and 50 units of market-rate housing. The market-rate housing would be located in CB-2 on top of the apparel mart[1], between Mission and Howard Sts. Adjacent to it on the west would be the main pedestrian concourse to the Convention

Center, and office, commercial, entertainment and hotel uses. Office and retail uses would border its eastern boundary and part of its northern boundary.

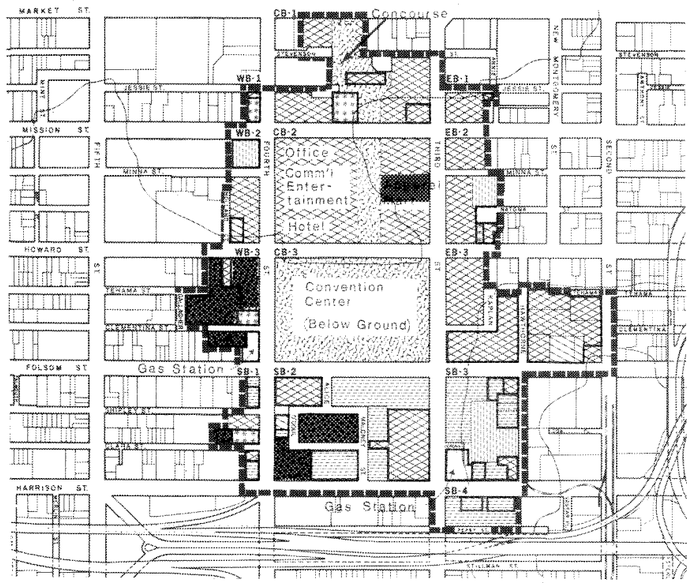
In Alternative B, a total of 2,086 housing units would be provided. As in Alternative A, 1,136 are units of subsidized housing for the elderly. In addition this alternative would provide 300 subsidized family housing units. There would be 120 subsidized family units located at the southwest corner of Third and Folsom Sts.; the rest of the subsidized family housing (180 units) would be located within SB-3 between Folsom and Harrison Sts.

A total of 650 market-rate units would be provided in this alternative: 100 units at the corner of Fourth and Mission Sts.; 400 units at the corner of Third and Mission Sts.; 50 units atop the apparel mart; and 100 units on the west side of Fourth St. between Minna and Howard Sts.

The Redevelopment Agency November 1977 tentative proposal would provide housing in the same locations as in Alternative B. Some of the units could be subsidized family housing, but the number of these units was not determined at the time of the Redevelopment Agency's letter containing the tentative proposal.

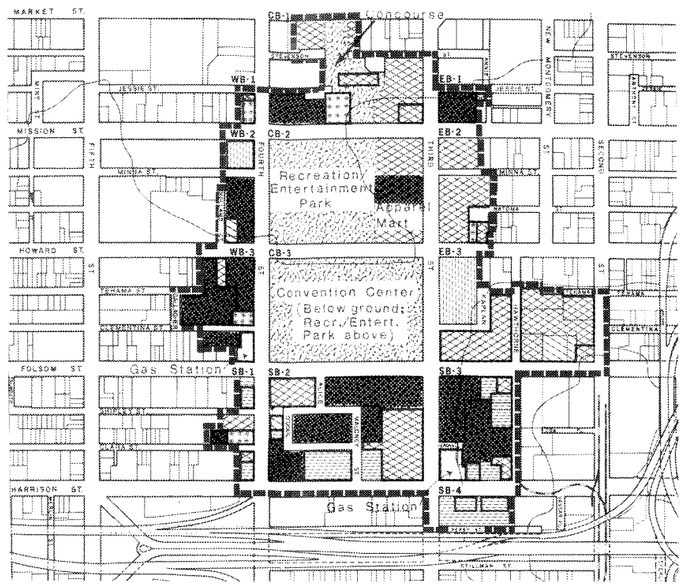
The location of housing sites in Alternative C is similar to that in Alternative B, with the exception of the change in land use at the corner of Third and Mission Sts. to office and retail and the provision of market-rate housing on Third St. between Minna and Clementina Sts. Two hundred market-rate units would be provided on Fourth St. between Minna and Howard Sts., 200 units at the corner of Fourth and Mission Sts., and 600 units on Third St. between Minna and Clementina Sts. With 350 more market-rate units than Alternative B, Alternative C would have the greatest number of dwelling units, i.e., 2,436.

In Alternative D, the only subsidized housing provided would be for the elderly. Housing locations and numbers of units are the same as



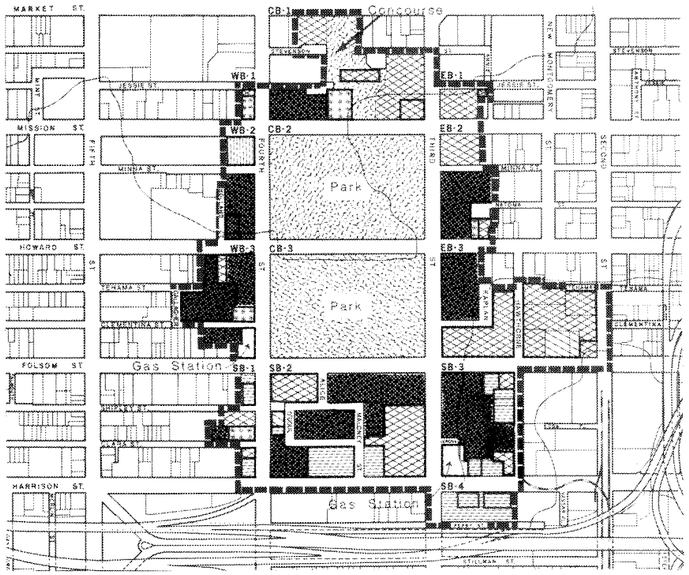
Subsidized Elderly	1,136
Subsidized Family	0
Market-Rate	50

ALTERNATIVE A



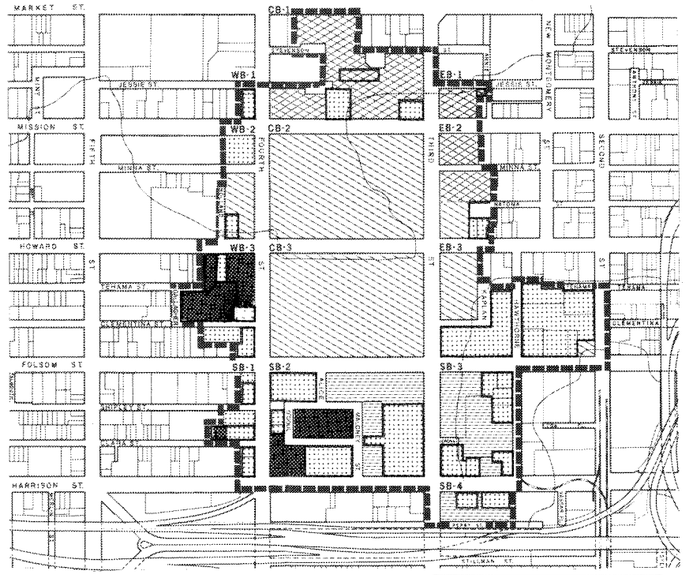
Subsidized Elderly	1,136
Subsidized Family	300
Market-Rate	650

ALTERNATIVE B



Subsidized Elderly	1,136
Subsidized Family	300
Market-Rate	1,000

ALTERNATIVE C



Subsidized Elderly	1,136
Subsidized Family	0
Market-Rate	0

ALTERNATIVE D

LEGEND

Housing

0 0.5 Kilometer

0 1800 Feet

YBC ALTERNATIVE HOUSING LOCATIONS

30

those in Alternative A. The exact uses of the cleared land are not known; hence it is possible other housing units could occur under this alternative.

There are plans[2] to provide food markets and other commercial facilities for residents at two sites on Fourth St. Until these are provided the location of the proposed housing would require walking distances of more than five blocks to shopping facilities in the South-of-Market district and elsewhere in the downtown area.

As of August 1977, Redevelopment Agency records[3] show that a total of 13,000 new housing units have been built or are committed to be built in various San Francisco redevelopment areas. Of these, 8,735 have been completed and 4,323 have been scheduled for construction with completion expected by 1981. These figures include the 1,186 housing units as proposed in Alternative A. The overall figures would change +900, +1,250 and -50 for Alternatives B, C and D, respectively.

- The remaining YBC displacees would be relocated to sites of their choice, within their ability to pay under provisions of the Uniform Relocation Act of 1970. The Redevelopment Agency would bear all relocation payments (moving expenses and replacement housing payments) of these relocatees[4] which meet eligibility requirements as set forth by HUD regulations. As of August 1977, Housing Authority records on citywide public housing show 387 vacancies with another 678 vacancies available when renovation is completed in 1978. The renovation program would be expected to proceed at 30 units every two weeks.[5] Preferential allocation of available housing units would be given to YBC displacees.[6]

2. HOUSING IMPACTS

The 1973 citywide vacancy rates[7] vary depending on the type of housing unit: hotel/guest house rooms 10.6%, studios 4.0%, and one or more bedroom units less than 2.5%. These figures do not include public housing vacancies.

As of September, 1977, there was a 6.7% vacancy rate in available public housing. Table 30 shows the characteristics of demand for public housing (5,716) and the supply of available public housing units. (There are 387 units available; 678 would be available when renovation is completed in 1978.)

TABLE 30

DEMAND FOR AND SUPPLY OF PUBLIC HOUSING UNITS IN SAN FRANCISCO, BY UNIT TYPE, OCTOBER 1977

	NUMBER OF BEDROOMS					TOTAL
	Studio Apts.	1	2	3	4	5	
APPLICATIONS ON FILE	2,506	1,147	1,247	584	184	48	5,716
SUPPLY							
Presently Available	33	202	127	24	1	0	387
Additional Units Available After Renovation	0	42	330	254	43	9	678

The ethnic and age distribution of low-income public housing applicants is shown in Table 31. The largest proportions of applicants are Black (45%) and elderly single (41%).

TABLE 31: DEMOGRAPHIC CHARACTERISTICS OF LOW-INCOME PUBLIC HOUSING APPLICANTS IN OCTOBER 1977

	Number of Applicants	Percent (rounded-off)
ETHNICITY		
Black	2,551	45%
White	1,449	25
Asiatic	1,092	19
Spanish Speaking	385	7
Other	217	4
Indian	22	1
TOTAL	5,716	100%
AGE		
Elderly Single	2,353	41%
Elderly Family	565	10
Non-elderly	2,144	38
TRANSFERS*	654	11
TOTAL	5,716	100%

*Applicants occupying public housing units but requesting relocation to another public housing location.

● Under all of the alternatives, the housing supply in San Francisco would continue to be tight. New housing in YBC would partially replace the substandard housing that has been demolished with standard housing and would partially reduce the shortage of low- and moderate-income housing in San Francisco, particularly in the categories of greatest demand, i.e., studio apartments and one-bedroom units. Provision of market-rate housing in Alternatives B and C, and in the Redevelopment Agency tentative proposal, could have some effect on reducing the demand for such housing elsewhere in the Bay Area, for it would attract downtown workers who might commute to the suburbs if such housing were not available.

The YBC project has contributed to this shortage by displacing 3,170 single persons and 250 families. The present shortage of low-income units would be partially ameliorated under Alternatives A and D by

providing a total of 2,539[8] subsidized units and under Alternatives B and C by providing 2,839[9] subsidized units. The shortage ameliorated by the Redevelopment Agency tentative proposal would range from that of Alternative A to the amelioration provided by Alternative B, depending on the number of subsidized units added under the proposal. It is not anticipated that the tentative proposal would finally add more subsidized units than Alternatives B or C. However, the net addition, under any alternative or the tentative proposal, of new low-income housing units to the City's housing supply still falls below the number of units necessary to house all the persons displaced by the YBC redevelopment activities.

The location of the housing units in YBC would provide convenient access for the residents to downtown service and cultural activities, city and regional transportation and a variety of employment opportunities. The provision and location of the public or the recreation/entertainment park in Alternatives A, B and C would offer an in-town recreation facility with access for most of the area's residents.

The location of proposed housing for the elderly and families in proximity to an activity node such as the proposed convention center in Alternative A, the convention center and recreation/entertainment park in Alternative B, or the expanded office uses in all alternatives, would expose residents to increased impacts of vehicular traffic (See Sections VI.F and VI.G).

● Redevelopment Agency policy which applies to YBC requires that all housing in redevelopment areas be made available on a non-discriminatory basis.

The increase in the noise level due to the full implementation of any of the alternatives is expected to be barely perceptible because of the existing level of noise. Existing noise levels are high enough to place restrictions on future housing construction as described in Section VI.H. Potential construction-noise impacts on housing are discussed in the same section.

3. BUSINESS RELOCATION IMPACTS

Within the YBC area 35 businesses remain to be relocated. Table 32 shows the projected relocation schedule of businesses from August 1977 until 1980, based on anticipated schedules of marketing and disposition. This schedule would be the same under Alternatives A, B, and C and the Redevelopment Agency tentative proposal. It would be inapplicable under Alternative D.

TABLE 32

BUSINESS RELOCATION SCHEDULE, 1977-1980
YERBA BUENA CENTER

	1977	1978	1979	1980	TOTAL
Retail	1	1	1		3
Business Service		7	2		9
Personal Service		1		8	9
Professional Offices		4			4
Printers			1	1	2
Restaurants	1		2		3
Bars			2		2
Non-Profit		1	1		2
Parking				1	1
TOTAL	2	14	9	10	35

Source: Redevelopment Agency.

Preference to relocate within the YBC area would be given to those businesses which returned a preference certificate in 1966. Additionally, some businesses now in the YBC area would not be a permitted use under the Redevelopment Plan.

FOOTNOTES

[1]In the event that the apparel mart is not built, it is proposed that the land be used for a park and the number of market-rate housing units in alternatives A and B would be reduced by 50.

[2]S. Dutton, Director, TODCO, telephone communication, August 11, 1977.

[3]San Francisco Redevelopment Agency, San Francisco Redevelopment Program Summary of Project Data and Key Elements, 1977.

[4]W. DeHart; Supervisor, Business Services, San Francisco Redevelopment Agency, telephone communication, August 18, 1977.

[5]J. Butler, Chief of Rentals, San Francisco Housing Authority, telephone communication, November 2, 1977.

[6]Mrs. M. Yamamoto, Secretary to Chief of Rentals, San Francisco Housing Authority, telephone communication, August 3, 1977.

[7]The 1973 figures are the most current estimates available. According to the Department of City Planning (E. Levine, Planner, telephone communication, November 9, 1977), the vacancy rates have remained stable since 1973.

[8]Consists of 1,089 rehabilitated units, 848 new housing units, 602 units committed to be provided.

[9]Consists of 1,089 rehabilitated units, 1,148 new housing units, 602 units committed to be provided.

C. SOCIAL CHARACTERISTICS

1. IMPACTS ON NEEDS, BY ALTERNATIVE

Table 33 indicates the areas of increased demand for support services according to the types of housing proposed for YBC. Each of the proposed alternatives would provide housing for approximately 1,140 low-income, elderly persons. Alternatives B and C, and possibly the Redevelopment Agency tentative proposal, would provide additional subsidized housing for 300 low-income families. This latter group would increase the overall need for social services in the South-of-Market district. The addition of 50-1,000 market-rate dwelling units proposed in Alternatives A, B, and C and the tentative proposal would have little effect on the need for those services provided by public agencies and charitable organizations, but would affect the retail and other commercial services required.

Approximately 750 units of housing for low-income elderly persons currently exist in three housing complexes (Clementina Towers, Silvercrest Residence, and Alexis Apartments) within and adjacent to the YBC area, which provide food preparation or dining facilities, laundry facilities and community meeting rooms. The Silvercrest Senior Citizens Residence and Club provides transportation and lunch services, and recreational, educational, health and social programs. These services would be expanded to serve all elderly residents of the area.

The Tenants and Owners Development Corporation (TODCO) is under contract to the San Francisco Redevelopment Agency to provide an additional 600 units of housing for the elderly. Prospective tenants are expected to be age 62 or older, to have an income of less than $6,000 per year, and to be in good health. No special facilities for the disabled would be provided within the housing.[1] TODCO researchers expect that the tenants would be drawn from the Inner Mission, North-of-Market, Chinatown, North Beach, and South-of-Market district areas. Plans for commercial services within the housing complexes include grocery stores, restaurants, dry cleaners and laundromats to serve about 1,500 customers.

TABLE 33
SOUTH-OF-MARKET (S-O-M) SOCIAL SERVICE IMPACTS BY TYPE OF HOUSING

Additional S-O-M Support Services Required	Residents by Housing Type: Low-Income Elderly	Low-Income Family	Market-Rate Tenants
Commercial (stores, banks, cleaners, etc.	X	X	X
Public Transportation	X	X	X
Special Transportation (medical emergency and handicapped)	X	X	
Health Clinic facilities	X	X	
Health care outreach	X	X	
Fire & police services	X	X	X
Schools & day care facilities		X	
Counseling/psychological	X	X	
Food Service programs	X	X	
Recreational facilities	X	X	X
Religious/community/ cultural facilities	X	X	X

In addition to food preparation and dining facilities, each complex would provide facilities for a resident social worker, a counselor, and community functions and entertainment. These services along with those currently available would satisfy much of the additional need for social services expected to be generated by the increased numbers of elderly residents.

Space for garden plots to be used by elderly residents is also included in the plans. These would be fenced off from the street to deflect air currents carrying pollutants from passing vehicular traffic.[2]

However, in light of the general air pollution levels expected through 1988, especially under Alternatives A, B and D, inclusion of garden space may need to be reconsidered or designed as an enclosed area.[3]

A Redevelopment Agency official[4] has estimated that 2.25 tenants per unit would live in the low-income family housing proposed under Alternatives B and C, representing a total of 675 persons. This average is lower than the citywide family size of 2.34 (1970 Census) because the inner-city location of the proposed project is viewed as not being conducive to the raising of children. Tenants would therefore tend to be couples or families with fewer children than typical in outlying housing. (The Western Addition average, for example, is estimated to be 2.97 persons per unit, based on numbers of school-age children.) Housing for families would increase the area needs for health care services, child care facilities, school accessibility, recreational facilities, and counseling and mental health programs (see also Section VI. E, Community Services). Additional needs for outreach programs (health care and social work) might also be expected. The Redevelopment Agency tentative proposal could increase area needs for services similar to increases produced by Alternatives B and C if some of the additional 900 dwelling units were subsidized family housing.

Most market-rate housing units would probably be tenanted by employed adults, with an average of two persons per unit. This estimate is based on the tenancy experience of the apartments in the Golden Gateway in downtown San Francisco. The increased demand for commercial services by this population, under Alternatives B (1,300 persons) and C (2,000 persons), could be a market stimulus and encourage development of retail establishments in the area. The November 1977 tentative proposal would add between 1,300 and 1,800 persons in market-rate housing, depending on the number of subsidized housing units provided, with impacts similar to those of Alternatives B or C.

2. EFFECTS ON, AND IMPACTS OF, CURRENT AND PLANNED SERVICES

The additional housing for elderly would have a small-to-moderate impact on the services provided by the South-of-Market Clinic,[5] based on behavior patterns among the elderly currently residing in the area. As perceived by the director of the Clinic, this is because most elderly persons are established as clients with private doctors whose care they are reluctant to leave. An increased demand for services by those who do not ordinarily seek health care services is perhaps more likely to be through subscription to outreach services such as the blood pressure screening program currently sponsored by the South-of-Market Clinic. Low-income families are more likely than are elderly residents to make use of the Clinic itself, but it is felt that with the expansion of services, the existing facility would probably be adequate to serve the greater case load. Resident access to medical services, especially under emergency conditions, is recognized as a current problem which might worsen with increased YBC population.[6]

● The provision of commercial services would depend upon the market demand of the area. The addition of all types of housing in YBC, as provided in Alternatives B and C and the Redevelopment Agency tentative proposal, would be a stimulus to the establishment of resident-serving commercial facilities. The Salvation Army, for example, has tentative plans for the development of a 10,000-sq.-ft. commercial complex geared to the shopping needs of the elderly and including small businesses such as a "mom and pop" grocery store, a hair dresser, and a cleaning and laundry service.[7] Because the market demand for the planned services is not currently adequate to justify the venture, development is contingent upon the amount of additional patronage generated by future housing and employment. Similarly, other population-serving businesses would be attracted to the area if the total population were sufficient to support them. If additional services were not attracted to YBC, residents would have to continue to utilize services available on Sixth St., in the downtown retail district on Market St. and north of Market St., and, through the use of special transportation, supermarkets located elsewhere in the city.

A new Downtown Community College Center is planned to be housed in a new eight-story structure located on the corner of Fourth and Mission Sts. This facility, scheduled to open in February 1978, is designed to serve approximately 10,000 students per day. It will offer both credit and non-credit classes in a variety of market-oriented and general program areas, becoming an educational and cultural resource for area residents and others in the City. No programs are specifically geared to the elderly.

FOOTNOTES

[1]S. Dutton, Director, TODCO, telephone communication, August 11, 1977.

[2]S. Dutton, Director, TODCO, telephone communication, November 10, 1977.

[3]See Section VI. G.

[4]T. Conrad, Chief Planner, San Francisco Redevelopment Agency, telephone communications, August 17, 1977 and November 18, 1977.

[5]Dr. W. Shore, Director of the South-of-Market Clinic, telephone communication, August 10, 1977.

[6]South-of-Market Planning Task Force Report (draft), July 13, 1977; confirmed by Dr. W. Shore, telephone communication, November 11, 1977.

[7]Major O. Youngquist, Secretary of the Northern California Division of the Salvation Army, telephone communication, September 1, 1977.