CITY OF EMERYVILLE

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November 15, 1990

SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT
CANNERY EAST (FORMER DEL MONTE CANNERY SITE)

Accompanying this letter is a copy of the draft Environmental Impact Report for Cannery East, a proposed development on the former Del Monte cannery site. The 11.77 acre site is located between Park Avenue and 45th Street, Haven Street and the Pepsi Cola bottling plant in the southern section of Emeryville. The project includes 422 multiple family residential units.

The comment period will commence **November 16, 1990 and will close on December 17, 1990.** Written comments may be sent to the Planning Department, attention Barry Cromartie, City Planner, 2200 Powell Street, 12th Floor, Emeryville, Ca 94608. You are also invited to provide verbal comments in response to the draft E.I.R. at a special Planning Commission meeting on December 6, 1990 at 6:30 p.m., in the City Council Chambers at 2449 Powell Street, Emeryville.

Additional copies of the draft E.I.R. are available for public review in the Planning Department at 2200 Powell Street, 12th Floor, Emeryville. Copies are also available at the Oakland Public Library, Golden Gate Branch, 5606 San Pablo Avenue, Oakland, CA 94608, and the Emeryville Fire Department, 4331 San Pablo Avenue, Emeryville, CA 94608.

Respectfully,

Gaye Quinn
Planning Director

GQ:slp
Enclosure

gq\c:cannery\eir.ltr

DRAFT
Environmental Impact Report

CANNERY EAST

Emeryville Planning Department
Emeryville, California

Wallace Roberts & Todd
November 12, 1990

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1. INTRODUCTION

1.1 TYPE OF DOCUMENT

This Environmental Impact Report (EIR) has been prepared by the City of Emeryville in compliance with the California Environmental Quality Act (CEQA) of 1970, as amended. The EIR is complete in itself; although it refers to information contained in other environmental documents pertaining to the project area, its adequacy does not depend on any other document. No other environmental studies have been incorporated by reference under the provisions of Section 15150 of the CEQA Guidelines.

1.2 PROJECT UNDER REVIEW

The project under review consists of a residential complex referred to as "Cannery East." The project is located in the southern portion of the City of Emeryville in Alameda County.

1.3 PURPOSE OF THE EIR

This EIR has been prepared to inform the public about the potential significant environmental effects of the proposed development, and its conformity with the City of Emeryville General Plan. The EIR identifies measures to mitigate significant effects and describes reasonable alternatives to the project.

Impacts described in this document are divided between "direct" and "cumulative" impacts. Direct impacts are defined as those impacts that are created by the project itself, independent of surrounding development proposed for the area. Cumulative impacts are those impacts that are a result of the project in conjunction with other nearby development. A development is a contributor to cumulative impacts, as opposed to the sole generator of those impacts.

The City of Emeryville is acting as the lead agency for the project and has required preparation of an EIR to aid in its decision-making process. The Draft EIR will be available for public review and comment for a period of at least 30 days. During this time a public hearing on the DEIR will be held by the Planning Commission. At the completion of the public review period, a Response to Comments document will be prepared containing responses to all verbal comments made at the public hearing and all written comments received during the public review period.

The DEIR plus the Response to Comments document will comprise the Final EIR (FEIR). The Final EIR will be used by the City and local citizens in evaluating the project's impacts on the environment, and in considering project alternatives and mitigation measures, prior to taking action on the project. This EIR is intended to be used by the City as a public informational document.

The issues examined in this EIR were identified through the Initial Study, responses to the Notice of Preparation (NOP) and meetings held with public agencies. Under CEQA, the entire EIR process -- EIR preparation, public review, response to comments and certification -- is focused on the environmental impacts of the proposed project identified in the Initial Study and NOP, mitigative actions, and the adequacy of the EIR as an informational document in conformance with CEQA. The environmental review process is not the project approval process. The project approval process follows the completion of environmental review.

After certifying the adequacy of the Final EIR, a lead agency may either approve or deny a project. To do so it must prepare written findings for each significant adverse environmental effect identified in the EIR. Findings must be accompanied by a brief explanation of the rationale for each finding and should indicate: 1) that mitigation measures reducing adverse impacts to less than significant levels have been adopted, or 2) that measures to mitigate specific effects are not within the jurisdiction of the agency making the finding and that the responsible agency can and should implement the mitigation measures, or 3) that specific effects are unavoidable and substantially unmitigated but are considered acceptable because there are overriding considerations, i.e., project benefits that outweigh the adverse effects.

An additional requirement requires a lead agency to adopt a monitoring or reporting program for the changes to a project that it has adopted, or made a condition of project approval, in order to mitigate or avoid significant effects on the environment. This reporting or monitoring program is to be designed to ensure compliance during project implementation.

After the preparation of findings and approval of the project, a lead agency must file a Notice of Determination with the County Clerk and with the Office of Planning and Research in the event that a discretionary decision is required by a State agency. The Notice of Determination is a formal legal notification of the approval of the project. The filing of this Notice starts a 30-day statute of limitations on any court challenges to the approval of the project under CEQA.

Under CEQA a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment (California Public Resources Code 21068). The guidelines which implement CEQA direct that this determination be based on scientific and factual data. The specific criteria for determining significance of a particular impact are identified in the discussion of each issue section.

1.4 FOCUS OF THE EIR

This focused EIR examines the impact of the proposed project on the following environmental elements: Land Use, including Population, Housing and aesthetics; Traffic and Circulation; Air Quality; Public Health and Safety; and Public Services. Some impacts discussed in this report do not involve physical environmental effects as defined by CEQA but are included for informational purposes only.

2. SUMMARY

2.1 PROJECT DESCRIPTION

The 11.77-acre project site is located between Park Avenue and 45th Street, and Haven Street and the Pepsi Cola bottling plant in the southern section of Emeryville. The proposed project would be a residential development, consisting of 422 dwelling units in up to 21 buildings. Six unit types are proposed in two building types, three-story townhouses with carports and three stories of dwelling units over parking. The buildings would be clustered around landscaped car courtyards linked by an internal ring road to form the interior circulation system. There would be at least 622 parking spaces. A linear open space running from east to west would divide the project site at midpoint, providing pedestrian paths, a landscaped fountain, recreation building, pool and play area.

2.2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Initial Study. An initial study was prepared for the Cannery East project to identify potential environmental issues resulting from the proposed project. Based upon the initial study and response to the Notice of Preparation, the following issues are covered in this EIR: Land Use, including Population and Housing and Aesthetics; Traffic and Circulation; Air Quality; Public Health and Safety; and Public Services. The following potential environmental issues were determined to be insignificant and are therefore not addressed in this EIR: Earth; Water; Plant life; Animal life; Noise; Light and Glare; Natural Resources; Utilities; Energy; Recreation; and Archaeological and Historic Resources.

Land Use. The proposed project would require a General Plan amendment to: 1) change the Local Commercial designation along Park Avenue to Medium-Density Residential; 2) close Watts Street; 3) make Haven Street a pedestrian corridor; 4) change the Floor Area Ratio (FAR) along Park Avenue to a 1.3 FAR from a .7 FAR; and 5) show Haven Street as a local city street. A Conditional Use Permit would also be required to change the building height from 40 feet to 50 feet.

Population and Housing. The City has a substantial imbalance of jobs over housing units required for local workers. The proposed project would add more housing and therefore improve the jobs/housing ratio.

Traffic and Circulation. The project will result in increased traffic especially along San Pablo Avenue and Powell and Hollis Streets. The small traffic increases, however, would not change the level of service operation at most intersections in the City.

Air Quality. Due to the steady marine breezes, the air quality in Emeryville is unusually good. The proposed project adds an insignificant amount of pollutants and this is caused directly by increased automobile traffic. Projects such as this one could incrementally reduce air quality.

Public Services. There would be an increase in demand for school space and police protection services as a result of the project. The proposed project would incorporate all Fire and Police Department regulations.

Public Health and Safety. The site originally contained as few as three and as many as eight underground gas tanks. Two were removed in 1986 and one was abandoned in place in the early 1980's. Soil tests have confirmed that soils in the vicinity of these tanks and the former fish pit contain dangerous levels of oil, grease, extractable hydrocarbons and possibly other toxic substances. Potential contaminated soil would be cleaned on site, replaced with clean soil, or encapsulated by paving and structures. The proposed project would implement all rules and regulations at every jurisdictional level for site cleanup. Additional testing by environmental and soils engineers as well as a safety determination by appropriate agencies will be required prior to construction.

2.3 PROJECT ALTERNATIVES

The alternatives to the development of the proposed project include the following: 1) the no-project alternative; 2) a lower density alternative; 3) a higher density alternative; 4) a mixed-use alternative; and 5) a family housing alternative; and 6) development of the project area.

No-Project Alternative. The entire 11.77-acre site would remain a partially vacant parcel under the No-Project alternative. Deterioration in traffic conditions would occur regardless of development of the proposed project as a result of cumulative development in the area unless special mitigation measures are incorporated in those anticipated development projects.

No improvement in the City's jobs/housing ratio or affordable housing opportunities would occur.

Lower Density Alternative. This alternative would consist of approximately 300 dwelling units. Some of these units would be two stories over parking and others would be two stories on grade with parking nearby. There would be a central recreation facility and landscaped plazas. Impacts on traffic and public services would be lower than those of the proposed project due to the 29% decrease in the number of units.

Higher Density Alternative. This alternative would consist of 660 apartments over a parking structure. The design of the structures would be a double-loaded corridor design. Traffic-related impacts would be greater than for the proposed project due to the greater number of new residents at the site. There would also be a larger demand for police and fire protection services and for school space.

Mixed-Use Alternative. This alternative would contain 300 residential units and 40,000 square feet of retail and office space along Park Avenue. This mix of uses would comply with the City's General Plan for the site. Traffic impacts would be greater than those of the proposed project because of the introduction of commercial uses. Demand for school facilities would be less than the proposed project and demand for police and fire protection would be similar.

Alternate Site. This alternative would be developed on a parcel located at the southern end of Shellmound Street between Interstate 80 and the Southern Pacific railroad tracks. Traffic and public services impacts would be the same as those of the proposed project. However, because of this site's location adjacent to a congested segment of Interstate 80, residents would be exposed to vehicular emissions and high noise levels. Site characterization studies would be required to determine the site's suitability for residential use. The site could potentially require extensive remediation activities as a result of historic industrial processes.

2.4 CEQA CONSIDERATIONS

2.4.1 Cumulative Development

With full buildout of the City as described in the City of Emeryville's General Plan, approved June 2, 1987 by the Emeryville City Council, cumulative effects could indirectly affect the project by competing for transportation systems, public services and utilities. To provide a comprehensive understanding of project-related impacts and mitigations, this report describes cumulative impacts of full buildout under current General Plan policies.

A general plan-based cumulative analysis is one of the two methods of cumulative analyses suggested by the State CEQA Guidelines Section 15130(b)(1)(B). The other method is a land-use based analysis, whereby a list of future projects producing related or cumulative impacts is used to determine combined effects of the whole and to determine the contribution of a proposed project to the overall cumulative effect. This latter method is permitted by State Guideline Section 15130(b)(1)(A).

The analysis in this EIR addresses the cumulative impacts of the General Plan's permitted development intensities, plus the net effect of anticipated General Plan amendments. The General Plan calls for reuse of old industrial sites, such as the Barbary Coast Steel and Myers Drum sites, for light industrial and other purposes. Only active industrial or service commercial sites, such as the Pepsi-Cola Bottling Plant, could become available for reuse in the future. At the present time there are no plans for the redevelopment of these sites. It is therefore assumed that their reuse will be in accordance with the General Plan. At the time the Cannery project application was submitted, on March 22, 1990, only one other "pipeline" project required a General Plan amendment. That project was Emeryville Business Center, a mixed-use proposal which is not anticipated to result in a significant cumulative increase in traffic and other impacts.

In addition to the pipeline projects, the City of Emeryville Planning Department is aware of a proposal by Catellus Development Corporation for the Santa Fe Pacific property at San Pablo Avenue and 40th Street. No formal application has been submitted. However, the developer has made known the general features of the proposed Yerba Buena Park project. There are currently two proposed schemes:

	Scheme A	Scheme B
Residential	400 units	600 units
Community Retail	150,000 s.f.	150,000 s.f.
Regional Retail	104,000 s.f.	300,000 s.f.
Office	1,100,000 s.f.	-------

Source: Catellus Development Corporation Company, August 23, 1990

Both schemes would increase the demand for public services, including fire, police, schools, recreation and public and private utilities. Both schemes would also result in a net increase in traffic over the volumes anticipated by the General Plan. The analysis presented below addresses the traffic volumes and impacts of Scheme A, as the worst case, and provides the traffic volumes generated by Scheme B.

2.4.2 Cumulative Impacts

Development of the proposed Cannery East project in conjunction with the buildout of the approved General Plan would cause cumulative impacts to:

Traffic. The project, although causing insignificant impacts itself, would incrementally add to traffic congestion on local roads and intersections. These are discussed in detail in chapters 4.2 and 6.1.

Public Services. The proposed project would incrementally add to the demand for fire and police protection services in Emeryville.

Population. The proposed project would add to the residential population of the City.

2.4.3 Growth Inducement

The proposed project would add new housing units to the area and, with it, the possibility of attracting new residents from outside the Bay Area.

In turn, this would accelerate demand for commercial and municipal services. Cumulatively, the proposed project could have growth-inducing effects by increasing land values and encouraging other similar projects in the City. However, such projects would be in keeping with the goals and objectives expressed in the City's General Plan.

2.4.4 Unavoidable Adverse Impacts

Adverse impacts associated with the proposed project could be reduced to less than significant levels if all required and recommended mitigation measures are implemented. Potential adverse traffic impacts have been identified resulting from cumulative development anticipated to follow the proposed project. More extensive mitigation measures would be required as part of the Yerba Buena Park proposal, in particular, to maintain acceptable levels of service and avoid adverse air quality impacts.

3. PROJECT DESCRIPTION

3.1 PROJECT LOCATION

The project is located in Alameda County in the City of Emeryville, as shown in Figure 3-1. Existing industrial, retail, office, warehouse and residential uses surround the project site. The site is bounded by 45th Street on the north, Park Avenue on the south and Haven Street on the west. The eastern boundary is the property line of the Pepsi Cola Bottling Plant (see Figures 3-2 A, B & C). The A.C. Transit vehicle storage and maintenance garage is located north of the site. Old two-story brick warehouse buildings, some renovated for retail or light-industrial uses, lie across Park Avenue and south of the site (see Figure 3-3, A). More recent concrete warehouse, manufacturing and light-industrial buildings are located to the north and west. Across Park Avenue to the southwest is the former Emeryville City Hall. The parcel contiguous to the west of the project is vacant and owned by Del Monte Corporation

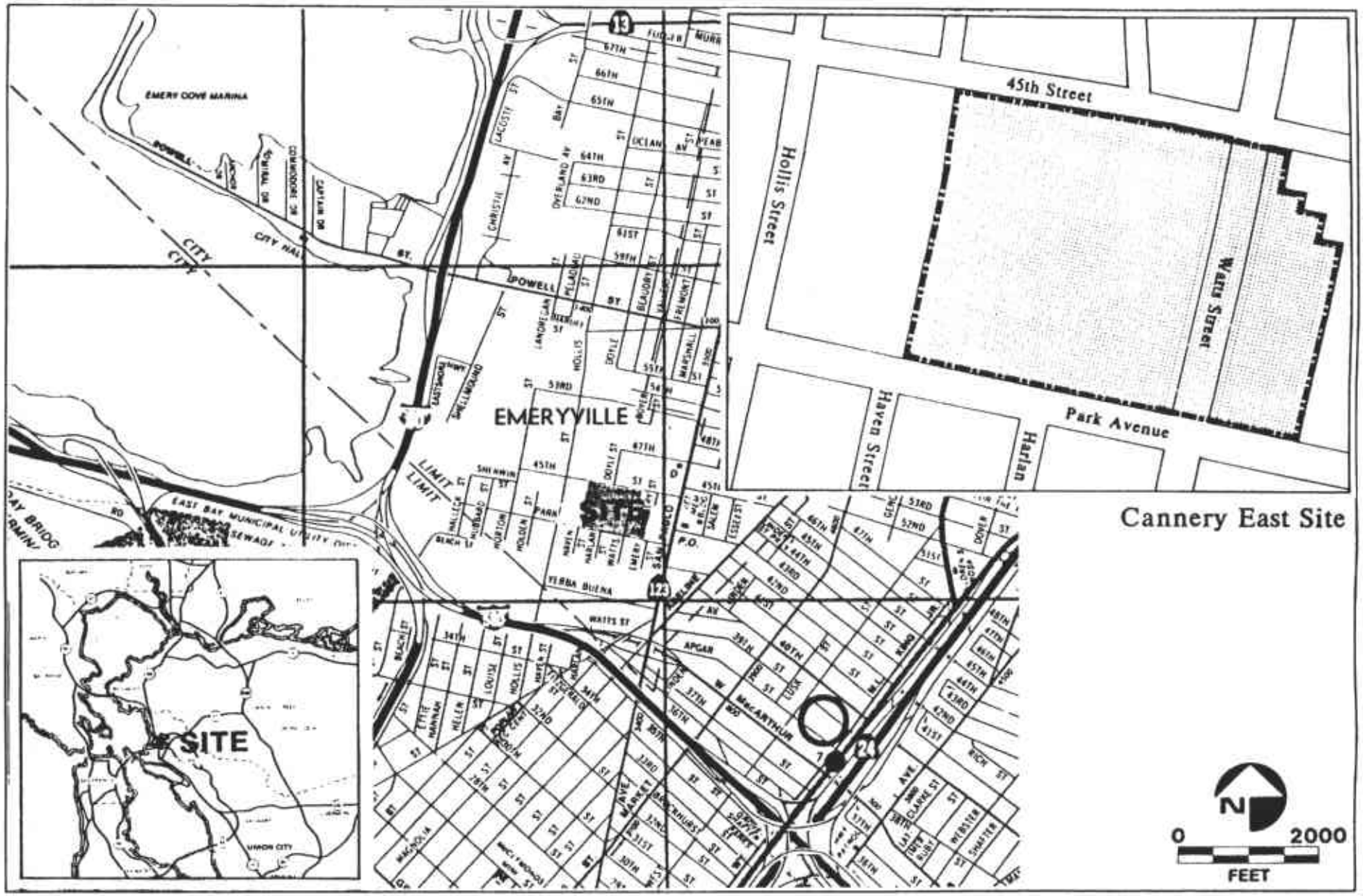
3.2 PROJECT BACKGROUND

The project site is the former site of the Del Monte Corporation pear cannery. A complex of unreinforced brick structures, some of the cannery buildings were damaged in the October, 1989, Loma Prieta earthquake and require demolition. Two masonry buildings on Park Avenue were considered for retention, but will also be demolished. These buildings contain asbestos and also suffered damage during the earthquake (see Figure 3-3, B).

3.3 PROJECT CHARACTERISTICS

The project site includes three lots with a total area of about 11.77 acres. Two lots are now vacant. The two existing brick buildings on the third lot contain asbestos and would be demolished. Watts Street runs north/south through the eastern portion of the project site. A summary of project characteristics is included in Table 3-1.

Land Use. The proposed project would consist of a total of 422 dwelling units in up to 21 buildings. Project density would be up to 34 dwelling units per acre, which is below the maximum density of 45 dwelling units per acre permissible on the site with a conditional use permit.



SITE LOCATION

Cannery East
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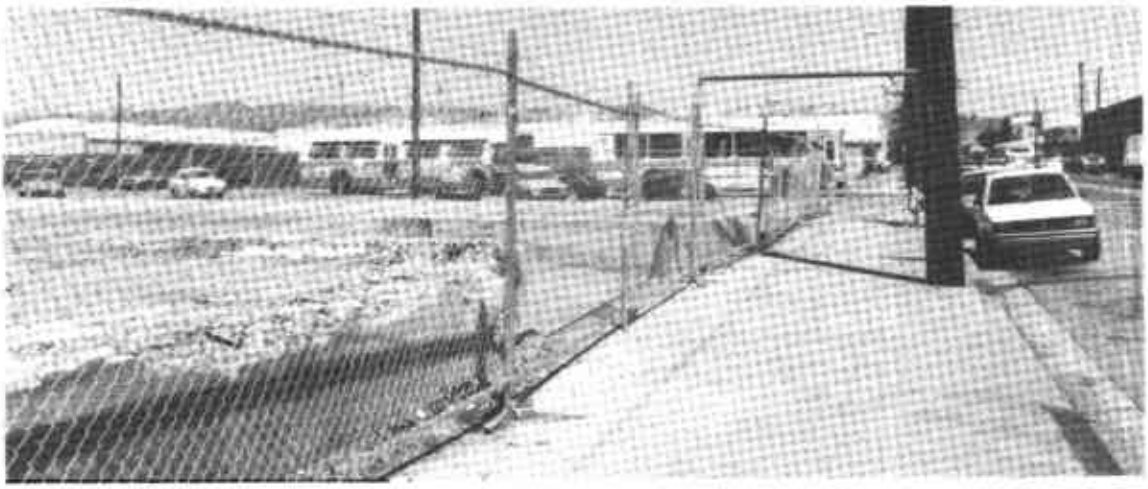
Figure 3-1

A. View along Park Avenue looking west



B. View looking northeast

C. View looking southeast along Watts Avenue towards Pepsi-Cola Bottling Co.

SITE VIEWS

Cannery East

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Figure 3-2

A. Warehouse building at corner of Park Avenue and Harlan Street

B. Existing Cannery building looking northeast along Park Avenue

ARCHITECTURAL CONTEXT

Cannery East

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Figure 3-3

TABLE 3-1

PROJECT CHARACTERISTICS

Site Area:	11.77 acres
Description:	Residential buildings
Building Height:	50 feet
Square Footage:	364,470 gross square feet of living area
Units:	422
Density:	34 D.U./acre
Parking:	622+ spaces

TABLE 3-2

UNIT/FLOOR AREA TABULATION

UNIT TYPE	GROSS SQ.FT	UNIT TOTAL	TOTAL LIVING AREA IN GROSS SQ. FT*	%
A - 1 BR / 1 BA	713	156	111,228	37
A1 - 1 BR w/ Upper Level	948	78	73,944	18.5
B - 2 BR / 1 1/2 BA	955	80	76,400	19
B1 - 2 BR w/ Upper Level	1,232	40	49,280	9.5
C - Studio	508	34	17,272	8
D - 2 BR Townhouse	1,069	34	36,346	8
PROJECT TOTAL		422	364,470	

*(Gross sq. ft. does not include terrace at each unit)

Source: Backen, Arrigoni & Ross, Inc.

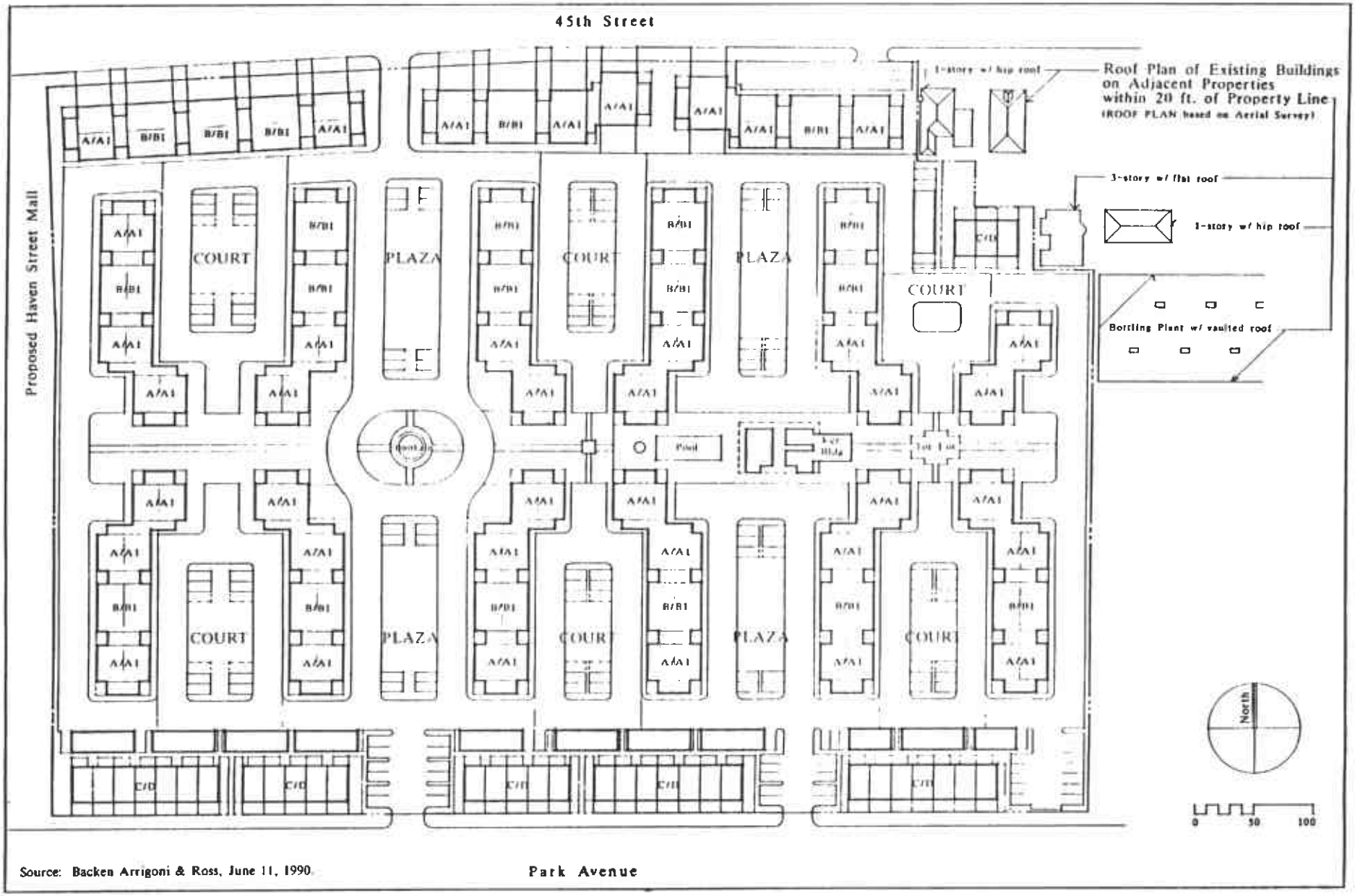
In order to create diverse living opportunities within the required density, six unit types are proposed in two building types: 1) one bedroom/one bath; 2) one bedroom with upper level; 3) two bedroom/one and a half baths; 4) two bedroom with upper level; 5) studio; and 6) two bedroom townhouse. Table 3-2 gives a complete outline of the units and their associated square footages as currently proposed. (Minor adjustments may be made in final plans) The two building types would be three-story townhouses with carports and a three-stories of units over garages. The buildings' height would exceed the 40-foot limit for the district, by approximately 10 feet. The townhouse/studio units and units with upper-level loft space would offer live/work opportunities.

Building Siting (Figure 3-4). Along 45th Street and Park Avenue the buildings would be parallel to the streets. Buildings located along Park Avenue would contain units with garden courts at the street for the lower units, and the upper level townhouses with their gardens in the back of the unit. Their carports would be located to the south of these buildings, oriented to the interior "ring" road. Most of the buildings along 45th Street would be set back from the street by tandem parking spaces, by an interior road, or by a street setback. The buildings in the interior of the project would be arranged in rows, oriented north/south, clustered around courtyards with garages at grade. A linear open space corridor, oriented in an east/west direction, would divide the site at its midpoint. In the eastern portion of this corridor, there would be a recreation building with a pool and play area. To the east, and serving as a focal point along the corridor, would be a fountain.

Access, Circulation, Roads (Figure 3-5). Two points of access to the project would be taken off Park Avenue: the primary access would be on the west, where Harlan Street currently intersects Park; and the secondary access would be on the east, where Watts Street intersects Park. There would be two access points off 45th Street. A "ring" road would serve as the main internal collector road through the site. The primary entrance at Harlan Street would extend north through the site from Park Avenue to the project entrance at 45th Street. This street would have twelve 90° guest parking spaces on both sides where it intersects with Park Avenue. It would be a wide street with a landscaped "plaza" or median containing guest spaces. A fountain, the project's focal point, would divide this road where it intersects the open space corridor. The secondary access road from Park Avenue at Harlan Street would contain ten 90° guest parking spaces and two landscaped "plazas" or "medians." It would not be a through road and would be blocked by the open space corridor. All entrances except the secondary entry at 45th Street would have security gates.

Cul-de-sac car courtyards and the internal ring road would form the internal vehicular circulation system. There would be no vehicular access through the linear open space corridor. The buildings would be double-loaded. The majority of units facing the ring road would be accessed from it, while those facing the courtyards would be accessed from the courtyards. The courtyards would connect to the pedestrian-oriented open space corridor.

Parking. The City's zoning ordinance requires 602 parking spaces, and each unit must have at least one dedicated parking space. The project would have at least the 622 spaces, 3.3% more than the requirement. The parking requirements would be met by covered parking in carports and garages and by surface parking in the courtyards, medians and two project entry areas, as well as in driveways (Table 3-3).



Source: Backen Arrigoni & Ross, June 11, 1990.

SITE PLAN

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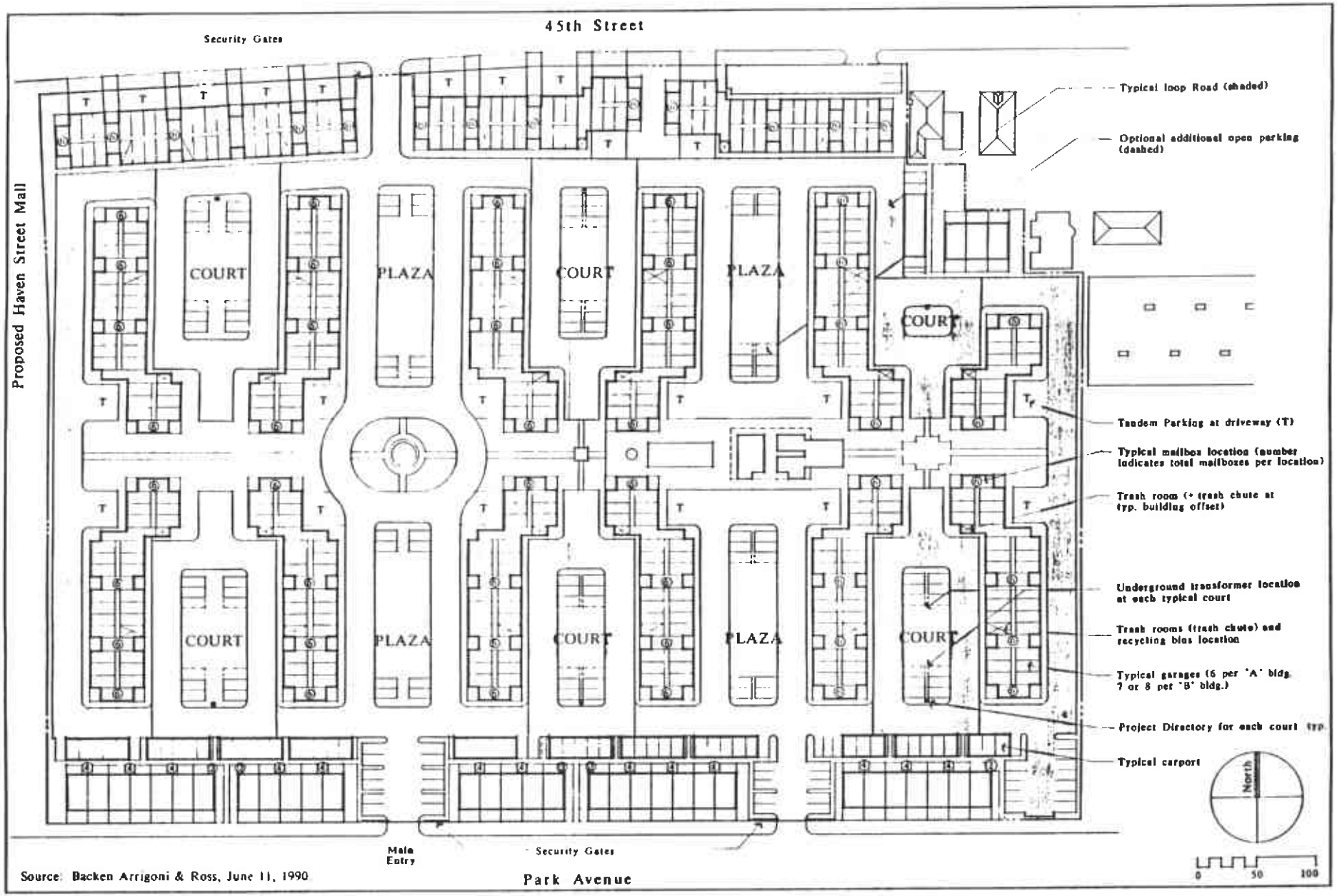
Figure 3-4



Source: Backen Arrigoni & Ross, June 11, 1990

SITE PARKING & CIRCULATION PLAN

Cannery East
Wallace Roberts & Todd
Figure 3-5

TABLE 3-3

PARKING CALCULATION

Required Parking

A. Resident			
(1) 268 Studios/1BR @ 1.0./1	= 268		
(2) 154 2 BR @ 1.5/1	= 231		
(3) Total		=	499
B. Guest			
422 Units @ .25/1		=	106
C. Total Required Parking		=	605 Spaces

Parking Provided

A. Open Parking on Grade		=	121*
B. Driveway Parking		=	70
(Note: Used by garage owner only)			
C. Covered Parking			
(1) Carports	= 68		
(2) Garages	= 378		
(3) Total		=	446
D. Total Parking Provided		=	637 Spaces

(*excluding a total of 24 optional additional parking spaces as shown dotted on site plan)

Source: Backen, Arrigoni & Ross, Inc.

Open Space/Recreation (Figure 3-6). The open space system would contain two components: 1) the linear pedestrian mall/open space corridor; and 2) the courtyards and plazas.

Linear Pedestrian Mall Corridor. The project's pedestrian space dominates the central portion of the site. It provides an east/west open mall or spine within the otherwise urban vehicular-oriented design. This landscaped corridor is an active as well as passive recreation area because of the recreation center, tot lot and pool. The fountain court would be a landscaped focal point.

Courtyard and Plaza Open Space. The smallest element of the open space system would be the interior courtyards of approximately 100 feet wide, defined by the buildings. These would be car courts with shade trees, seating and guest parking. Each would act as the center of a small neighborhood.

Architectural Character. (Figure 3-7). The architectural character of the buildings would be urban with recognition of the industrial character of the surrounding community. Unit entrances along Park Avenue and 45th Street would be immediately off the street. Building elevations would be simple, with high windows. Terraces or decks would be located within the building envelope and would not project.

Socio-economic Character. Residents of the proposed project are expected to be in the moderate to middle income groups. A majority of the residents would likely be professional singles or couples without children.

3.4 PROJECT SPONSOR'S OBJECTIVES

The objectives of the proposed project are to: provide secure, moderate-density residential units that would be affordable to moderate-income residents; maintain the streetscape along Park Avenue by the design of housing units adaptable to include office or retail businesses; and make economic use of the project sponsor's land.

3.5 REQUIRED APPROVALS

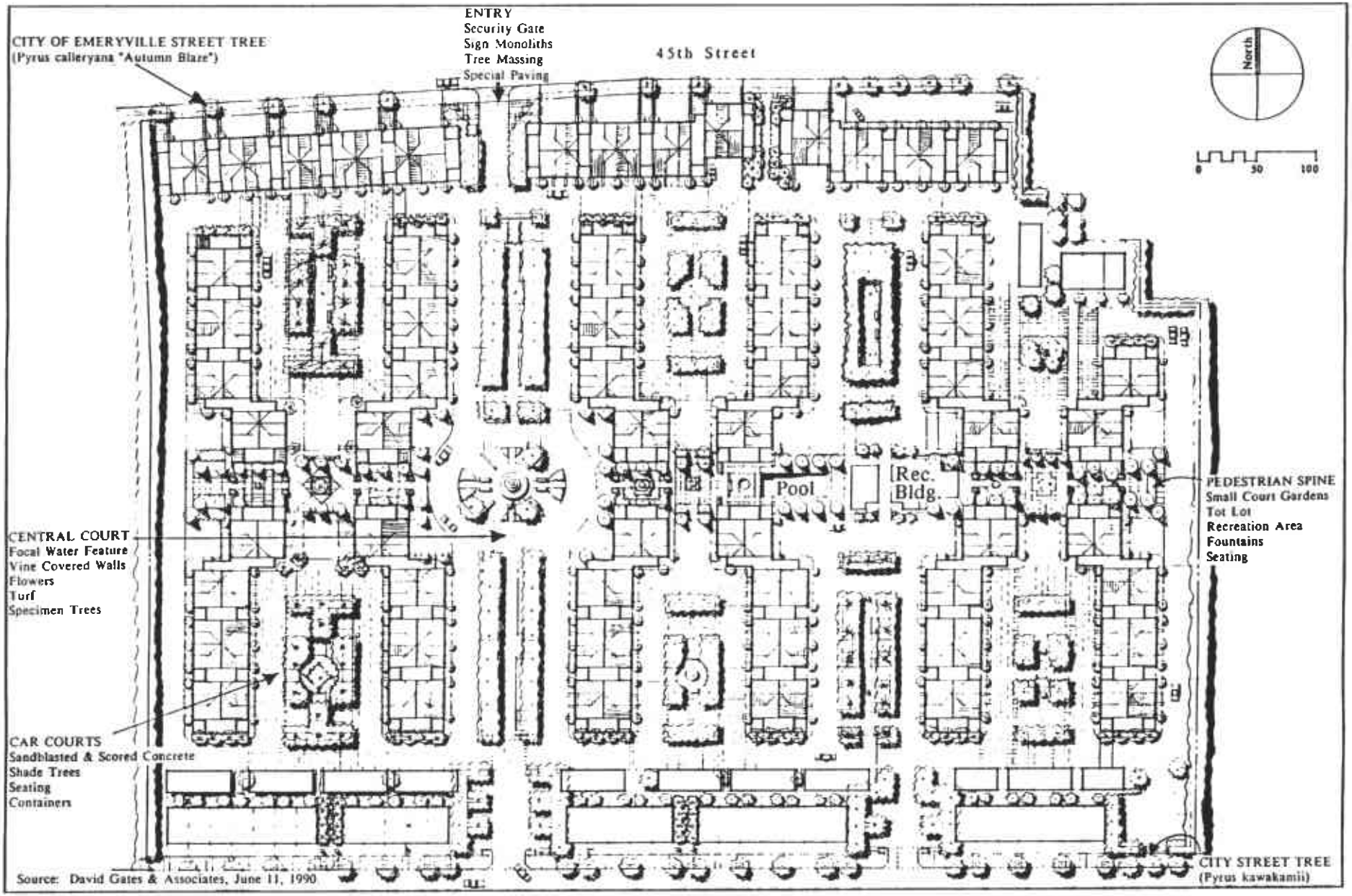
The proposed project would require the following approvals and governmental actions:

General Plan.

The project would require an amendment to the General Plan of the City of Emeryville to: 1) change the height limitations for the project site from 40 to 50 feet; 2) change the designation along Park Avenue from Local Commercial (maximum FAR of .7) to Medium Density Residential (maximum FAR of 1.3), permitting 20 - 45 dwelling units per gross acre; 3) eliminate Watts Street as a major pedestrian corridor and replace it with Haven Street; 4) close Watts Street (a local street) and show Haven Street as a local city street; 5) change the text in the General Plan to add "Haven Street" to the discussion of pedestrian corridors on page III-61.

Zoning.

The project would require a rezoning application to change the site's zoning along Park Avenue from Neighborhood Commercial, C-N, to Medium-Density Residential, R-M, and a Conditional Use Permit to change the height limit from 40 to 50 feet and to allow up to 34 units per acre.



LANDSCAPE CONCEPT

Cannery East
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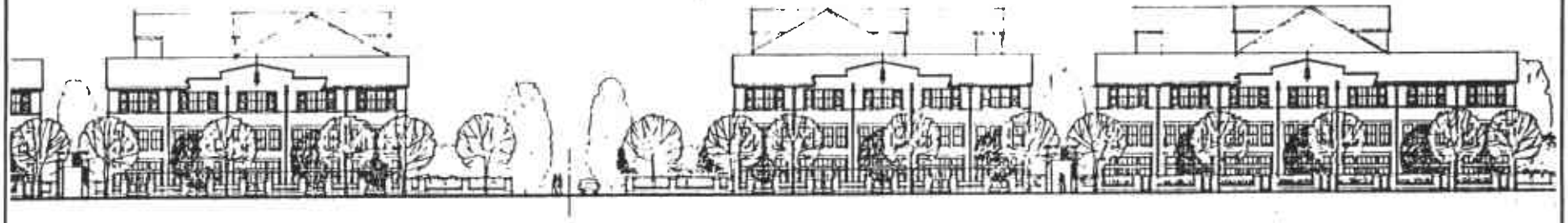
Figure 3-6



Park Avenue Elevations

Interior Court/Ring Road Elevations

Source: Backen Arrigoni & Ross, June 11, 1990.

ELEVATIONS

Cannery East
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Figure 3-7

In addition to the regulatory and permit requirements discussed above, the recently-enacted Assembly Bill 3180 affects the environmental review and development approval process. CEQA requires that mitigation measures to address significant environmental impacts be identified in the EIR, and that the lead agency adopt findings that all identified significant impacts have either been mitigated or are subject to overriding considerations created by other, beneficial characteristics of the project. CEQA, however, does not specifically require adoption of measures to implement mitigation programs identified in an EIR. Under AB 3180 a lead agency must, in making findings, identify measures to reduce significant impacts of a project, and adopt a reporting or monitoring program for each adopted or required mitigation measure.

4. ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

4.1 LAND USE AND PLANNING

4.1.1 Setting

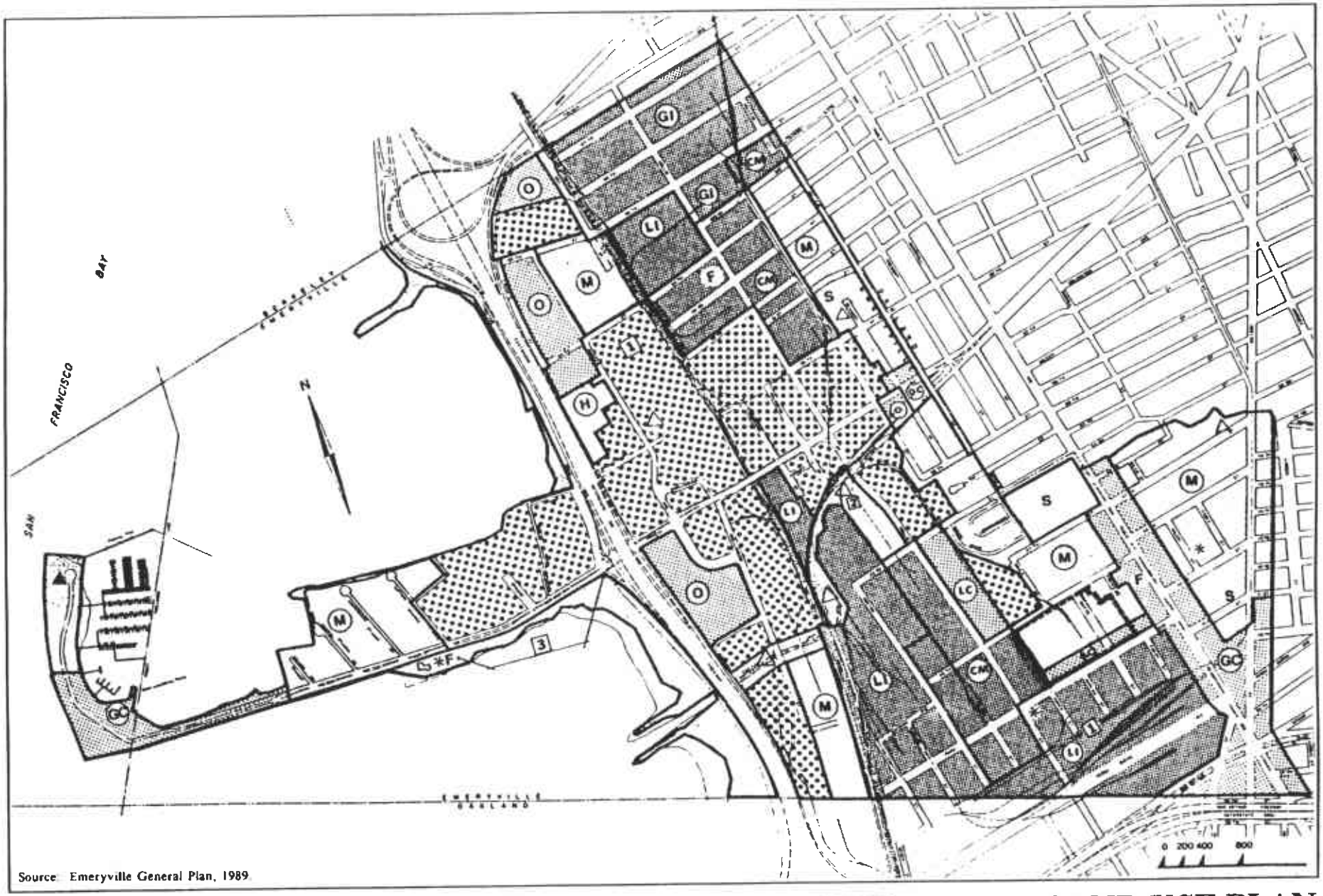
The project site is located in the North End District whose predominant land use is housing and commercial, and where its land use development strategy calls for promotion of new medium-density housing.

Industrial, light-industrial, warehouse, retail and office development surround the site as shown in Figure 4-1. A vacant lot owned by the Del Monte Corporation adjoins Haven Street on the site's western boundary and the Pepsi Cola Bottling Plant forms the eastern boundary. The A.C. Transit vehicle garage and maintenance yard and converted light-industrial buildings are located on 45th Street across Park Avenue to the south. These latter buildings have been renovated for office, retail, or light industrial use. Located immediately to the southwest and across Park Avenue is the former Emeryville City Hall. Only one public street, Watts, crosses the site, towards the eastern end, while Haven Street, which is currently on abandoned railroad right-of-way, borders it on the west.

The proposed project is located on a 11.77-acre site and includes Assessor's Parcel Numbers 049-1027-028, 049-1029-001-03 & 04, 049-1031-003-01, 049-1031-004, and 049-1027-022-01. The site is partially vacant; most of the former Del Monte Cannery buildings were damaged in the October, 1989 Loma Prieta earthquake and required demolition. The two remaining brick buildings on the site along Park Avenue contain asbestos and also suffered damage during the earthquake and are proposed to be demolished.

General Plan Policies: In the Emeryville General Plan (as amended by the Emeryville City Council on May 3, 1988), the great majority of the project site is designated Medium-Density Residential, RM, and a portion along Park Avenue is designated Local Commercial, LC. Medium Density permits a range of 20 to 45 dwelling units per gross acre, or approximately 34 to 77 persons per gross acre (Figures 4-1 and 4-2). This category would permit low-rise, multi-family units and garden apartments (like Emery Bay Village at the low end of the density range or Watergate at the high end). The General Plan also specifies a building intensity for the majority of the site of 1.3 FAR and along Park Avenue of .7 FAR. The General Plan also establishes that medium density developments shall be preferred along arterials, such as Park Avenue.

In this area there are a number of different land uses, including land that is currently underutilized and represents an important resource to the City. The City of Emeryville will review residential developments to ensure that the proposed housing offers a quality living



Source: Emeryville General Plan, 1989.

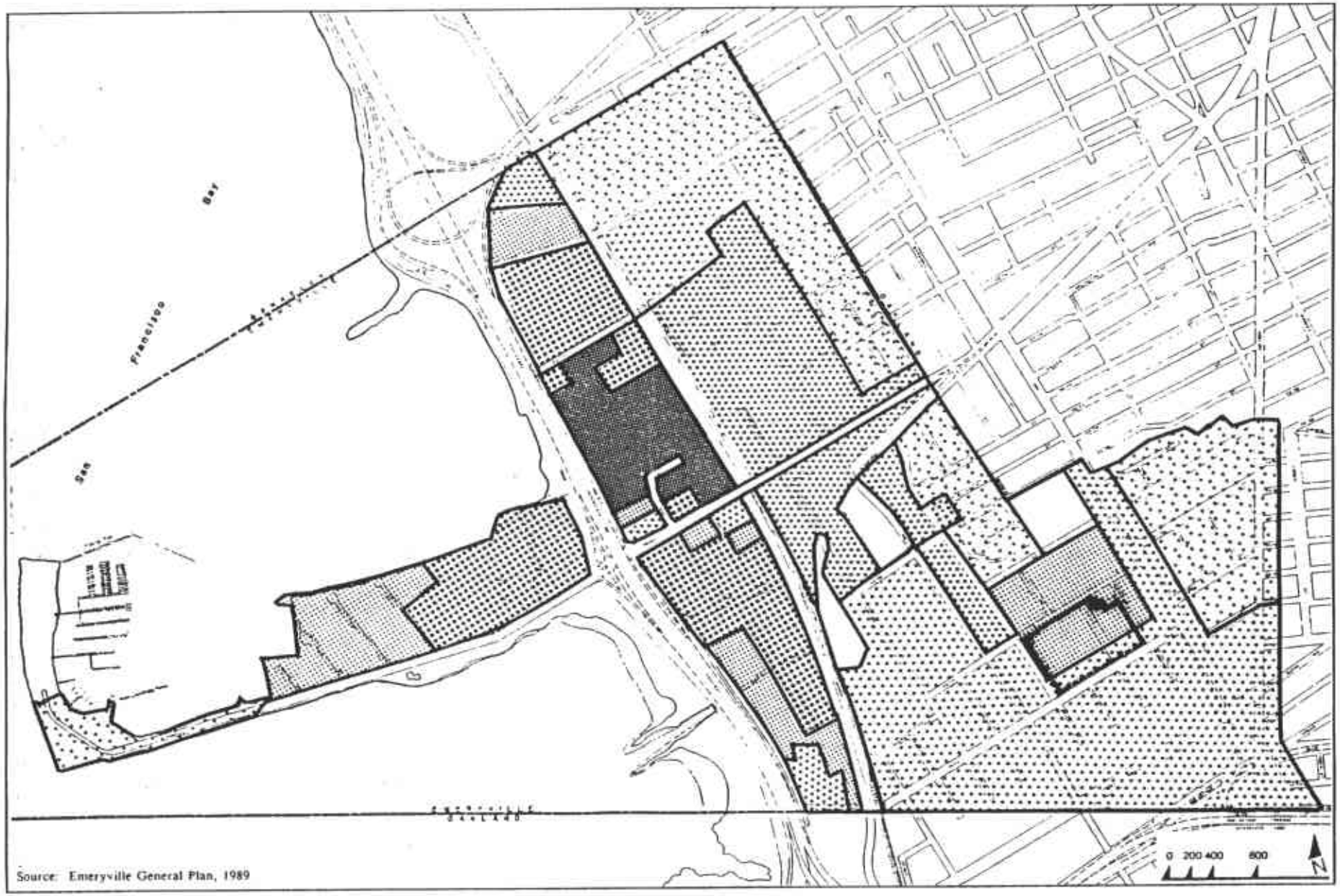
- (M) MEDIUM DENSITY RESIDENTIAL 20-45 du/gross ac.
- (H) HIGH DENSITY RESIDENTIAL 45 du/gross ac.
- (GC) GENERAL COMMERCIAL
- (LC) LOCAL COMMERCIAL
- (O) OFFICE
- MIXED USE
- (LI) LIGHT INDUSTRIAL
- (CM) CUSTOM MANUFACTURING
- (GI) GENERAL INDUSTRIAL
- OPEN SPACE
- ▲ PARK
- △ PROPOSED PARK
- * PUBLIC BUILDING
- F FIRE STATION
- S SCHOOL
- [1] ALTERNATIVE LAND USES (SEE "OPTION AREA" POLICIES)

LAND USE PLAN

Cannery East

Wallace Roberts & Todd

Figure 4-1



MAXIMUM F.A.R.
(ILLUSTRATIVE ONLY)

0.5 1.0 1.5

0.7 1.3 2.0

BUILDING INTENSITY

Cannery East
Wallace Roberts & Todd
Figure 4-2

environment and complements surrounding neighborhood character. It will use the following criteria: 1) relationship to adjacent structures; 2) provision of adequate, on-site, usable open space where feasible; 3) relationship to City-wide open space system; 4) incorporation of a variety of housing types; 5) provision of buffers between different land use types to achieve overall neighborhood cohesion; and 6) incorporation of security measures.

Zoning: The General Plan designations discussed above correspond to the Emeryville Zoning Ordinance, in which the majority of the site is Medium Density Residential (R-M) and a portion along Park Avenue is zoned Neighborhood Commercial (C-N) (Figure 4-3).

The R-M zoning allows single-family detached, two family, single family semi-attached and townhouses. The maximum allowable number of dwelling units in the district is 20 per gross acre. A higher density of up to 45 units per acre could be permitted with a Conditional Use Permit. Buildings in this district may have a FAR of 1.3. Each dwelling unit shall have a minimum gross floor area of not less than 500 square feet. C-N zoning allows commercial uses such as convenience sales and services; eating and drinking establishments, medical services and personal services.

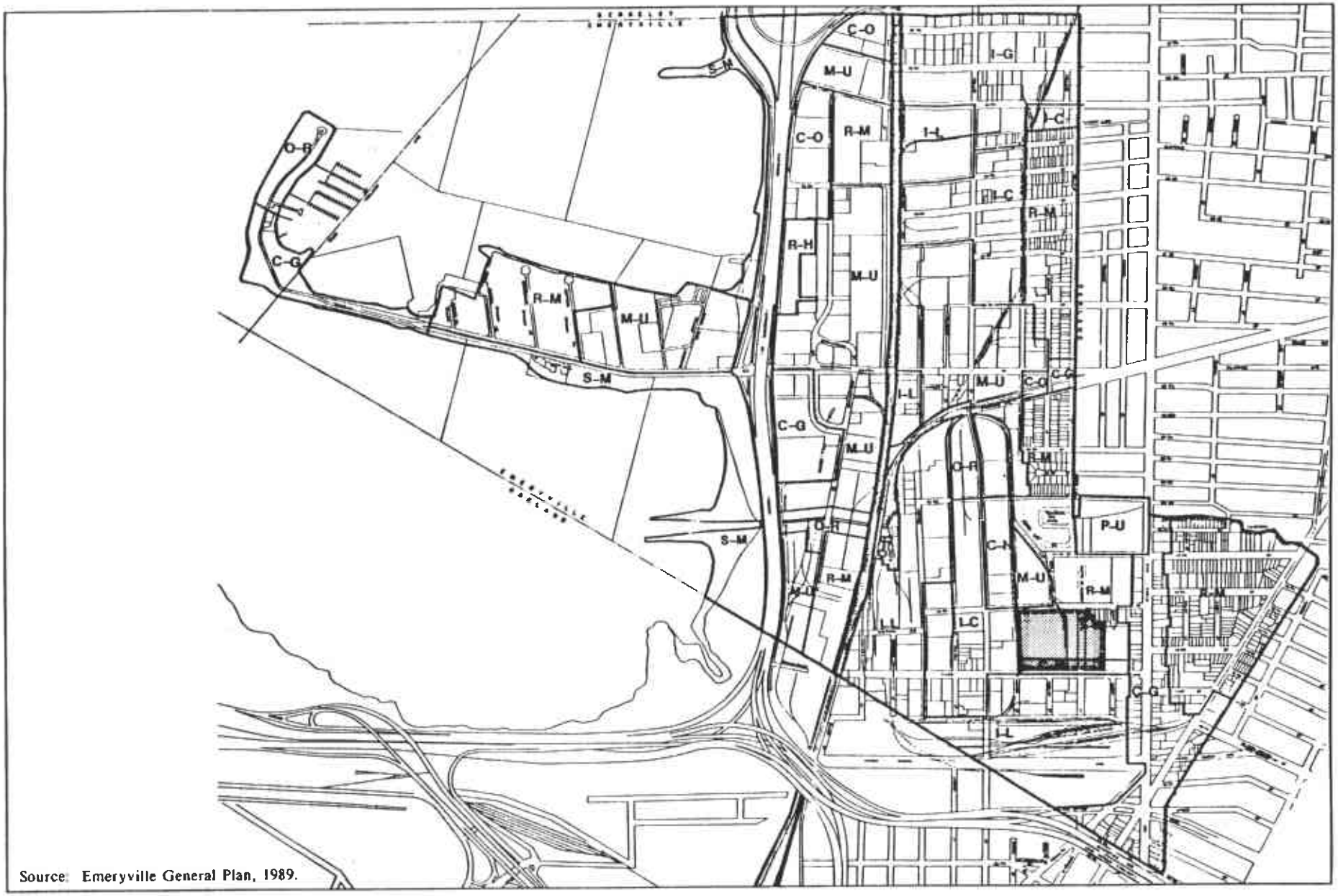
The Zoning Ordinance regulates building intensity. It specifies that new developments shall be an appropriate density based upon locational considerations, accessibility, and the density of the majority of existing surrounding uses. This is implemented by designating Floor Area Ratio (FAR) areas. The FAR is defined as the square footage of a development relative to the land area that it will occupy. As discussed above, the majority of the project site is assigned a building intensity of 1.3. However, along Park Avenue at the southern perimeter of the site and corresponding to the C-N zoning, the FAR is .7 (Figure 4-4). The permitted height for the entire site is 40 feet (Figure 4-5). An increase in height to 55 feet, not exceeding three stories, could be allowed with a Conditional Use Permit.

Parking requirements for residential districts include a provision that sites containing five or more dwelling units must provide one guest parking space for each four units. This would be in addition to the minimum requirement of one space per unit.

Affordable Housing Set-Aside Ordinance. In response to a shortage of affordable housing, the City has recently passed an affordable housing set-aside ordinance for all new residential development of thirty dwelling units or lots. Under the ordinance, developers of new residential projects (new construction and the conversion on non-residential commercial space to residential use) must set-aside 20% of the dwelling units to be affordable by moderate, low or very low income households for a minimum period of twenty-five years from the date of availability. The set-aside requirement shall be imposed only once on a given development, regardless of changes in the character of ownership of the development.

All set-aside units shall be sold or rented to moderate, or very low income households as certified by the City or its operating agent. Affordable for moderate and low income households means that housing costs are less than 30% of the gross income of a moderate income household (adjusted for household size, depending on the number of bedrooms in the dwelling unit). In order to avoid a potential economic burden to the applicant, the City will consider the possibility of an increase in density of up to 25%, provided that the increased density does not conflict with the goals of the City General Plan.

Credit for set aside units constructed at one location within the City may be transferred to another site to satisfy the requirement.



Source: Emeryville General Plan, 1989.

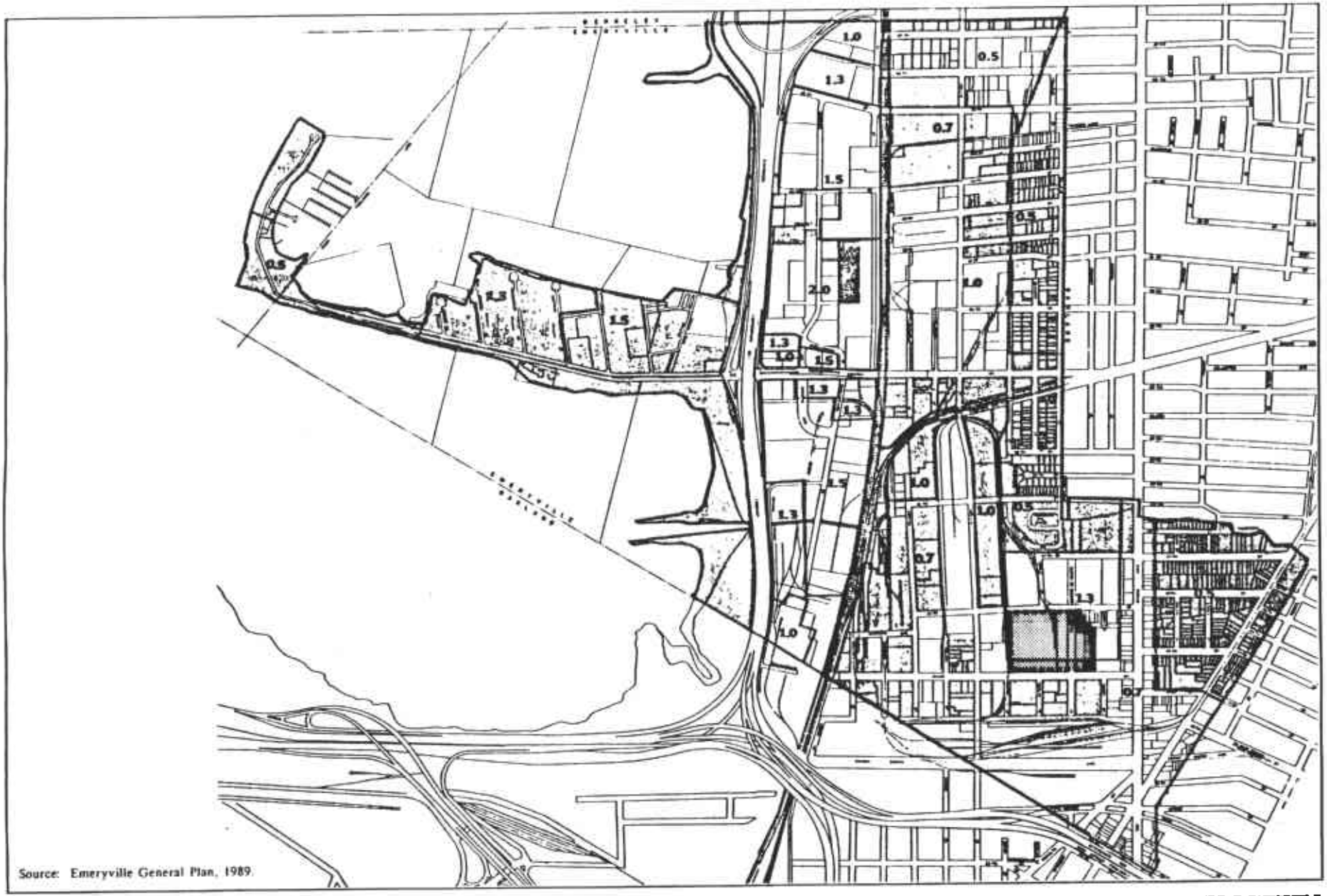
R-M	Medium Density Residential	C-G	General Commercial	M-U	Mixed Use
R-H	High Density Residential	I-C	Custom Manufacturing	P-U	Public Use
C-N	Neighborhood Commercial	I-L	Light Industrial	O-R	Outdoor Recreation
C-O	Office Commercial	I-G	General Industrial District	S-M	Shoreline Management

ZONING DISTRICTS

Cannery East

Wallace Roberts & Todd

Figure 4-3



Number on map indicate maximum Floor Area Ratio

The Floor Area Ratios do not apply to dwellings except when they are part of a multiple - use development.

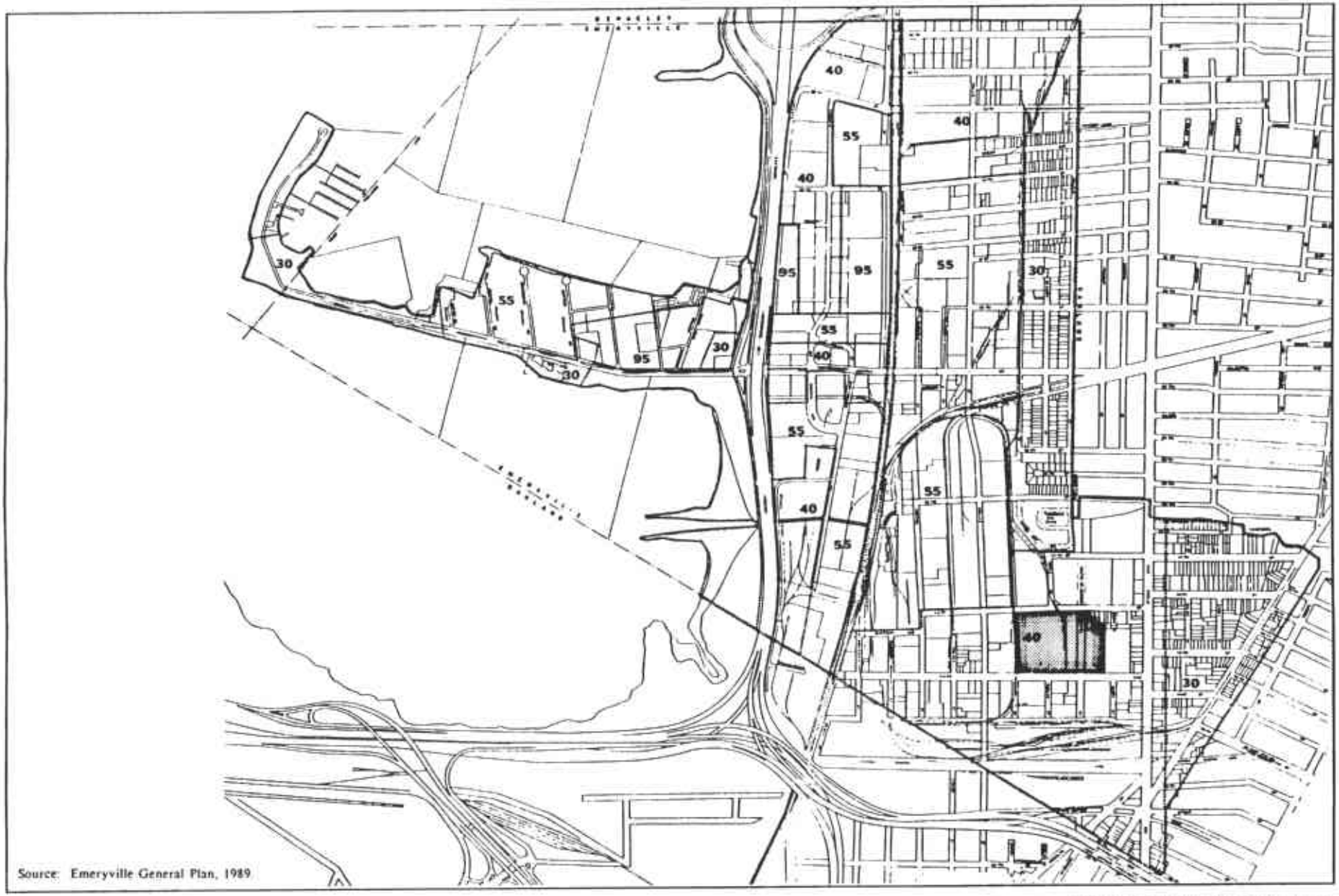
Neighborhood Conservation Area. Refer to Article 9 - 4.51 for intensity restrictions.

BUILDING INTENSITY

Cannery East

Wallace Roberts & Todd

Figure 4-4



Source: Emeryville General Plan, 1989

Numbers on map refer to maximum building height.

In certain situations heights may be increased pursuant to Article 9-4.52

BUILDING HEIGHTS

Cannery East

Wallace Roberts & Todd

Figure 4-5

4.1.2 Impacts

The proposed residential project would be up to twenty-one three-story townhouses with carports and three-story units over garages. The 50-foot high residential buildings would contain approximately 422 dwelling units, for a project density of 35 dwelling units per acre. The 622 parking spaces would be provided in covered carports, in garages and in surface parking spaces at grade.

Of the 422 new housing units, 234 will be one-bedroom, 120 will be two-bedroom, 34 studio, and 34 two-bedroom townhouse units. Assuming an average of one person per bedroom, the project would bring in an additional 576 persons to the City. Emeryville's 1990 population was 5,100. The additional population would therefore constitute an 11% increase in population.

General Plan Policies

The proposed project relates to the relevant General Plan policies in the following ways:

Housing

Policy 2:
"Mixed-use areas shall be desirable locations for medium-density residential development. In reviewing mixed-use projects, the City should encourage a mix of activities including residential development, where residents would not be adversely affected by other activities and vice versa."

The proposed project would conform to this policy, adding medium-density residential uses, with provision for live-work opportunities, and the potential for limited local commercial uses along Park Avenue.

Policy 3:
"The City should facilitate the conversion of underused industrial areas for residential or live/work use. Several sites in the south end of the City, currently occupied by industrial businesses, would be appropriate for future residential or live/work development . . ." (page III-22)

Construction of the proposed 422 medium-density dwelling units would supply this transitional mixed-use area with needed housing, conforming to the General Plan's development objective of promoting new housing in this area. The site, a former pear cannery, is currently partially vacant and considered an underutilized resource. The project's location makes it accessible to public transit and neighboring emerging commercial areas. The connection of water and sewer lines should not require the closing of Watts Street, nor the rerouting of public transportation on that street. The project would respond to Policy 3 by designing units that could be adapted to include office or retail businesses.

Pedestrian & Bicycle System

Policy 1:
"The City should develop a comprehensive pedestrian network to link the City's activity centers, public facilities, and open space areas. The network should offer a visually enjoyable experience, as well as a viable alternative to the automobile."

Policy 2:
"The pedestrian and bicycle systems should be designed to minimize potential safety hazards from automobiles. Pedestrian routes in particular should avoid heavily trafficked roads, such as the main City arterials . . ."

Policy 3:
"The pedestrian and bicycle systems, while serving local Emeryville travel needs, should be integrated into a regional network in order to function as a viable alternative to the automobile . . ." (page III-58)

Watts Street is shown as a major pedestrian corridor in the General Plan (Figure 4-6). The proposed project would eliminate Watts Street as a major pedestrian corridor and replace it with the extension of Haven Street. This replacement would be consistent with Pedestrian and Bicycle System Policies 1 through 3 as Haven Street is also a local city street.

Land Use

General Policy 1:
"Future land development in Emeryville shall be governed by the land use policy map (Figure 4-1). The policy map is a generalized interpretation of the written policies.

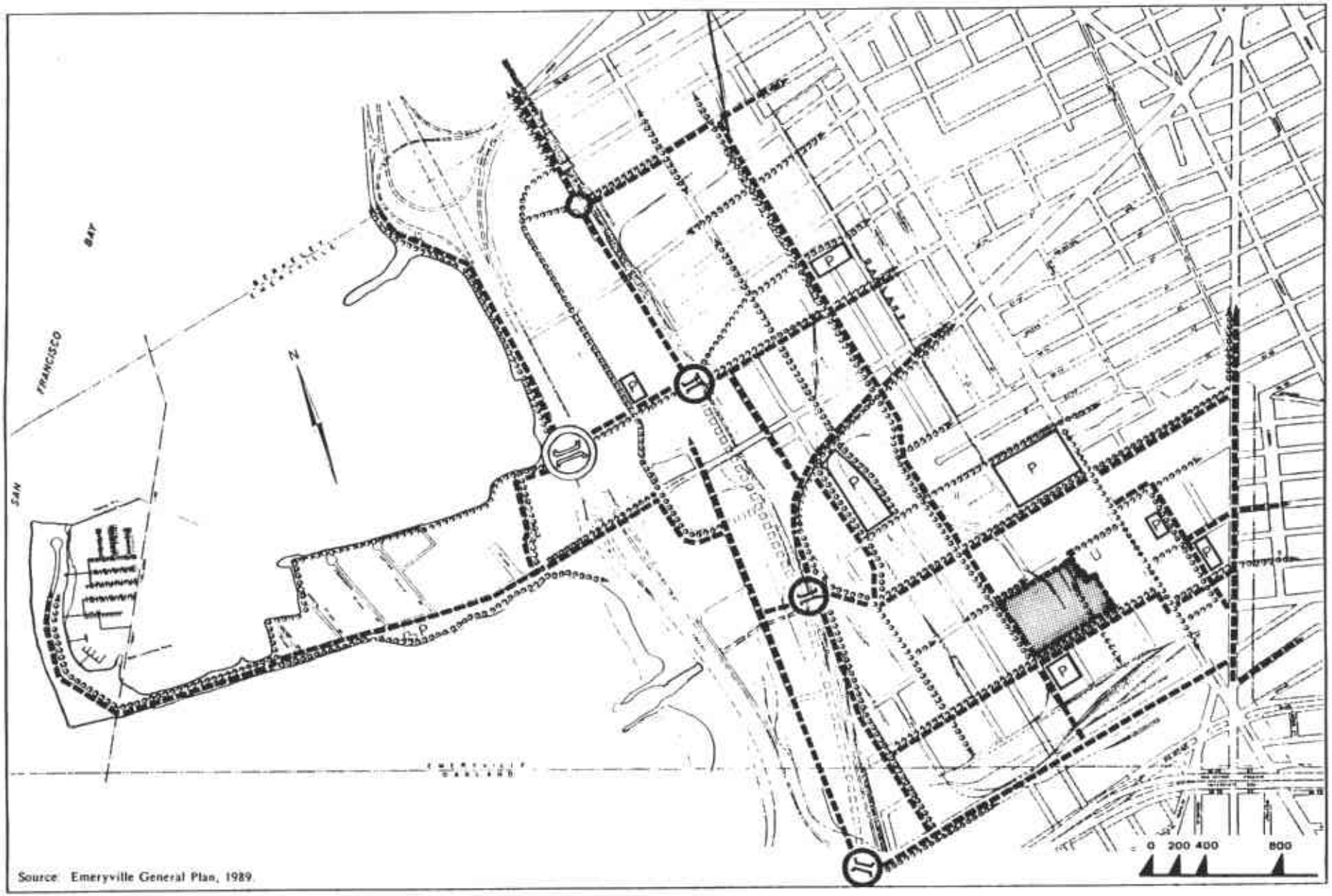
General Policy 2:
"New development projects shall be an appropriate density based upon locational considerations, accessibility, and the density of the majority of existing surrounding uses . . ." (page III-89)

In order to fully utilize the site for medium-density residential uses, a portion of the site's commercial land use designation and zoning district would require a change to medium-density residential. It would also require a change in the FAR to 1.3 from .7. These changes would support Land Use General Policies 1 and 2 that specifies new projects be based upon approximate densities for the project area. A FAR of 1.3 would be consistent with the FAR of surrounding areas to the north, west and east of the project site, and a medium-density residential use would be consistent with areas north and east of the project site.

Residential Policy 4:
"The following residential land use categories shall be used to describe the appropriate character and density of residential locations within Emeryville. They are intended to provide the City with a range of housing types, sufficiently broad to deal flexibly with various site constraints and opportunities. Population densities are based on the City-wide average household size of 1.7 persons."

> "Medium Density (20-45 dwelling units per gross acre, or approximately 34-77 persons per gross acre). This residential category accommodates low-rise multifamily units and garden apartments; Emery Bay Village is an example of development at the low end of this range and the Watergate complex is an example of development at high end of this range. Floor area ratios would vary from about 0.5 to 1.3." (page III-90)

The proposed project would generally conform to residential Policy 4 by providing 34 dwelling units per acre. However, a portion of the project along Park Avenue, as discussed above, would require a General Plan change from commercial to medium-density residential to fully comply.



Source: Emeryville General Plan, 1989

CIRCULATION PLAN: PEDESTRIAN & BICYCLE CORRIDOR

MAJOR PEDESTRIAN CORRIDORS

MAJOR BICYCLE CORRIDORS

OPTIONAL CORRIDOR

P MAJOR PUBLIC FACILITY

OVERPASS OVER RAIL OR FREEWAY

UNDERPASS UNDERNEATH FREEWAY

OPTIONAL OVERPASS (GENERAL LOCATION)

RAIL CROSSING AT GRADE

Cannery East

Wallace Roberts & Todd

Figure 4-6

Community Design

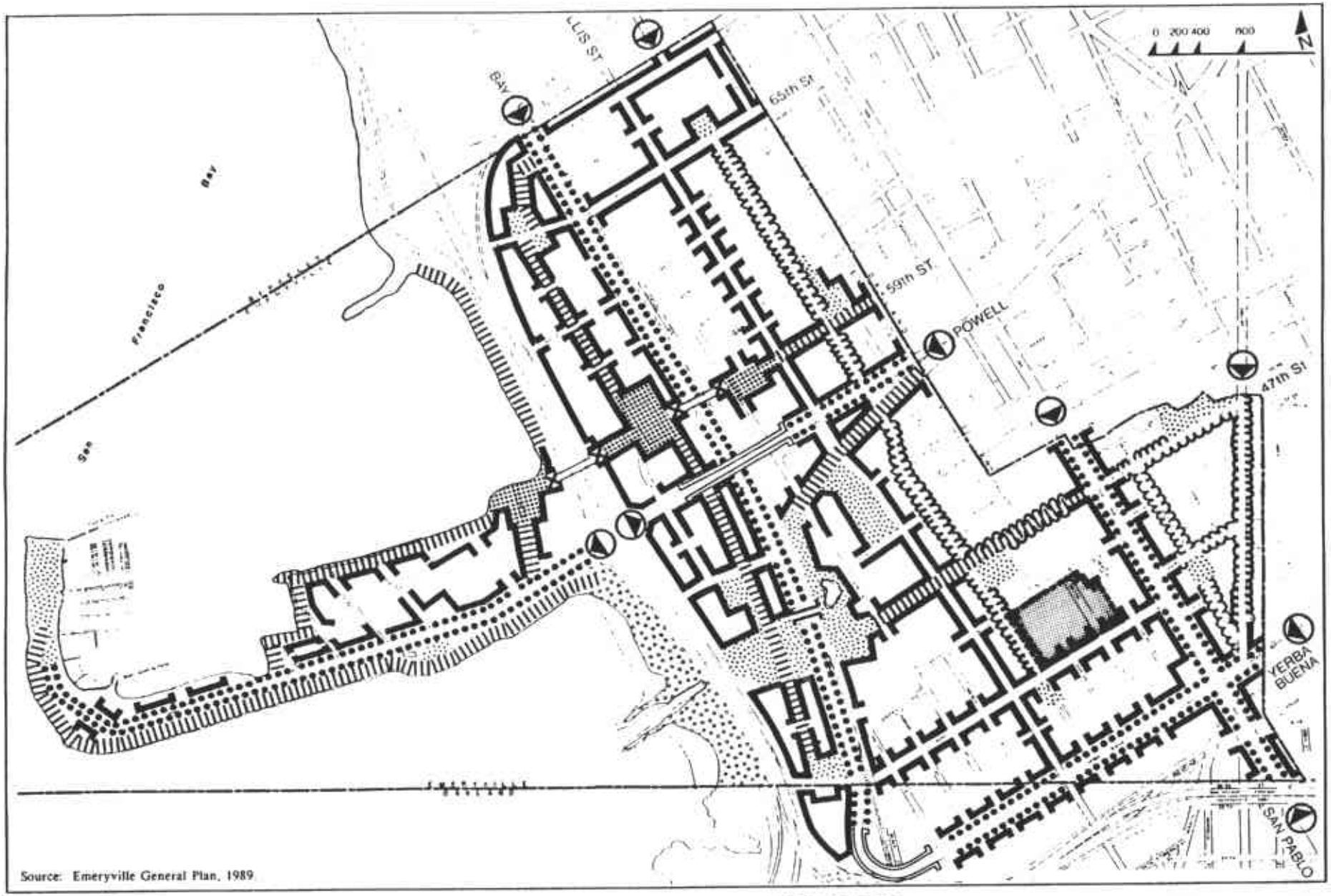
Building Form Policy 3:
"The City should permit new housing structures in the North End between 47th Street and Park Avenue. New development should consist of large low-rise structures. In order to define city blocks, the development should have a continuous street facade, uniform setbacks, and interior open spaces. Its visual relationship to the existing brick buildings along Park Avenue should be strengthened through the use of similar building materials and structures of similar height."

Building Form Policy 5:
"The existing brick buildings along Park Avenue should be retained and restored to preserve and enhance the historic value of this street. No building additions should exceed the existing height within the block; the existing continuous street facade should be preserved; and brick should be used as the predominant building material in new construction". (page III-107)

Cityscape Policy 18:
"The City should retain and develop the historic warehouse-industrial image of Hollis Street and Park Avenue. Existing buildings should be upgraded and new ones should be introduced to form a continuous street facade of buildings with similar height and bulk. This should be further accentuated with use of materials like brick and glass, and more traditional building details". (page III-110) (Figure 4-7)

These three policies address streetscape along Park Avenue as well as building form and character. The project would partially conform to these policies:

- The buildings would be three- and four-stories, which can be defined as low-rise structures.
- Along Park Avenue and 45th Street buildings would have uniform setbacks, respectively, by garden courts and by driveways. However, the Park Avenue setback would not conform to Policy 5, which specifies continuous street facades along this street.
- The project would contain interior open space in the form of a linear pedestrian system in the center of the site, complying with Building Form Policy 3.
- Brick is not proposed as a building material, as specified in Building Form Policy 5 and Cityscape Policy 18.
- Although the project would have an urban character and incorporate traditional building details of the surrounding area, such as wood windows and similar rooflines, the architectural character would not be an historic-warehouse image.
- The proposed height of the buildings along Park Avenue is three stories, which exceeds the two-story or approximately 25-foot height of existing buildings across the street on Park Avenue (see Figure 3-2, A).



PROVIDE CONTINUOUS STREET FACADE

PROVIDE STRONG BUILDING FACADE

PROVIDE FORMAL STREET TREE PLANTING

PLANT STREET TREES AS VISUAL CONNECTORS/BUFFERS

ACCOMMODATE PEDESTRIAN-ORIENTED MOVEMENT

PROVIDE MAJOR CITY OPEN SPACE

ESTABLISH MAJOR CITY PLAZAS

PROVIDE PEDESTRIAN/BICYCLE OVERPASS

UPGRADE EXISTING AND LOCATE NEW STREET OVERPASSES

ESTABLISH MAIN CITY GATEWAYS

PROTECT EXISTING NATURAL HABITAT

CITYSCAPE

Cannery East

Wallace Roberts & Todd

Figure 4-7

- The existing brick buildings on the site would be demolished and not retained as specified in Policy 3. However, they contain asbestos and suffered severe structural damage in the October, 1989, Loma Prieta earthquake.

Zoning

The proposed residential use would generally be in conformance with the R-M zoning of the majority of the site. A zoning application would be required for the following:

- to change the zoning of a portion of the site along Park Avenue to Medium-Density Residential (RM) from Neighborhood Commercial (C-N).

- to change the Floor Area Ratio (FAR) for the same portion to a FAR of the site from 0.7 to 1.3.

- to allow a height limit of 55 feet, ten feet higher than currently permitted for the whole site. This would also require a Conditional Use Permit application.

Parking requirements would be met by incorporating at least 622 and up to 637 parking spaces in the project design, as many as 32 more than required by the zoning ordinance.

Affordable Housing Set-Aside Ordinance

In the absence of market information from the project sponsor, it is not possible to determine whether any of the proposed units will be affordable by moderate- or low-income households, as intended by the project sponsor. However, under the City's newly-adopted Set-aside Ordinance, 20% of the project's 422 units must be for moderate-or low-income households. Thus a total of 84 units should be made available in this category. These units can be provided either on-or off-site and must be affordable under the affordability guidelines listed in the ordinance for a minimum of 25 years. The City has the right to waive this requirement if it so chooses. With the provision of the affordable units, the applicant is eligible for a 25% increase in density for the entire project.

4.1.3 Mitigation Measures

- In order to maintain Park Avenue as a city block, buildings along the street shall contain brick as the predominant building material.

- Building plans shall be revised to show a uniform setback from the street to ensure a continuous street facade along Park Avenue.

- Building heights shall be similar to those buildings across the street and south of the site on Park Avenue.

- The scale, design and materials shall be sensitive to the surroundings and reflect the unique architectural character of the warehouse buildings

- Details shall be incorporated into the building that are compatible with the historic warehouse image of the district.

- The required 20% of all units, (84 units), shall be set aside for low- and moderate-income households, according to the City's affordability guidelines, or alternatively, provide off-site units.

4.2 TRAFFIC AND CIRCULATION

4.2.1 Setting

Regional Access. Regional access to Emeryville is provided by Interstate 80 (I-80) and Interstate 580 (I-580). Prior to the October 1989 earthquake, Interstate 880 also provided access from the south to I-80. However, the collapse of the Cypress section of I-880 has resulted in I-980 and I-580 serving as the only freeway connection between I-880 and I-80. The interchange on I-80 at Powell Street provides the primary connection in Emeryville between the freeway and arterial street systems. The Powell Street interchange is located approximately 0.7 mile northwest of the project site.

The interchange on I-580/State Route 24 in the Market Street/MacArthur Boulevard/San Pablo Avenue vicinity also provides access to the South Emeryville and project vicinities except in the westbound direction on I-580. The westbound off-ramp on State Route 24 at Market Street/San Pablo Avenue provides access from State Route 24 but not from I-580. The eastbound I-580 off-ramp provides access to San Pablo Avenue and MacArthur Boulevard. In the South Emeryville and project vicinities, on-ramps to eastbound State Route 24 and I-580 are located on 35th Street east of San Pablo Avenue. The Market Street/MacArthur Boulevard/San Pablo Avenue interchange is located approximately 0.35 mile south of the site.

After the October earthquake, all through traffic on I-880 and I-80 was diverted to I-980 and I-580 and the westbound on-ramp from MacArthur Boulevard to I-580 was closed to help minimize traffic congestion at the I-580/I-80 interchange. Westbound traffic on MacArthur Boulevard accessing I-80 (the Bay Bridge) has been diverted to Peralta and 32nd streets to the south. Therefore, westbound freeway traffic on I-580 must use the Powell Street off-ramp on I-80 to access the site, while southbound traffic can use either the Powell Street interchange or the MacArthur Boulevard/San Pablo Avenue off-ramp on I-580.

Local Circulation. Arterial streets providing access to the project site include Powell Street, San Pablo Avenue, Hollis Street, 45th Street and Park Avenue. The local roadway system is represented graphically in Figure 3-1, Site Location.

Local Serving Streets

Powell Street is a four-lane arterial that extends from west of I-80 to San Pablo Avenue. East of San Pablo Avenue, it becomes Stanford Avenue. The Southern Pacific Railroad tracks extend through Emeryville in a north-south direction, separating the west side of the City from the east side. Powell Street is the only above-grade crossing of the Southern Pacific Railroad tracks in the City; at-grade railroad crossings are located in North Emeryville on and near 65th Street. Signal controls are located on Powell Street at the Frontage Road, I-80 southbound on-/off-ramps, I-80 northbound on-/off-ramps, Christie Avenue, Hollis Street, Beaudry Street, and San Pablo Avenue. It has left-turn lanes at the I-80 ramp intersections, Christie Avenue, Hollis Street (eastbound only), and San Pablo Avenue. There is a raised median between San Pablo Avenue and Vallejo Street. Between Vallejo Street and Christie Avenue, there is no median and parking is prohibited on both sides.

San Pablo Avenue is an arterial roadway that extends in a north-south direction, generally parallel to I-80, between downtown Oakland and the Pinole-Hercules vicinity. It is also designated as State Route 123 between Oakland and El Cerrito. In the project vicinity, San Pablo Avenue is a four-lane facility with a continuous two-way, left-turn lane along most of its length and with raised medians in intersection vicinities including 45th Street, Park Avenue, and Yerba Buena Avenue. Left-turn lanes (either exclusive or part of the continuous two-way turn lane) are also provided at these intersections except at Adeline Street (in both directions) and MacArthur Boulevard (northbound). There are no left-turn signalheads at these signalized intersections; the Powell Street/San Pablo Avenue intersection is a three-way signal allowing for free left turns from San Pablo during the green phase for each direction on this street. In the project vicinity, signal controls are provided on San Pablo at Powell Street, 47th Street, 45th Street, Park Avenue, Yerba Buena and Adeline Street/MacArthur Boulevard. Near 45th Street, San Pablo Avenue is 74 feet wide with 15-foot wide travel lanes and a 14-foot wide raised median/continuous two-way, turn lane. On-street parking (controlled by 60-minute parking meters) is allowed on both sides of the street.

Hollis Street is a two-lane arterial roadway that extends parallel to San Pablo Avenue through Emeryville from just south of I-580 in Oakland to Ashby Avenue in Berkeley. North of Ashby Avenue, it becomes 7th Street and extends through Berkeley to Gilman Street. In the Berkeley-Emeryville area, Hollis Street-7th Street serves as an alternate north-south route to I-80 and San Pablo Avenue. In the project vicinity, Hollis Street is a 43-foot wide, two-lane roadway with unrestricted parking allowed on both sides. There are no left-turn lanes on Hollis between Park Avenue and Powell Street, although Hollis Street widens to four lanes on its approaches to Powell Street. There is also an at-grade railroad crossing that diagonally traverses this intersection. Signal controls are provided on Hollis Street at Powell (with a 3-way signal phase) and 53rd streets, while the Hollis Street/Park Avenue intersection is stop-sign controlled in all directions.

Forty-Fifth Street is a two-lane street that extends from Horton Street (west of Hollis Street) to Adeline Street (east of San Pablo Avenue). Its approaches to Hollis Street and Adeline Street are stop-sign controlled while at San Pablo Avenue, 45th Street is controlled by a traffic signal. Forty-Fifth Street is offset at San Pablo Avenue with the west leg of the intersection slightly south of the east leg. Pedestrian crosswalks are located at both the east and west leg intersections with San Pablo Avenue. At the project site, 45th Street is 35 feet wide with two travel lanes and unrestricted parking allowed on both sides.

Park Avenue is a wide (56 feet wide), two-lane street with parking allowed on both sides. Parking is unrestricted on both sides, except on the section east of Emery Street (south side only) where there are 60-minute parking meters. This section of Park Avenue also has a left-turn land and right-turn lane on its approach to San Pablo Avenue. Park Avenue extends between the Southern Pacific Railroad tracks on the west and San Pablo Avenue on the east. For any eastbound vehicles seeking access to Adeline Street to the east from Park Avenue, the closest access would be from 43rd Street to the north of Park Avenue. Left turns from southbound San Pablo to 41st Street (just south of Park Avenue) are prohibited.

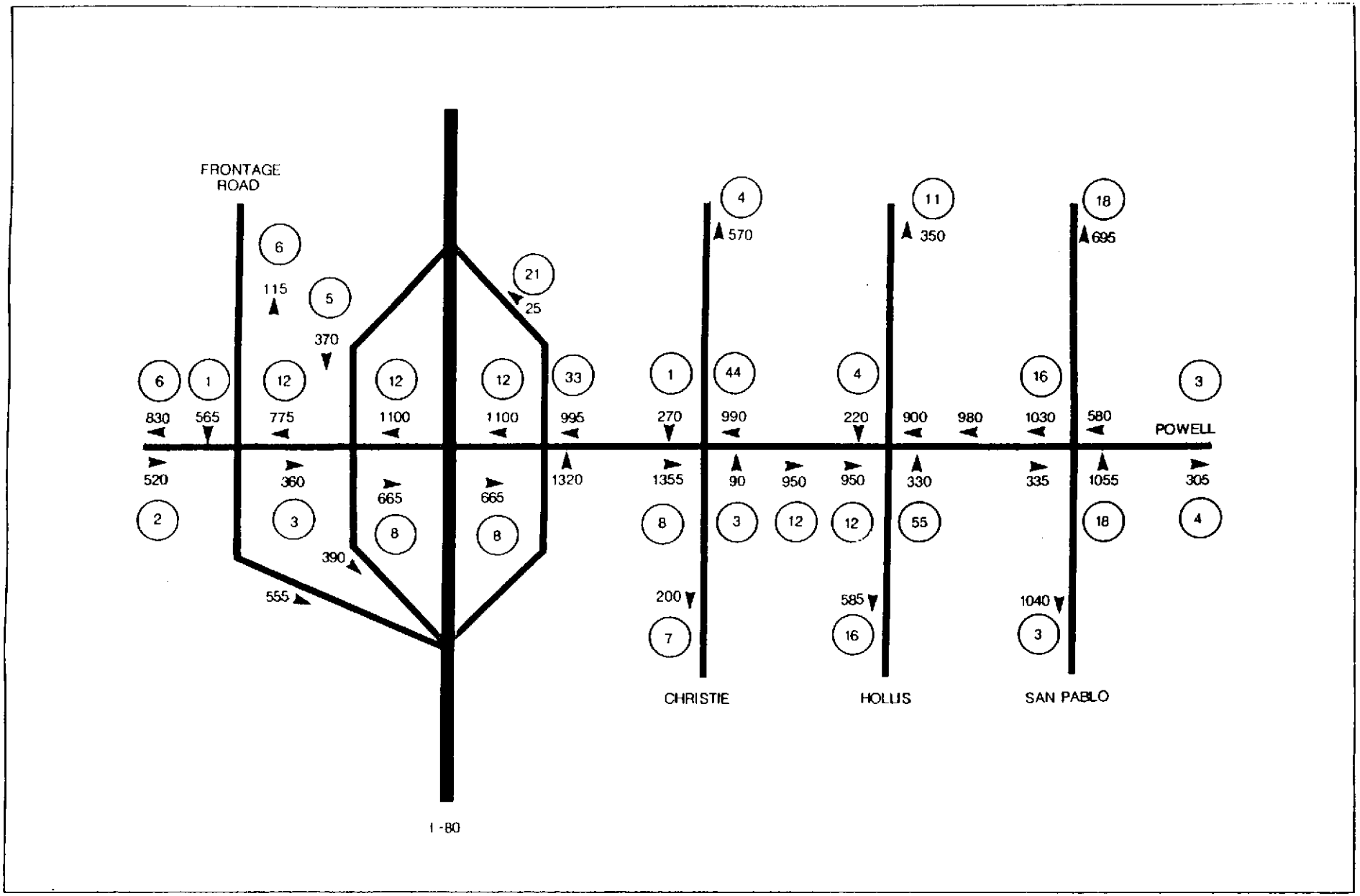
Watts Street is a two-block long street that extends from 45th Street on the north to one block south of Park Avenue, traversing the eastern portion of the project site. This two-lane street is 47 feet wide with unrestricted parking. There is a discontinuous curb on the west side and a short section of curb on the east side just south of 45th Street. Vehicles were observed to park perpendicular to the road on the east side and diagonal to the road on the west side. Vehicles parked mostly beyond the road surface. Trucks were parked (parallel) on this street just south of 45th Street, while perpendicularly and diagonally parked vehicles were located on the section adjacent to Park Avenue.

Existing Traffic Volumes. Morning and afternoon weekday peak hour traffic counts were taken by Goodrich Traffic Group in April and May 1990 at the following intersections in the project area:

@ Powell Street/Frontage Road
@ Powell Street/I-80 southbound on-/off-ramps
@ Powell Street/I-80 northbound on-/off-ramps
@ Powell Street/Christie Avenue
@ Powell Street/Hollis Street
@ Powell Street/San Pablo Avenue
@ San Pablo Avenue/45th Street
@ San Pablo Avenue/43rd Street
@ San Pablo Avenue/Park Avenue
@ San Pablo Avenue/Adeline Street/MacArthur Boulevard
@ Hollis Street/45th Street
@ Hollis Street/Park Avenue
@ 45th Street/Watts Street
@ Park Avenue/Watts Street
@ Park Avenue/Haven-Harlan Streets (combined)

Morning and afternoon peak hour traffic counts were taken during the 7:45 - 8:45 AM and 4:45 - 5:45 PM periods at these intersections. Turn movements counts at study intersections are shown in Figures 4-8 through 4-12. Mid-block counts are presented in Appendix B, Figures 1 through 4. Mid-block AM peak traffic hour and PM peak traffic hour volumes (derived from turn movement counts) in the Powell Street vicinity are shown in Figures 1 and 2, respectively. Mid-block volumes for the AM and PM peak traffic hours in the San Pablo Avenue-Hollis Street vicinity are shown in Figures 3 and 4.

Mid-block traffic volumes on Powell Street during the AM and PM peak traffic hours range from 900 to 2,500 vehicles per hour with the highest volumes occurring between the northbound I-80 on-/off-ramps and Hollis Street intersections. Peak hour volumes on San Pablo Avenue are generally uniform between Powell Street and MacArthur Boulevard with volumes averaging 1,800 during the AM peak traffic hour and 2,230 during the PM peak traffic hour; slightly higher volumes (2,165 and 2,540, respectively) occur north of Adeline Street. A comparison of these volumes with counts taken prior to the October 1989 earthquake indicates that Powell Street and San Pablo Avenue carry more traffic under post-earthquake conditions (approximately 25% and 10% more traffic, respectively).



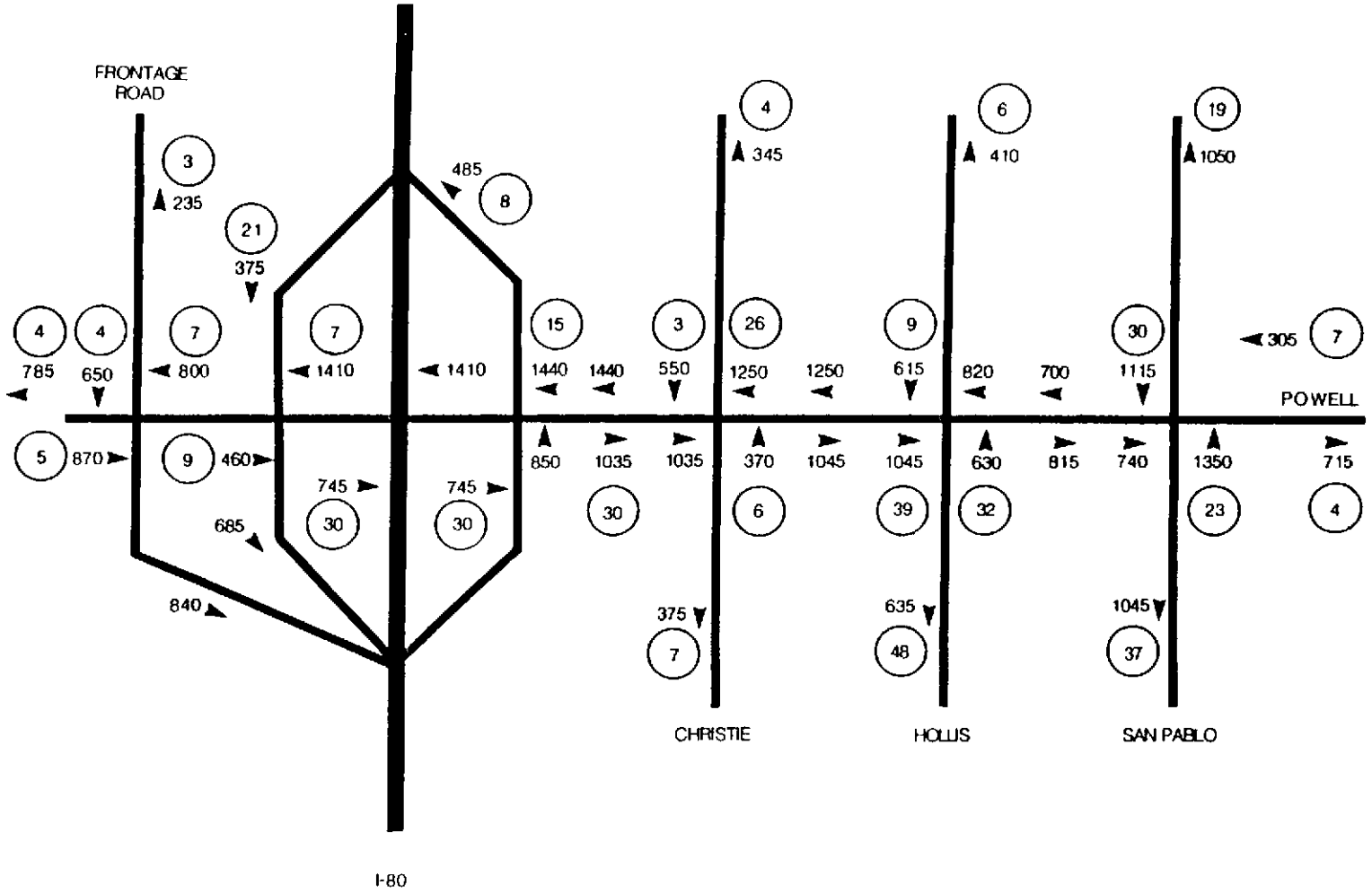
GOODRICH TRAFFIC GROUP

AM PEAK HOUR TRAFFIC VOLUMES - POWELL STREET VICINITY

Cannery East

Wallace Roberts & Todd

Figure 4-8



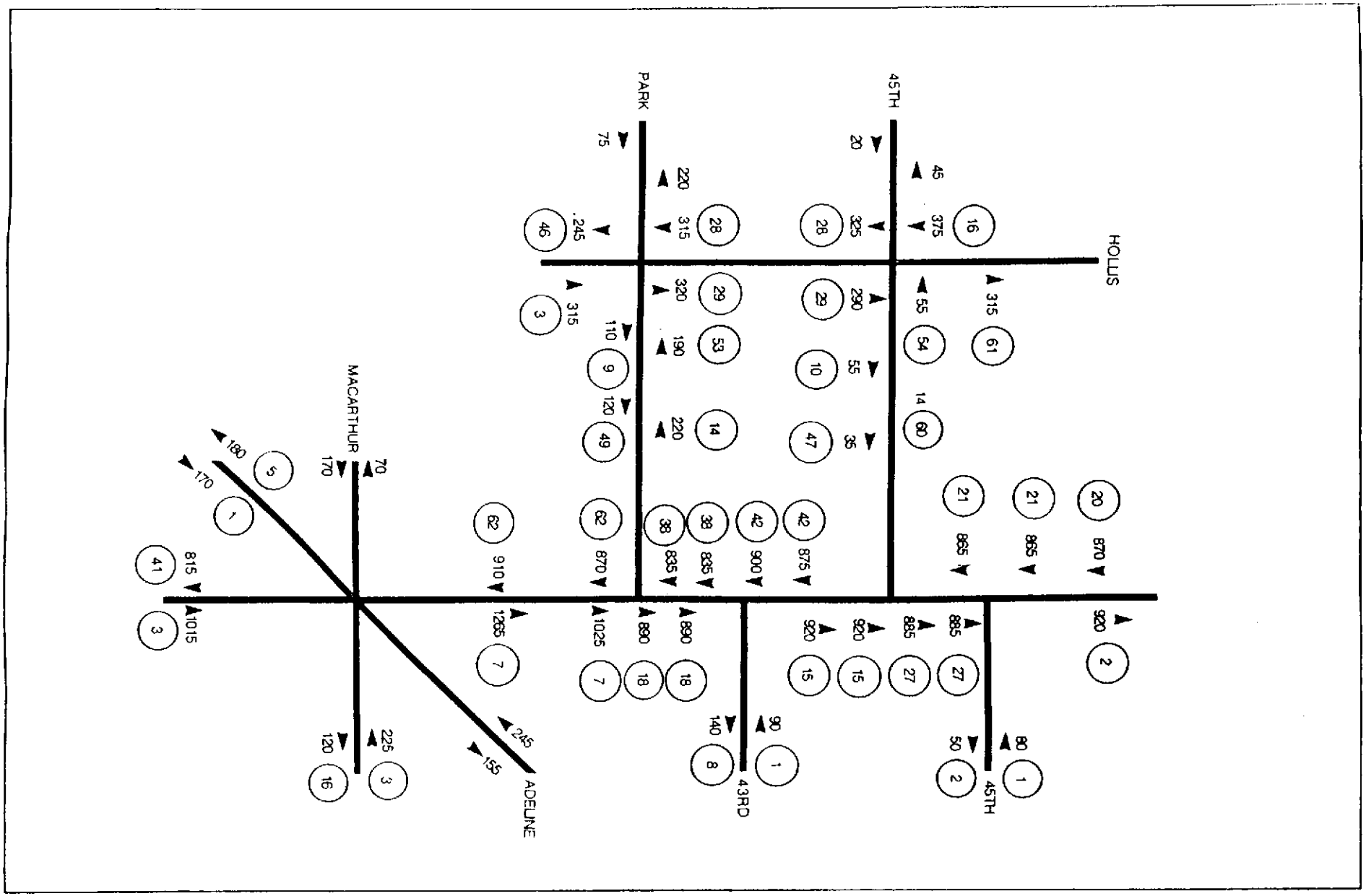
GOODRICH TRAFFIC GROUP

PM PEAK HOUR TRAFFIC VOLUMES - POWELL STREET VICINITY

Cannery East

Wallace Roberts & Todd

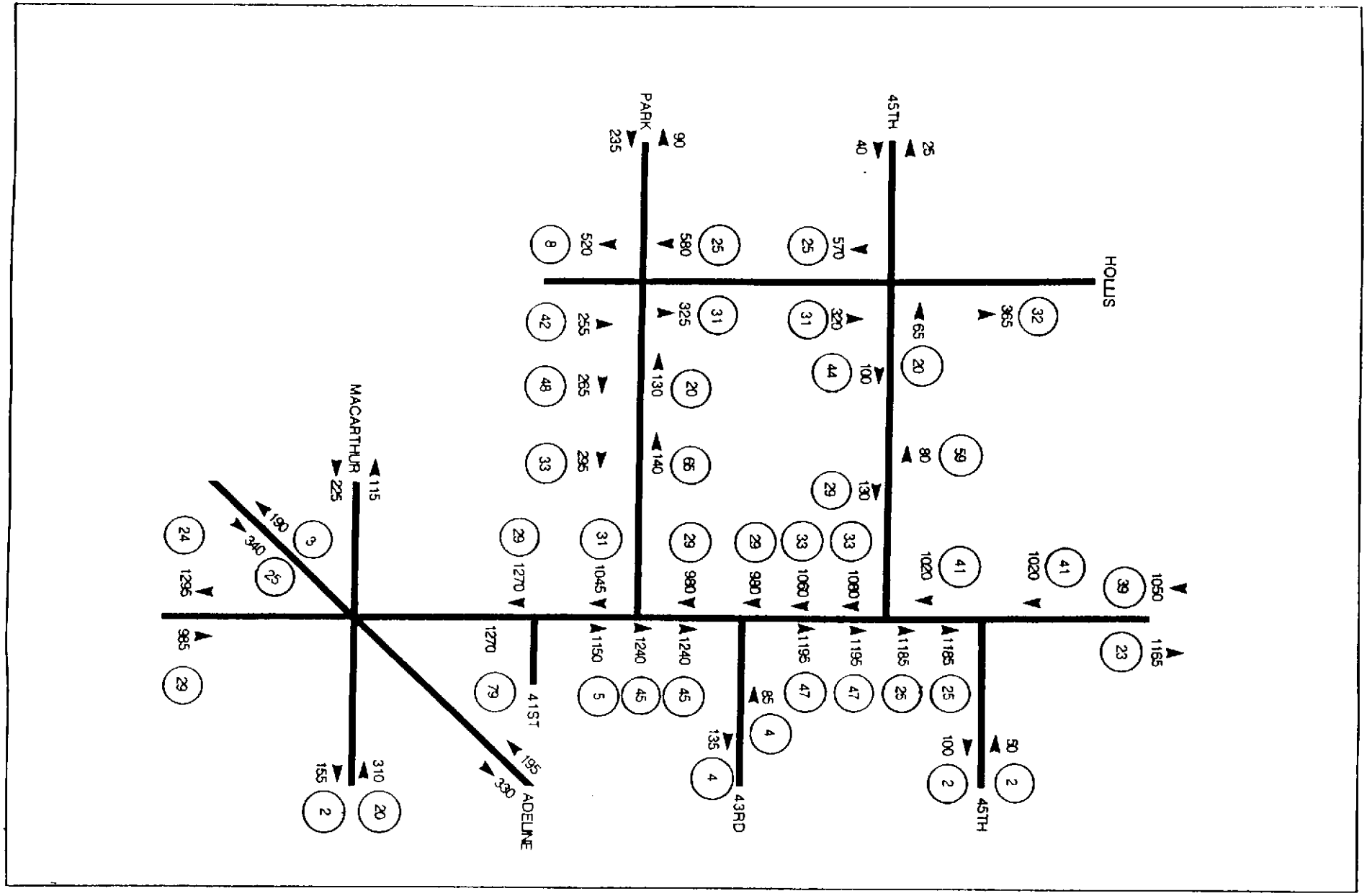
Figure 4-9



GOODRICH TRAFFIC GROUP

AM PEAK HOUR VOLUMES
- SAN PABLO VICINITY
Cannery East
Wallace Roberts & Todd

Figure 4-10



GOODRICH TRAFFIC GROUP

PM PEAK HOUR TRAFFIC VOLUMES
- SAN PABLO AVENUE VICINITY
Cannery East
Wallace Roberts & Todd
Figure 4-11

Hollis Street (in the Park Avenue vicinity) carries lower volumes of approximately 620 and 900 vehicles during the AM and PM peak traffic hours, respectively. Between Hollis Street and San Pablo Avenue, peak hour volumes on Park Avenue (approximately 320 and 400 vehicles during the AM and PM peak traffic hours, respectively) are relatively higher than volumes on 45th Street (approximately 100 and 200 vehicles during the AM and PM peak traffic hours, respectively).

The project area contains a variety of uses including office and industrial uses. Hollis Street carries a high proportion of trucks. In the Park Avenue/45th Street vicinity, trucks comprise approximately 5% of the total peak hour volumes, while buses made up 1% of the total peak hour traffic. On Park Avenue, trucks comprised 2% and buses made up 2% of the total PM peak hour traffic, while during the AM peak traffic hour, buses comprised 7% and trucks made up to 1% of the total traffic. Traffic counts were also taken by Goodrich Traffic Group at Emery Bay Village, a residential development located on 53rd Street between San Pablo Avenue and Hollis Street. This project is the most comparable in Emeryville to the proposed project. Access to this development is provided by two driveways located on 53rd Street. The AM and PM peak hour traffic counts indicated that approximately 60 - 65% of the traffic entering and leaving this development use San Pablo Avenue while the remaining 35 - 40% use Hollis Street. Of the vehicles leaving the site and traveling to the north during the AM peak hour, 60% use Hollis Street while 40% use San Pablo Avenue. Of the vehicles leaving the site and traveling to the south during this time period, 90% use San Pablo Avenue while the remaining 10% use Hollis Street. During the PM peak traffic hour, 70% of the vehicles accessing the site from the south use San Pablo Avenue while the remaining 30% travel on Hollis Street. Of the vehicles traveling to the site from the north, one-half use Hollis Street and the other half use San Pablo Avenue.

Existing Intersection Operation. When the peak hour demand level of traffic is compared to the capacity of a road, the resulting operating condition (level of congestion) is measured by a grading system called Level of Service (LOS). LOS grades may represent operating conditions at intersections or at points (mid-block) between intersections. However, intersections, rather than roadway segments between intersections, are almost always the capacity-controlling locations for a circulation system. LOS grades range from Level A, indicating uncongested flow and minimum delay to drivers, down to Level F, indicating extreme congestion and delay. LOS D is usually the poorest level tolerated by community leaders. In Emeryville, LOS D conditions are considered the poorest acceptable level during peak traffic conditions; any traffic increase that degrades the Level of Service operation to LOS E or F is considered a significant impact (Wally Kolb, personal communication; EIP, 1989). At signalized and all-way stop intersections, the LOS grade applies to the entire intersection. At side-street, stop-sign controlled intersections, the LOS grade applies only to specific turning movements. LOS and the grading scales for intersections are further defined in Appendix B.

Based on traffic counts taken by GTG in April and May 1990, level of service operation was determined for study intersections during the AM and PM peak traffic hours and the result are presented in Tables 4.2-1 and 4.2-2, respectively. These data indicate that all study intersections currently operate at acceptable levels of service (LOS D or better) during the AM peak hour. During the PM peak hour, all but

two of the intersections operated at acceptable levels of service. When the Powell Street intersections at the West Frontage Road and I-80 northbound and southbound on-/off-ramps are considered individually, they operate acceptably (LOS A - C) during the PM peak hour; however, when these intersections are analyzed as one intersection (the signals at these intersections are interconnected), this combined intersection operates unacceptably at LOS F. The Powell Street/San Pablo Avenue intersection is currently operating unacceptably at LOS E (at capacity) during the PM peak traffic hour.

In the project vicinity, the Hollis Street/Park Avenue and Hollis Street/45th Street intersections are currently unsignalized. Existing traffic volumes are approaching traffic signal warrant criteria levels at the Hollis Street/Park Avenue intersection while volumes at the Hollis Street/45th Street intersection do not meet these criteria levels.

Existing Parking Demand. A survey of on-street parking was conducted by Goodrich Traffic Group in April and May 1990. The results of the survey are presented in Table 4.2-3. Survey results indicated that the existing parking supply in the project area is generally adequate to meet the existing demand with one exception. The parking demand in the vicinity of the Park Avenue/Watts Street intersection (specifically, the one-block sections south and west of this intersection) was found to exceed the parking supply during the daytime business hours. In addition, parking demand on the one-block sections of Harlan and Hollis streets (south of Park Avenue) was found to exceed the existing parking supply at 9:30 AM.

Traffic Operational and Safety Concerns. At present, there are no significant operation or safety problems during the peak traffic hours on local roadways in the immediate project vicinity. However, traffic on roadways surrounding the project site is comprised of a high proportion of buses and trucks (4 to 8% buses and trucks). The southwestern access driveway to the AC Transit storage facility is located on 45th Street at Watts Avenue; this driveway serves as the primary access for most of the buses entering and leaving the site. In the past, buses used 45th Street to access San Pablo Avenue and the AC Transit facility, and it was found that bus use was degrading the road surface on this section of 45th Street. Buses are now required to use Watts Street and Park Avenue for access between San Pablo Avenue and the AC Transit facility.

The most significant traffic congestion problems occur during the PM peak traffic hour along Powell Street, particularly at the I-80 on-/off-ramps and San Pablo Avenue intersections. The I-80 ramps intersections with Powell Street (combined) operate unacceptably (LOS F) during the PM peak hour and westbound traffic on Powell Street backs up through the Powell Street/Christie Avenue intersection; these back ups often extend up to or over the crest of the railroad overcrossing east of this intersection. The Powell Street/San Pablo Avenue intersection operates unacceptably (LOS E) during the PM peak hour where eastbound and westbound through traffic on Powell Street is subject to delays.

TABLE 4.2-1

INTERSECTION LEVEL OF SERVICE OPERATION
AM PEAK HOURS

	AM PEAK HOUR	
INTERSECTION	EXISTING CONDITIONS	EXISTING + PROJECT
Powell St./Christie Ave.	C - .71 *	C - .73
Powell St./I-80 NB On/Off Ramps	C - .75	C - .75
Powell St./I-80 SB On/Off Ramps	A - .40	A - .40
I-80 Ramps/West Frontage Rd./Powell	C - .78	C - .78
Powell St./West Frontage Rd.	A - .36	A - .37
Hollis St./Yerba Buena Ave.	A/A/A/ ****	A/A/A
Hollis St./Park Ave.	C ***	D
Hollis St./45th St.	AA/BA/AA **	BA/BA/AA
Powell St./Hollis St.	B - .66	B - .68
Hollis St./65th St.	D - .87	D - .87
7th St./Ashby Ave.	C - .71	C - .71
San Pablo Ave./35th St.	E/A/A/****	E/A/A
San Pablo Ave./36th St.	A - .52	A - .54
San Pablo Ave./ W. McArthur Blvd.	A - .59	A - .59
San Pablo Ave./Yerba Buena Ave.	B - .62	B - .67
San Pablo Ave./Park Ave.	A - .48	A - .52
San Pablo Ave./45th St.	A - .34	A - .38
San Pablo Ave./Powell St.	A - .78	C - .79
San Pablo Ave./Ashby Ave.	D - .81	D - .81

Source: Goodrich Traffic Group

NOTE: Level of Service operation was estimated using level of service intersection analysis methodology outlined in the 1985 Highway Capacity Manual.

*LOS: Signalized Level of Service V/C: Vehicle/Capacity Ratio
** Combined LOS since signals at these three intersections are interconnected and operate as one intersection.
*** All-Way Stop Level of Service
**** Westbound Left, Through, and Right/Eastbound Left, Through, and Right/Northbound Left and Southbound Left

TABLE 4.2-2

INTERSECTION LEVEL OF SERVICE OPERATION
PM PEAK HOUR

INTERSECTION	PM PEAK HOUR EXISTING CONDITIONS	PM PEAK HOUR EXISTING + PROJECT
Powell St./Christie Ave.	C - .73 *	C - .74
Powell St./I-80 NB On/Off Ramps	B - .69	B - .69
Powell St./I-80 SB On/Off Ramps	C - .75	C - .75
I-80 Ramps/West Frontage Rd./Powell	F - 1.02	C - 1.02
Powell St./West Frontage Rd.	A - .37	A - .37
Hollis St./Yerba Buena Ave.	A/A/A ****	A/A/A
Hollis St./Park Ave.	D ***	E ***
Hollis St./45th St.	CB/CB/AA **	CB/CB/AA
Powell St./Hollis St.	D - .85	D - .85
Hollis St./65th St.	F - 1.19	F - 1.19
7th St./Ashby Ave.	D - .86	D - .86
San Pablo Ave./35th St.	F/D/F ****	F/D/F
San Pablo Ave./36th St.	B - .64	B - .66
San Pablo Ave./W. McArthur Blvd.	B - .69	C - .70
San Pablo Ave./Yerba Buena Ave.	B - .66	B - .67
San Pablo Ave./Park Ave.	A - .57	A - .63
San Pablo Ave./45th St.	A - .47	A - .51
San Pablo Ave./Powell St.	E - .94	E - .96
San Pablo Ave./Ashby Ave.	E - .95	E - .95

Source: Goodrich Traffic Group

NOTE: Level of Service operation was estimated using level of service intersection analysis methodology outlined in the 1985 Highway Capacity Manual.

*LOS: Signalized Level of Service V/C: Vehicle/Capacity Ratio
**Combined LOS since signals at these three intersections are interconnected and operate as one intersection.
***All-Way Stop Level of Service
****Westbound Left, Through, and Right/Eastbound Left, Through, and Right/Northbound Left and Southbound Left

Planned Road Improvements. The California Department of Transportation (Caltrans) is responsible for improvements to I-80 and San Pablo Avenue (State Route 123). There are a number of improvements that are planned or under consideration by Caltrans. All improvements are scheduled to be constructed between 1990 and 1995. A High Occupancy Vehicle (HOV) lane is planned in each direction on I-80 from the Bay Bridge northward, eventually extending over the Carquinez Bridge. The westbound HOV lane would extend to the Bay Bridge, while the eastbound HOV lane would begin between the Powell Street and Ashby Avenue interchanges. No lane closures are planned for I-80 during construction of these improvements. Shoulder improvements on I-80, improvements on Hollis Street and San Pablo Avenue, and transit promotional programs are planned to help relieve traffic congestion on I-80 during construction. Construction was planned to begin in Fall, 1990 and end in early 1995. While funding is available, processing delays have resulted from opposition and concerns expressed by local communities along the affected section of I-80 (Diane Steinhauser, personal communication).

In the Emeryville area, Caltrans plans to relocate the southbound on- and off-ramps to I-80 from Powell Street to 1,000 feet northward and both ramps would create a new intersection with the West Frontage Road. The ramp relocation project would facilitate the movement of southbound traffic accessing the freeway via the on-ramp to I-80. It would also provide simplified signal operations on Powell Street. One of the heaviest traffic movements in the evening peak hour is westbound Powell Street traffic accessing the southbound I-80 on-ramp. This movement is currently a signalized left turn and uses valuable signal time at the intersection. With ramp relocation, this movement would become a "free" right turn, and would proceed independently of the signal; this would free the signal to allow better operation of the through traffic movement (EIP, 1989).

As part of the I-880 Cypress Section reconstruction project, Caltrans plans to interconnect the traffic signals along San Pablo Avenue to provide improved traffic progression. Controllers would be improved at signals at MacArthur Boulevard, Yerba Buena, Park, 45th, Powell Street, and Alcatraz Avenue. On San Pablo Avenue at Powell Street and Alcatraz Avenue, Caltrans also plans to install left-turn signalheads. On Hollis Street, Caltrans plans to install traffic signals where they are currently warranted and the intersections being considered include Yerba Buena Avenue, Park Avenue, 65th Street and possibly 45th Street. These signals would be interconnected with the traffic signal at the Hollis Street/Powell Street intersection. Caltrans also plans to interconnect signals on Powell Street between San Pablo Avenue and Hollis Street. Funding and approval of the I-880 reconstruction project is anticipated in the next few months (Diane Steinhauser, personal communication).

The Emeryville Circulation Plan (1989) designates two additional overpasses over the Southern Pacific Railroad tracks. They are located along a westerly extension of Yerba Buena (connecting with a southerly extension of Shellmound Street) and a northwesterly extension of 45th Street.

TABLE 4.2-3

SURVEY OF ON-STREET PARKING

	Number of Legal Spaces*	Number of Spaces in Use** 6:30 AM	9:30 AM	3:30PM	6:30 PM
Park Ave.					
- San Pablo Ave. to Emery St.	15	61	11	8	14
- Emery St. to Watts St.	11	12	13***	10	10
- Watts St. to Harlan St.	13	3	30***	16***	4
- Harlan St. to Haven St.	23	4	8	9	0
- Haven St. to Hollis St.	10	3	13***	5	1
- West of Hollis St.****	11	1	10	13***	9
Emery St.					
- South of Park Ave.****	23	16	20	9	10
- 45th St. to Park Ave.	9	5	4	4	1
Watts St.					
- South of Park Ave.****	34	5	42***	41***	14
- 45th St. to Park Ave.	45	11	20	26	1
Harlan St.					
- South of Park Ave.****	17	9	21***	16	9
Haven St.					
- South of Park Ave.****	28	2	17	26	9
San Pablo Ave.					
- North of Park Ave.****	14	6	15***	8	9
- 45th St. to Park Ave.	22	0	6	10	3
- South of Park Ave.****	12	0	3	1	0
45th St.					
- East of San Pablo Ave.****	22	6	17	15	15
- San Pablo Ave. to Emery St.	9	3	4	7	3
- Emery St. to Watts St.	22	4	6	8	5
- Watts St. to Doyle St.	14	2	3	0	2
- Doyle St. to Hollis Street	33	2	20	23	4
Hollis Street					
- North of 45th St.****	23	0	8	4	0
- 45th St. to Park Ave.	25	4	14	17	5
- South of Park Ave.****	12	3	14	7	4
Doyle St.	38	0	1	0	1
43rd St.					
- East of San Pablo****	14	2	9	7	6

Source: Goodrich Traffic Group

*The number of legal spaces does not include red, green or yellow zones.
**The number of spaces used includes vehicles parked in red, green and yellow zones.
***Existing parking capacity of this one-block road section was exceeded at this time.
****This road section is one block long.

Transit Service. Public transit service in the site vicinity is provided by the AC Transit. Bus stops are located on San Pablo Avenue and Hollis Streets. The 72 and G lines provide service along San Pablo Avenue while the 57 and 57M lines service Hollis Street and San Pablo Avenue. The 57 and 57M lines provide access to the MacArthur BART Station via 40th Street and Broadway Street. The 72 line provides access to downtown Oakland (12th Street). The G line provides trans-bay service to San Francisco. Trans-bay bus service is also available from the San Pablo Avenue/MacArthur Boulevard/Adeline Avenue intersection, which is about two blocks south of Park Avenue.

On the 72 line, headways throughout the day (including peak periods) are generally 10 to 15 minutes. At times, this line operates at or near capacity in the site vicinity (Ronald Kilcoyn, personal communication). Ridership data (1989 and 1990) indicates that this Line generally operates at 60 to 75% of capacity during the AM and PM peak periods and 70 to 105% during the mid-day (non-peak) hours with some of the buses filled to capacity. Capacity is defined as 125% of the number of seats on a bus which accounts for standing room capacity (Howard Jefferies, personal communication). AC Transit has plans to increase the capacity of this Line by adding "limited stop" buses; local buses would continue to operate the same. However, such improvement plans would be contingent on funding availability, and there are currently no funds available to increase service on this Line (Ronald Kilcoyn, personal communication).

Based on ridership data from the past year, the 57 and 57M lines have opened below capacity (less than 50% of capacity during peak and non-peak periods on the 57 Line). Although not funded, there are plans to reduce headways on the 57 Line from 20 to 30 minutes, and to have all buses on the 57 and 57M lines go to the MacArthur BART station (Ronald Kilcoyn, personal communication).

Trans-Bay service in the site vicinity is provided on the G and F lines. The F Line operates at approximately 50% capacity near the project site during the day, and 75 to 85% during the AM and PM peak periods (Ronald Kilcoyn, personal communication). Ridership data (1990) indicates that the G and F lines operate at 60 to 70% of capacity during the AM peak period and 50 to 60% capacity during the PM period (peak direction only). There are no current improvement plans for these lines (Ronald Kilcoyn, personal communication).

Bicycle and Pedestrian Routes. In the project vicinity, the Emeryville Circulation Plan (1989) identifies San Pablo Avenue, Hollis Street, 45th Street, Park Avenue and Watts Street as "Major Pedestrian Corridors." Park Avenue and Hollis Street are also designated as "Major Bicycle Corridors."

4.2.2 Potential Impacts

For purposes of this analysis, significant impacts are identified by any one of the following criteria (EIP, 1989):

- @Degradation of any intersection or network to LOS E or F;
- @Creation of a demand on public transportation greater than levels currently projected or planned for; or
- @Exposure to pedestrians or bicyclists to high health and safety risks.

Project Trip Generation. The proposed project would be expected to generate a total of approximately 2,830 two-way trips per day, 250 AM peak hour two-way trips and 318 PM peak hour two-way trips. Trip generation by project component and time period would be as follows.

	Daily Two-Way		AM Peak Hour Inbound		Outbound		PM Peak Hour Inbound		Outbound	
Project	Rate	Vol	Rate	Vol	Rate	Vol	Rate	Vol	Rate	Vol
422 Apartment or Townhouse Units										
- Ave. Trip Rate	6.1		0.10		0.44		0.46		0.22	
- Adj. Trip Rate	6.7	2,827	0.11	47	0.48	203	0.5	216	0.24	102

Project Trip Distribution. Projected distribution of project-related traffic on local roadways was estimated based on a combination of existing distribution patterns that occur at the planned residential development to the north (on 53rd Street) and distribution patterns projected in the General Plan for buildout conditions. The distribution of project traffic on study roadways is shown in Figures 1 through 4 for the AM and PM peak traffic hours. Incremental increases in traffic due to the proposed project are listed in Table 4.2-4.

Project Impacts on Roadways. Table 4 indicates that peak hour traffic increases of up to 23% and 64% would occur adjacent to the site on Park Avenue and 54th Street, respectively. Relatively lower peak hour traffic increases would occur on San Pablo (3-5%) and Hollis Street (6-11%). According to the City's criteria for defining the significance of traffic increases, project-related traffic increases on Park Avenue, 45th Street, and Hollis Street would be considered significant. However, no new operational or safety problems between intersections on these roadway would be expected to result from these traffic increases.

The project would result in peak hour traffic increases of three to nine vehicles per hour on 41st, 43rd, and 45th streets, east of San Pablo Avenue. This added traffic would represent a 2-4% percent increase over existing levels on each street; such increases would not be considered significant.

The proposed project would eliminate Watts Street between 45th Street and Park Avenue. Closure of this road would force buses to either: (1) use 45th Street to San Pablo or (2) travel westward on 45th Street to Hollis Street, thern turn south on Hollis Street. Since previous bus use of the section of 45th Street between the AC Transit facility and San Pablo Avenue degraded the road surface, use of this section of the roadway would only be feasible if the

Table 4.2-4

INCREASE IN EXISTING PEAK HOUR VOLUMES DUE TO PROJECT TRAFFIC

	Existing Volume		Volume Due to Project		Percent Increase Due to Project	
	AM	PM	AM	PM	AM	PM
Park Ave.						
- West of San San Pablo Ave.	340	435	63	91	20%	23%
- East of Hollis St.	300	395	62	68	21%	17%
45th St.						
- East of San Pablo Ave.	130	150	3	4	2%	3%
- West of San Pablo Ave.	95	210	61	88	64%	42%
- East of Hollis St.	110	165	64	64	58%	39%
San Pablo Ave.						
- North of 45th St.	1790	2215	45	62	3%	3%
- 45th St. to Park Ave.	1895	2195	69	110	4%	5%
- South of Park Ave.	1895	2195	69	110	4%	5%
Hollis St.						
- North of 45th St.	560	775	49	50	9%	6%
- 45th to Park Ave.	615	905	57	56	9%	5%
- South of Park Ave.	690	1000	77	82	11%	8%
43rd St.						
- East of San Pablo	230	220	9	8	4%	4%

Source: Goodrich Traffic Group

*AM: AM Peak Hour PM: PM Peak Hour

structural section of this road was reconstructed between the AC Transit facility southwestern driveway and San Pablo Avenue. According to Caltrans (Man Ju, personal communication), the San Pablo Avenue/45th Street signal is operating on a 100-second cycle. Field observations indicate that the signal for 45th Street appears to be actuated by approaching vehicles; they wait approximately 20 seconds for the green phase which is approximately five seconds long. This vehicle-actuated signal phasing would appear adequate to accommodate the resulting increase in bus traffic on 45th Street, although the length of the green phase may need to be increased to accommodate the increase in traffic turning from 45th Street to San Pablo Avenue.

Project Impacts on Intersections. The addition of project traffic to existing traffic volumes would not change existing LOS designations at study intersections except at two locations. (See Table 4.2-5 for LOS designations at study intersections and Appendix B for LOS definitions). During the AM peak traffic hour, Level of Service operation at the Hollis Street/Park Avenue intersection would decrease from C to D, and during the PM peak hour, it would change from D to E. Based on the City's criteria for defining the significance of traffic increases, the project-related change in Level of Service from D to E during the PM peak hour would be considered significant.

Project-related traffic increases would also decrease the Level of Service operation of specific turn movements at the Hollis Street/45th Street intersection. During the AM peak hour, all Level of Service designations would remain the same except for the westbound left-turn movement, which would decrease from LOS A to LOS B. During the PM peak hour, operation of the westbound through, eastbound left, and eastbound through movements at this intersection would decrease by one LOS designation (from B, C, and B to C, D, and C, respectively).

After project development, traffic volumes at the Hollis Street/45th Street intersection would continue not to meet traffic signal warrant criteria levels.

Project Access. As shown in Figure 3-5, access to the proposed project would be provided by two driveways on Park Avenue and two driveways on 45th Street; one of these driveways would serve only about eight units while the others would provide access to all units except those fronting on 45th Street which have security gates, restricting through traffic flows across the site. Assuming vehicles are not allowed to park on-street immediately adjacent to driveways and no tall landscape vegetation or other obstructions are allowed at driveway intersections, it is anticipated that sight distance would be adequate between the streets and driveways. The proposed driveways would be 30 feet wide at the street edge. The 30-foot wide driveways would be consistent with the 24-foot minimum and 40-foot maximum curb-cut width requirements specified by City parking regulations (Section 9-4.55.7(c)); however, the 30-foot width would restrict turning maneuverability if one vehicle is entering at the same time another is leaving.

The proposed site plan does not indicate the location of project driveways with respect to existing cross-streets that intersect with Park Avenue and 45th Street; specifically, Doyle Street, the AC Transit driveway, Harlan Street, and Watts Street. It is important that project driveways be located directly opposite existing intersecting streets and the AC Transit driveway (or be at least 150 feet away from them) to avoid traffic conflicts between turning vehicles.

TABLE 4.2-5

LEVEL OF SERVICE SUMMARY AT STUDY INTERSECTIONS

AM Peak Hour Intersection	**Existing Conditions**	**Existing & Project**
West Frontage Rd/Powell	A - .36*	A - .37*
I-80 SB ramps/Powell	A - .40	A - .40
I-80 NB ramps/Powell	C - .75	C - .75
I-80 Ramps/West Frontage Rd/Powell	C - .78	C - .78
Christie Powell	C - .71	C - .73
Hollis/Powell	B - .66	B - .68
San Pablo/Powell	C - .78	C - .79
45th/San Pablo	A - .34	A - .38
Park/San Pablo	A - .48	A - .38
McArthur/Adeline/San Pablo	A - .59	A - .59
Park/Hollis	C**	D**
45th/Hollis	AAA/BAA/AA**	BAA/BAA/AA**

PM Peak Hour Intersection	Existing Conditions	Existing & Project
West Frontage Rd/Powell	A - .37*	A - .37*
I-80 SB ramps/Powell	C - .75	C - .75
I-80 NB ramps/Powell	B - .69	B - .69
I-80 ramps/West Frontage Rd/Powell	F - 1.02	F - 1.02
Christie/Powell	D - .86	D - .87
Hollis/Powell	D - .85	D - .86
San Pablo/Powell	E - .94	D - .96
45th/San Pablo	A - .47	A - .51
Park/San Pablo	A - .57	A - .63
McArthur/Adeline/San Pablo	B - .69	C - .70
Park/ Hollis	D**	E**
45th/Hollis	CBA/CBA/AA**	CCA/DCA/AA**

Source: Goodrich Traffic Group

See Appendix B for LOS definitions

* Signalized Level of Service - Vehicle/Capacity Ratio

** Westbound left, through, right/eastbound left, through, right northbound Left southbound left

The site plan indicates security gates at three of the project driveways and these gates are proposed at the street edge. In the event an inbound vehicle is delayed at the gate, safety problems would be posed by other entering vehicles waiting in the street travel lanes, especially those waiting to turn left to enter the gate.

There are eight driveways (accommodating 28 parking spaces) along 45th Street that are proposed to provide access to individual residential units. The width of 45th is narrow at approximately 30 feet. These driveways would require vehicles parked in the driveways to back out onto 45th Street from between vehicles parked in adjacent driveways. In addition, these driveways are proposed to serve as tandem parking spaces where one space would be within the building while the second space would be behind in the driveway. Safety problems posed by vehicles backing onto 45th Street would be increased further by the greater frequency of vehicles backing out onto 45th Street as a result of the proposed tandem parking configuration. City parking regulations (Section 9-4.55.7 (d)) requires that, "all access to a parking area from a public street, alley, or highway shall be designed so that motor vehicles leaving the driveway or parking area will enter the highway traveling in a forward direction."

Internal Circulation. The proposed internal circulation system comprises a perimeter road that extends primarily along the outer margin of the project site. Connecting with the perimeter road are eight loop roads associated with six courtyards and two plazas. The drives associated with two plazas in the west-central portion of the site provide direct access from 45th Street and Park Avenue.

The perimeter road contains sections with long straight alignments. The east-west sections have straight sections that are the equivalent of up to two blocks long. These straight sections would encourage speeding that could be a potential constant source of aggravation to residents. Additional safety problems would be posed when parked vehicles (e.g., vehicles parked in the carports located along the southern project boundary) backed out from between other parked vehicles, visibility between drivers of vehicles backing out of the parking spaces and of on-coming speeding vehicles on the perimeter road would be limited.

Each courtyard had two access points, which would provide adequate emergency access. Perpendicular parking spaces are proposed along the access connection road to Park Avenue. This configuration would pose traffic conflicts between parking cars and those using the access driveway to enter and leave the development. Similarly, cars maneuvering into and out of the perpendicular parking spaces proposed in the centers of the courtyards and plazas (particularly the western plaza that provides direct access across the site) could conflict with traffic: safety problems could be posed if landscaping in the plazas and courtyards obscures or blocks views of oncoming vehicles from the parking stalls.

The proposed parking dimensions would be consistent with the City's parking regulations (Section 9-4.55.7 (b)). These regulations require a minimum aisle width (between stall lines) of 22 feet for 90 degrees or perpendicular parking stalls, and the proposed 30-foot aisle widths would more than meet this requirement. Section 9-4.55.7(d) of the City's parking regulations specifies a minimum width of 20 feet for access driveways, and the project's 30-foot driveway widths would be consistent with this requirement.

The Emeryville Fire Department has reviewed the proposed site plan on a preliminary basis and expressed concerns over whether some of the driveway curves can meet the 42-foot turning radius required by the Fire Department. In addition, the on-site circulation system raises Department concerns over response time to project units as well as from the project site to another call elsewhere in the City. Delays in response time to a project unit would be expected due to the time required to find the unit once the Fire Department has arrived on the site. Fire trucks would require more time to leave the site due to the circuitous nature of the roadway system, and this would cause delays in response time to other locations in the City if the fire truck unit must respond to another emergency call directly from the project site (Ray Vittori, Emeryville Fire Department, personal communication, July, 1990).

Pedestrian Movement. The three driveways providing access into and across the site would have security gates, restricting the potential for through pedestrian movement across the site; all other driveways along 45th Street would provide direct access to residential units and access to the interior of the site would not be available form these driveways. Emery High School is located north of the project site on 47th Street and access to the school from the site is provided by the Doyle Street (where attending Emery High School would cross 45th Street either at Doyle Street (where there is no crosswalk) or San Pablo Avenue. Although there could be an incremental increase in pedestrians crossing this street at Doyle Street, research has shown that the provision of a crosswalk is not advisable unless it can be located where traffic is controlled by a stop sign. If a crosswalk is designated at a location where traffic is controlled by a top sign. If a crosswalk is designated at a location where vehicles are not required to stop (e.g., at a mid-block location or at an intersection that is not stop-sign controlled), inattention and/or limited visibility of the crosswalk by motorists may result in pedestrians being subject to a greater risk, particularly since they may be less cautious while crossing in a crosswalk.

Watts Street is designated by the Emeryville Circulation Plan as a major pedestrian corridor. Elimination of Watts Street as part of project development would not be consistent with this aspect of the plan. Other major pedestrian and bicycle corridors designated along streets in the project vicinity would not be affected by project development.

Parking Demand. The proposed project would eliminate the 45 parking spaces that are currently available on Watts Street between 45th Street and Park Avenue. Based on the parking survey results listed in Table 4.2-3, the loss of these spaces would displace approximately 20 to 26 cars during the daytime business hours. This amount of additional parking demand could be absorbed on streets within four blocks of Watts Street. During the morning hours, the parking survey indicated an adequate number of available parking spaces within two to three blocks of Watts Street, specifically on Park Avenue (west of Harlan Street), Emery Street (south of Park Avenue) and Harlan Street (south of Park Avenue). During the afternoon hours, the parking survey indicated there were fewer available parking spaces in the Watts Street Vicinity, but there would be an adequate number of available parking spaces within four blocks of Watts Street; specifically, on Park Avenue (west of Harlan Street), Hollis Street (north and south of Park Avenue), or Haven Street (south of Park Avenue). Although motorists could find parking elsewhere in this area, it should be noted that they might have to park as far as four blocks away from their designation.

The project would reduce the number of driveways on the 45th Street frontage from three to two. Although this could increase slightly the number of available on-street parking spaces, it would not improve existing parking conditions on Park Avenue since there would be no direct access to Park Avenue from 45th Street. The development of two driveways along Park Avenue would increase the number of available parking spaces along Park Avenue; there are currently four driveways, two intersecting streets (Watts Street and the entrance to an existing building opposite Harlan Street) and painted red zones along the site frontage). This would help to slightly offset the loss of parking associated with proposed closure of Watts Street between Park Avenue and 45th Street.

Adequacy of On-site Parking. The project sponsor proposed to develop 637 parking spaces on the project site. This would provide 1.5 parking spaces per project residential unit. The City's parking regulations (Section 9-4.55.3(a)) require one parking space for each two-bedroom unit. In addition, one guest parking space is required for each for dwelling units. Under the City's requirements, it should be noted that 66 of the parking spaces would exceed City requirements, which would affect a total of 132 parking spaces. Tandem parking spaces (one space within the building and the second behind in the parking apron or driveway) are not recognized by many jurisdictions. City parking regulations do not specifically address this type of parking design.

The Institute of Transportation Engineers (1987) has compiled parking generation rates for various uses. Parking demands associated with apartments were found to average 1.04 spaces per low-rise unit and 3.40 spaces per high-rise unit. For condominiums, parking demand averaged 1.11 spaces per unit a maximum usage of 1.61 spaces per unit.

A parking survey was completed by Goodrich Traffic Group in May, 1990 for the Emery Bay Club and Apartments development located at 6400 Christie Avenue. The survey indicated that 0.97 spaces per unit were occupied at 6:00 AM. It should be noted that this residential development has more studio units and fewer two-bedroom units that the proposed project; therefore, parking demand would also be expected to be lower to the Emery Bay development than for the proposed project.

Transit Service. AC Transit does not compile or maintain ridership generation rates for new developments located within existing urban areas. Ridership levels can vary depending on a number of factors such as the proximity to commercial uses to new residential development as well as the level of pedestrian traffic. In suburban areas where new development occurs in previously undeveloped areas, the District generally uses a minimum density of 8 units per acre as a criterion to determine whether there would be sufficient demand to establish a new transit line, suburban areas are characterized as more auto-oriented with lower pedestrian levels and apply these rates to the proposed project, which is considered by the District to be an urban infill development (Ronald Kilcoyn, personal communication).

Project development could increase the demand for transit service on the 57 and 72 bus lines as well as trans-bay lines. AC Transit anticipates that there would be sufficient available capacity on the trans-bay lines (G and F lines) and on the 57 line to accommodate project-related increases in transit demand. However, some of the buses on the 72 line operate at or near capacity and increased demand on this

line due to the project could further aggravate this condition. Either planned improvements will need to be funded and implemented (Ronald Kilcoyn, personal communications), or adjustments on the bus schedules would be made on these lines as necessary to meet peak demand (Howard Jeffries, personal communication).

Construction Impacts. Watts Street is used extensively by AC Transit as a primary street for their buses serving the East Bay. According to their project engineer, Watts Street could still be used for this purpose provided that at least one side of the street remained open. The excavation for water and sewer connections is anticipated to be made on Watts Street. Watts Street is a two-lane street which handles a moderate amount of traffic. The Emeryville Department of Public Works estimated that water and sewer connections would take approximately two to three weeks. Excavation would be required on at least part of Watts Street and would require closing one side of Watts Street.

Cumulative Impacts.

Development of the project site in conjunction with anticipated development in the City (buildout of the General Plan) has been evaluated in the General Plan EIR (City of Emeryville, 1987). Caltran's planned improvements have been factiored in the thed buildout of the General Plan. However, there are three potential developments that could alter traffic projections under the General Plan buildout conditions since they would require General Plan amendments. They are: this proposed project, Cannery East and the Emeryville Business Center for which applications are on file, and Yerba Buena Park. It should be noted that projects undertaken in Emeryville by The Martin Group to date have been built out at 25 to 30% below the FAR in the General Plan.

The Cannery East project would require a General Plan amendment and rezoning along Park Avenue from commercial to medium density residential. However, as part of this analysis in the General Plan EIR, the zone that includes the project site and the zone to the north (zones 11 and 21) were assumed to have 760 new residential units, and the project's 422 units would be within the range of assumed buildout development. Therefore, traffic that is project in the General Plan EIR would not change with the proposed project Development levels assumed under the existing General Plan and development levels by the other two General Plan engagement proposal are listed in Table 4.2-6.

The Emeryville Business Center, located on 45th Street between Hollis and Doyle streets (northwest of the project site), would require a General Plan amendment to allow for redevelopment of the existing light industrial use to 130,000 square feet of mixed uses. Considering that the existing use currently generates traffic, the proposed mixed-use project would result in a net increase of 75 AM peak hour trips and 40 PM peak hour trips. It would also generate additional daily volumes of up to 280 to 335 vehicles on 45th Street and San Pablo Avenue (those traveling to and from the north). These small traffic increases would not change the projected future level of service by one percent at the San Pablo Avenue intersections with Park Avenue (PM peak hours only) and MacArthur Boulevard; the only change in the Level of Service designations projected in the General Plan EIR would be at the San Pablo Avenue/MacArthur Boulevard intersection which would change under the General Plan. Projected level of Service operation at study intersections under General Plan buildout conditions with the Emeryville Business Center are listed in Tables 4.2-7 and 4.2-8.

TABLE 4.2-6

TRIP GENERATION DUE TO CUMULATIVE DEVELOPMENT: PM PEAK HOUR

Project	Proposed Development Level	Trip Rate	Trips Total	In/Out	Development Level Under General Plan	Rate	Trips Total	In/Out
Emeryville Business Center	130,000 SF Mixed-Use (Bus. Park)	1.35	175	35/140	Light Indus (Existing Use)	1.03	135	20/115
Yerba Buena Park								
- Scheme 1	1,100,00 SF Office (Office Park)	1.47	1620	210/1410	26,850 SF Office	--	70	10/60
	400 Apmts	0.68	275	185/90	7 sf Residential Units	1.01	7	4/3
	254,000 sf Retail Local & Regional	4.0	1010	500/510	66,730 sf Gen. Comm'l	--	505	250/255
					416,850 sf Lt. Ind.	1.04	435	50/385
					330,000 sf Business Park	1.35	450	95/355
Employment-related Use of Transit *****	-10% Reduction			-20/-140				-15/-80
Commercial-related Passby/Pedestrian Trip Capture***	-30% Reduction			-150/-150				-75/-75
Subtotal:	New Trips on Street System****			725/1720				320/905
- Scheme 2	600 Apmts	0.46	415	280/135				
	450,000 sq.ft. Retail (Local & Regional)	3.0	1360	670/690				
Commercial-related Passyby/Pedestrian Trip Capture	-30% Reduction			-200/-200				
Subtotal	New Trips on Street System****			750/625				

* Per 1,000 sf. of floor area or per residential unit.
** Source of Project Information and Trip Generation: EIP (1989).
*** Trip capture accounts for existing traffic that is already passing through the project during peak traffic periods that would stop and use Yerba Buena commercial uses and customers that would access commercial uses as pedestrians.
**** Due to Yerba Buena Park project only.
***** A conservative estimate; cumulative development would be higher with TSM.

TABLE 4.2-7

INTERSECTION LEVEL OF SERVICE OPERATION DUE TO CUMULATIVE DEVELOPMENT: AM PEAK HOUR WITH G.P. IMPROVEMENTS

Intersection (Numbers correspond to numbered intersections in General Plan EIR)	Existing + Project + Cum. (w/o Yerba Buena) LOS	V/C	Existing + Project + Cum. (w Yerba Buena-Sche LOS	V/C
1. Powell St./Christie	E	.91	E	.94
2. Powell St./I-80 NB on-/-off ramps	D	.87	D	.87
3. Powell St./I-80 SB on-/-off ramps	E	.95	E	.95
Powell St./I-80 ramps/W. Frontage Rd**	na***	na	na***	na
4. Powell St./W. Frontage Rd.	A	.36	A	.36
5. Hollis St/Yerba Buena Ave.	A	.48	A	.56
6. Hollis St./Park Ave.****	A	.31	A	.31
Hollis St./45th St.	CBA/CBA/AA*****		CBA/CBA/AA*****	
7. Powell St./Hollis St.	A	.58	A	.58
8. Hollis St./65th St.	A	.57	A	.57
9. 7th St./Ashby Ave.	B	.65	B	.65
10. San Pablo Ave./35th St.	A	.50	B	.62
11. San Pablo Ave./36th St.	D	.82	D	.87
12. San Pablo Ave./W. MacArthur Blvd	D	.87	E	.94
13. San Pablo Ave./Yerba Buena Ave.	D	.84	F	1.09
14. San Pablo Ave./Park Ave.	B	.68	C	.71
San Pablo Ave./45th St.	B	.61	B	.65
15. San Pablo Ave./Powell St.	E	.96	F	1.01
16. San Pablo Ave./Ashby Ave.	D	.84	D	.84

Source: Goodrich Traffic Group
Source for Cumulative LOS and V/C: City of Emeryville General Plan EIR (1987) but adjusted and estimated by Goodrich Traffic Group (GTG) for traffic increases due to the proposed General Plan amendment for the Emeryville Business Center, located on 45th Street (first two columns). The same future geometrics and roadway improvements that were included in the General Plan are assumed. LOS at 45th Street intersections with Hollis Street and San Pablo Avenue were estimated by Goodrich Traffic Group based on a comparison of existing and projected traffic volumes on 45th Street and Park Avenue and LOS projections for the Park Avenue intersection with these same streets.

LOS: Signalized Level of Service V/C: Vehicle/Capacity Ratio
** Combined LOS since signals at these three intersectins are interconnected and operate as one intersection.
*** not available
**** Assumed not to be signalized
***** Westbound left, through, and Right/Eastbound left, through, and Right/Northbound Left and Southbound left.

TABLE 4.2-8

INTERSECTION LEVEL OF SERVICE OPERATION DUE TO CUMULATIVE DEVELOPMENT: PM PEAK HOUR WITH G.P. IMPROVEMENTS

Intersection (Numbers correspond to numbered intersections in General Plan EIR)	Existing + Project + Cum. (w/o Yerba Buena) LOS	V/C	Existing + Project + Cum. (w Yerba Buena-Sche LOS	V/C
1. Powell St./Christie	D	.81	D	.85
2. Powell St./I-80 NB on-/-off ramps	E	.98	E	.98
3. Powell St./I-80 SB on-/-off ramps	E	.99	E	.99
Powell St./I-80 ramps/W. Frontage Rd**	na***	na	na***	na
4. Powell St./W. Frontage Rd.	B	.62	B	.62
5. Hollis St/Yerba Buena Ave.	C	.71	D	.82
6. Hollis St./Park Ave.****	A	.41	A	.41
Hollis St./45th St.	DCA/DCA/AA*****		DCA/DCA/AA*****	
7. Powell St./Hollis St.	E	.95	E	.95
8. Hollis St./65th St.	A	.57	A	.57
9. 7th St./Ashby Ave.	D	.85	D	.85
10. San Pablo Ave./35th St.	E/F	1.00	F	1.16
11. San Pablo Ave./36th St.	E	.91	E	.97
12. San Pablo Ave./W. MacArthur Blvd	E/F	1.00	F	1.09
13. San Pablo Ave./Yerba Buena Ave.	F	1.04	F	1.23
14. San Pablo Ave./Park Ave.	E	.99	F	1.03
San Pablo Ave./45th St.	B	.66	C	.72
15. San Pablo Ave./Powell St.	D	.89	E	.95
16. San Pablo Ave./Ashby Ave.	D	.85	D	.85

Source for cumulative LOS and V/C: City of Emeryville General Plan EIR (1987) but adjusted and estimated by Goodrich Traffic Group (GTG) for traffic increases due to the proposed General Plan amendment for the Emeryville Business Center, located on 45th Street (first two columns), and the Yerba Buena Park project, located on Yerba Buena Avenue (second two columns). The same future geometrics and roadway improvements that were included in the General Plan are assumed. LOS at 45th Street intersection with Hollis Street and San Pablo Avenue were estimated by Goodrich Traffic Group based on a comparison of existing and projected traffic volumes on 45th Street and Park Avenue an LOS projections for the Park Avenue intersections with these same streets.

* LOS: Signalized Level of Service V/C: Vehicle/Capacity Ratio

** Combined LOS since signals at these three intersections are interconnected and operate as one intersection.

*** Not available

**** Assumed to be signalized

***** Westbound left, through, and Right/Eastbound left, through, and Right/Northbound left and Southbound left.

The Yerba Buena Park project involves approximately 46 acres located about one block south of the Cannery East site. It is bounded by the Southern Pacific Railroad tracks on the west, I-580 on the south, San Pablo Avenue on the east, and various industrial and commercial establishments to the north (the project's northern boundary is approximately midway between Yerba Buena Avenue and Park Avenue). Under the existing General Plan, the Yerba Buena site would generate approximately 1,225 trips per hour (two-way) during the AM and PM peak hours. This estimate includes a 10% reduction in employment-related trips due to transit use by the project employees, and a 30% reduction in commercial-related trips attributed to the project that would be existing trips on San Pablo Avenue (passby trip capture); these adjustment factors are listed in Table 4.2-6. Under the proposed Scheme A of the Yerba Buena Park project, approximately 870 more trips (two-way) during the AM peak hour and 1,220 more trips during the PM peak hour would be generated that under the existing General Plan. Under Scheme B, peak hour trip generation would be relatively lower than Scheme A with approximately 450 fewer trips generated during the AM peak hour and 150 more trips during the PM peak hour when compared to traffic estimated under the existing General Plan. (AM peak hour trip generation has been estimated based on PM peak hour rates. The total trip generation for the project is approximately 25% lower during the AM peak hour than the PM peak hour and this can be attributed to the absence of retail-related trips during the AM peak hour.)

To assess worst-case conditions, Level of Service operation was analyzed for Scheme A. When compared to future conditions without the Yerba Buena Park project, development of Scheme A would degrade future Level of Service operation by up to two service levels (or up to 20 percent). As shown is Tables 4.2-7 and 4.2-8, AM and PM peak hour Level of Service operation would be degraded by one-half service level of more (change in V/C of .05 or more) at the San Pablo Avenue intersections with 35th Street, 36th Street, W. MacArthur Boulevard, Yerba Buena Avenue, 55th Street and Powell Street, the Hollis Street intersection with Yerba Buena Avenue, as well as the Ashby Avenue intersections with the W. Frontage Road and I-80 southbound on-/off ramps. Of these intersections, all of the San Pablo intersections analyzed would operate at LOS E or F during the PM peak hour except at 45th and 65th streets. The Powell Street intersections with the I-80 northbound on-/off-ramps, Christie Avenue, and Hollis Street would operate at LOS with or without Yerba Buena Park.

According to Emeryville standards, any traffic increase that degrades the Level of Service operation to LOS E or F would be considered a significant impact. Traffic increases due to Yerba Buena Park would degrade the other cumulative Level of Service operation from LOS D to LOS E or F at the San Pablo Avenue intersections with W. MacArthur and Yerba Buena Avenue during the AM peak hour, and with 55th Street and Powell Street during the PM peak hour. It would also degrade Level of Service operation from LOS E to LOS F at the San Pablo Avenue intersections with Powell Street during the AM peak hour and Park Avenue during the PM peak hour.

The average daily traffic volumes on local roadways were also estimated in the General Plan EIR for General Plan buildout conditions and these volumes have been modified to reflect future conditions with the Emeryville Business Center and Yerba Buena Park project. The modified volumes are presented in and they are rounded off to the nearest thousand. Level of Service designations shown in the General Plan EIR (Figure 5) would also be changed by the Yerba Buena Park project at some locations and modified volume figure reflects the amended LOS designations.

In addition to the traffic increases that would result from the new development in the Emeryville area, temporary increases in traffic on San Pablo Avenue would occur during construction of planned I-80 improvements Although there is limited available capacity on this roadway (particularly through Berkeley), Caltrans anticipates that 200 to 300 cars per hour could divert from I80 to San Pablo Avenue (Diane Steinhausen, personal communication). Although the I-80 improvements are scheduled to be constructed over four or five years, increases on the section of San Pablo Avenue in Emeryville would be expected when construction occurs on the section of I-80 in the Emeryville-Berkeley area.

The traffic analysis in the General Plan EIR projects significantly more traffic congestion only local streets in the future. Under current conditions, three intersection in the area are estimated in the General Plan EIR to be at the capacity during the PM peak hour (Powell/Hollis streets, San Pablo Avenue/MacArthur Boulevard, and San Pablo/Ashby avenues). Under General Plan buildout conditions, the General Plan EIR projects that approximately twice as many intersections (located along Powell Street and San Pablo Avenue and south of Park Avenue) would operate at LOS E or F during this peak period. It is also noted in the General Plan EIR that proposed roadway improvements must keep pace with new development, or traffic impacts will be even greater than those identified in that EIR. The General Plan EIR identifies the improvements of the freeway addition, use of Transportation System Management techniques is recommended as well as measures to promote mixed-use and live/work developments, permit higher density development near transit routes, and develop bicycle and pedestrian routes.

4.2.3 Mitigation Measures

1. The project sponsor should be required to reconstruct the structural section of 45th Street between the AC Transit Facility's western driveway (opposite the existing Watts Street) and San Pablo Avenue. In addition, some parking should be restricted from the south side of 45th Street immediately east of Watts Street to allow adequate turning radius for buses entering and leaving the AC Transit facility.

   Alternatively, buses could be required to use the Facility's eastern driveway on 45th Street for ingress and egress, thereby requiring a shorter section of 45th Street to be improved; on-street parking along the south side of the street is already restricted opposite this driveway.

2. Locate project access driveways directly opposite the existing intersections (not offset) to avoid turning and traffic conflicts.

3. The curbs on Park Avenue and 45th Street within 50 feet of the proposed driveways should be painted red to prohibit parking and maintain adequate sight distances between the streets and driveways.

4. Project access driveways should be widened from 30 to 36 feet at the Park Avenue and 45th Street Intersections to allow for better maneuverability and accommodate one outbound lane and one inbound lane, if needed.

5. To minimize potential safety problems at project access intersections, the proposed security gates at project access driveways should be relocated or removed so that entering vehicles are not forced to wait in the street.

6. Redesign the eight driveways along 45th Street to meet City regulations so that vehicles in the approximately 28 parking spaces leave the site in a forward direction.

7. To discourage speeding, the perimeter road should be designed so that the sections with straight alignments over 150 feet long are broken by curved sections or speed control circles with design speeds below 20 mph. The alternative use of speed bumps could cause aggravation, vehicle damage, and emergency access problems that could lower property values and result in potential liabilities on the approving agency's behalf.

8. Tandem parking spaces, if determined to be consistent with City parking regulations, should be restricted to two-bedroom units.

9. Install rolling curbs where necessary to ensure fire truck access. Perpendicular parking should be located so as not to conflict with turing radius requirements and the use of rolling curbs.

10. If necessary to compensate for the loss of emergency access due to the proposed closure of Watts Street, 45th Street may require special treatment suuch as removal of parking on one side to improve emergency access.

Cumulative Development Mitigation Measures

11. Appropriate traffic mitigation fees should be levied against the project on a fair-share basis in accordance with the City's traffic impact fee schedule. Funds should be placed in escrow pending installation of improvements.

12. Although the Hollis Street/Park Avenue intersection is approaching signal warrant criteria levels, traffic increases associated with the project would result in these criteria being met and a traffic signal being warranted. Under typical conditions, this signal would be the responsibility of the project sponsor; however, Caltrans will install this signal as part of the I-880 reconstruction project. The City should consider requiring the project sponsor to contribute the equivalent amount of funds for installation of a traffic signal at the Hollis Street/Park Avenue intersection. The cost of a traffic signal is estimated at $90,000, assuming it is designed by the City (Wally Kolb, personal communication).

Project Access and Internal Circulation

13. The proposed security gates at project access driveways should be relocated or removed so that entering vehicles are not forced to wait in the street.

14. Redesign the eight driveways along 45th Street to meet City regulations.

15. Locate project access driveways directly opposite existing intersections to avoid turning and traffic conflicts.

16. Maintain safe sight distances at all times to minimize conflicts between parked cars and internal project traffic.

17. Payment to a traffic impact mitigation fee for off-site improvements.

4.3 PUBLIC HEALTH AND SAFETY

4.3.1 Setting

The 11.77-acre project site is owned by The Del Monte Company Corporation. It was formerly used as a pear cannery. Some of the buildings were structurally damaged in the October, 1989 Loma Prieta earthquake and were demolished. Concern over public health results from the potential existence of contaminants that may have entered the soil and groundwater during Del Monte's use of the site for manufacturing.

The public does not drink water from any aquifer in the vicinity of Emeryville; therefore, the possible presence of hazardous contaminants in the ground water poses no threat to drinking water supplies.

Environmental Risk Assessment. Three site investigation reports were reviewed by Treadwell & Associates, Consulting Engineers and Scientists. These reports are: 1) "Property Assessment Report, Del Monte Plan No. 35, Emeryville, CA," CH2M Hill, June 1989; "Soil Investigation Report, Haven Street Property, 1250 Park Avenue, Del Monte Plant No. 35, Emeryville, CA," CH2M Hill, December 1989; and "Preliminary Survey, Del Monte Site, Emeryville, CA, Cullen Engineering Associates, March 3, 1990.

Treadwell & Associates' report indicates the following:

1. 3500-gallon underground gasoline tank -- Very low concentrations of petroleum hydrocarbons (TPH) are present in soil. They recommend that during demolition and site preparation all existing gas lines be removed and the soil visibly checked for staining or discoloration. If staining or discoloration is observed, soil samples should be obtained and tested prior to soil removal.

2. 550-gallon underground gasoline tank -- This tank, removed in January 1986, was located on Park Avenue. During removal, a soil sample was taken from a depth of three feet below the tank excavation with TPH reported at 1500 ppm. There were two borings, and one was converted into a monitoring well (MW-6). TPH concentrations ranged from 150 parts per million (ppm) at 7 feet to less than 1 ppm at 16 feet. Water samples found TPH, benzene, toluene and xylene. The well was sampled in August 1987, December 1988 and May 1989. Concentrations of all contaminants found in the groundwater decreased during this period. As of May 1989, groundwater analyses indicated 0.910 ppm of TPH, 0.011 ppm of xylene. Benzene and toluene were below detection limits. Treadwell understands that all compounds currently do not exist above detection limits in this well. Upon demolition of structures, CH2M Hill would obtain more soil samples to determine the extent of any remaining soil contamination, and Del Monte would remove the soil and replace it with clean soil.

   A final component to investigation is tank closure. Closure activities are monitored and verified by the Alameda County Department of Health Services (DEH). Del Monte has applied to the County of Alameda to begin closure activity under the guidelines of DEH. When these activities are complete, DEH certifies that the correction is completed.

3. 20,000-gallon underground fuel oil tank -- This tank was excavated in the early 1980s and abandoned in place by grouting in late 1985. Five soil samples were taken during the closure, but locations are unknown or unsure. Sample depths were documented and

groundwater samples were taken. Volatile hydrocarbons were found in two soil samples at concentrations up to 5 ppm and extractable hydrocarbons were detected in all five soil samples up to 116 ppm. Extractable hydrocarbons and oil and grease were found in the groundwater samples.

When buildings are demolished and site preparation begins, Del Monte plans to remove the tank. At that time, soil adjacent to and below the tank will be tested by CH2M Hill; and if groundwater is encountered, Treadwell recommends sampling it. If soil at or near the groundwater shows TPH concentrations above 100 ppm, a groundwater monitoring well would be installed.

4. Haven Street -- Twenty soil sample borings were taken along this street, one at the end of 1988 and nineteen at the end of 1989. In five near-surface soil samples and one in a "fish pit" excavation, elevated levels of TPH were detected. TPH was not detected in any samples below 1.5 feet. Laboratory test results, with the exception of two samples, indicated that the original fill material is not substantially impacted. Treadwell recommends that any soil containing elevated concentrations of TPH be removed and disposed of. They also recommend that groundwater samples be obtained and tested from two specific areas.

The report entitled Property Assessment Report by CH2M Hill, June 1989, cites the existence of eight tanks. Four of these appear to be unaccounted for and are not discussed in the Treadwell & Associates report. Their location and condition is uncertain. Closure plans, if any, for these and certain other tanks have not been available for review.

Regulatory Authority. In Emeryville, the DEH, through a Memorandum of Understanding, has the authority to implement California laws and regulations which are within the jurisdiction of the California Department of Health Services and the Regional Water Quality Control Board, San Francisco Bay Region. Thus, DEH is the agency which is responsible for supervising any hazardous waste investigations or cleanup activities at the site.

4.3.2 Impacts

Construction of the residential project would involve excavation for building foundations and for landscape elements, such as fence posts and the swimming pool, and planting of trees and shrubs.

During site preparation and construction, the significance of the public health risk is determined by the probability of construction workers being exposed to hazardous substances in sufficient concentrations to cause adverse health effects. California regulations in Title 22 and the Code of Federal Regulations (40 CRF Part 261) define what is considered hazardous, and therefore dangerous to handle.

Since petroleum hydrocarbons and other compounds may be present in various concentrations in soils and in groundwater on the project site, caution during construction is appropriate. During project construction, excavated soil could present a hazard of exposure to workers and the surrounding community. Also, construction activities may include dewatering which could bring potentially contaminated groundwater to the surface. However, this impact would be reduced as Del Monte would clean the soil on site or remove the contaminated soil from the site and replace it with clean soils and would monitor groundwater as necessary, pursuant to DEH directions.

During eventual habitation of the project site, any residual contaminated soils could potentially present a hazard to residents. Children playing in the open space could accidentally ingest contaminated soil. If encapsulated by parking lots or buildings or replaced with clean soil, the possibility of ingestion would be reduced to insignificance. The location and condition of several tanks or tank locations is uncertain, moreover, closure reports for certain other tanks have not ben available for review.

4.3.3 Mitigation Measures

The following mitigation measures shall be implemented according to the direction of the Department of Environmental Health. These measures include the process by which the DEH manages a contaminated site.

1. The project shall determine the extent and exact sources of contamination existing on Haven Street and at the site of the "fish pit". This study shall include water collection basins and soil and water samples. Contaminated soil shall be removed from the property according to DEH standards for removal and disposal.

2. Verify location of monitoring well #6, the exact location of which is unclear from figures provided by CH2M Hill.

3. Verify the location of the 550-gallon gasoline tank. Verify that removal procedure was been done in accordance with current regulations. Confirm that the monitoring well is downgrade from the location. This may require a further round of soil and water samples to verify absence of contaminants.

4. Verify the location of the former 3,500 gallon tank. (The figure from CH2M Hill does not provide an exact indication of its location.) Another monitoring well may be necessary for this tank. Verify that the closure procedure was in accordance with current regulations and confirm that any pipelines have been removed.

5. The project sponsor shall provide closure reports to the City for the tank of undetermined size and use on Park Avenue and the other tanks mentioned in the CH_2M Hill June 1989 report and not accorded for in the Treadwell report. If necessary, verify locations and conduct water and soil samples per DEH directions.

6. Pipelines or product lines connected to all underground tanks need to be removed.

7. In the vicinity of the 20,000 gallon tank (closed in place), the project sponsor shall determine where previous samples were taken in order to confirm results and dig a new monitoring well to confirm the absence of contaminants.

8. Any Sampling Plans shall be reviewed and approved by the DEH. The Sampling Plans shall include all revisions imposed by DEH.

9. The project sponsor shall implement the Sampling Plans and transmit the results to the DEH.

10. If contamination levels are at or near thresholds set by California regulations (California Code of Regulations, Title 22) or relevant federal law, the project sponsor shall meet with the County DEH, the Planning Director, City Manager and Attorney, and other relevant City staff to determine whether further action, including whether additional testing, would be necessary.

11. If contamination exceeds state and/or federal threshold levels, the project proponent shall prepare a Plan of Correction.

12. The Plan of Correction shall be reviewed and approved by the DEH. The Plan shall include all revisions imposed by DEH.

13. Upon acceptance, the project sponsor shall implement the Plan of Correction, and provide written verification of its completion to DEH and the Planning Department.

14. The DEH shall specify appropriate protective clothing for construction workers, if necessary.

15. Prohibit the use of ground water from the site for human consumption.

16. More recent data needed for the entire site since the most recent is the CH2M Hill report of December, 1989. This should concentrate on areas that have shown contamination in the past such, particularly the Haven Street area.

Similar measures exist for remediating potential exposure to contaminated groundwater. If found to be hazardous, water produced during construction would require caution in handling and treatment prior to discharge. Regional Water Quality Control Board standards for discharged water would apply. The DEH would supervise implementation of any necessary mitigation for groundwater contamination.

Implementation of these mitigation measures would reduce the potential risk to public health to less than significant level.

4.4 PUBLIC SERVICES

4.4.1 Setting

Fire

The Emeryville Fire Department provides fire protection to the project site. The Department's station located at 4331 San Pablo Avenue, Engine Number One, would be the first to respond to emergencies at the project site, with a response time of approximately one minute. The second unit that would respond is Engine Number Two, at 6303 Hollis Street with a response time of approximately four minutes. Engine Number One operates with an average of three firefighters while Engine Number Two operates with an average of four firefighters (personal communication, Ray Vittori, Emeryville Fire Department).

Police

The Emeryville Police Department provides police protection to the project site. Response time from the police station located at 2449 Powell Street is six minutes for non-emergency calls and two minutes for emergency calls. The department considers this level of service unique in the San Francisco Bay region. (Chief Joseph Colletti, 7-2-90). The police department has a force of 30 personnel: eight administrative and support and 22 patrol officers.

Schools

The Emeryville Unified School District (EUSD) serves the proposed project. The District operates the Anna Yates Elementary School for grades K-6, and Emery High School accommodates grades 7-12. Enrollment at Anna Yates Elementary is approximately 280 students in a building with a capacity of 300 students. Emery High School has a current enrollment of approximately 235 students and a capacity of 350 students. The District also owns the Ralph Hawley school, a 200-student capacity building, which the District currently rents to a private school.

Enrollment in the District has shown an increase during the past five years and the trend is expected to continue. District enrollment for grades K-8 has been larger in 1990 - 1991 than at any time during the last ten years. The increase is due in part to the District's recent practice of making underutilized capacity available to students resident in Oakland. The overall student population is anticipated to increase as existing students progress to high school and an equally large number of new students enroll in elementary grades. Under AB 2926, school districts may impose a fee of up to $1.53 per square foot of new residential development, and $0.25 per square foot of new commercial development including hotels, to offset the cost of providing additional school facilities. The Emeryville Unified School District does not have such a development impact fee.

4.4.2 Impacts

Fire

The proposed project would result in increased calls for service. However, the Emeryville Fire Department could serve the proposed project with existing personnel and equipment if the project is constructed to meet applicable fire protection requirements (see Mitigation Measures, below).

Emergency response to the units above the second floor will be delayed as there is not quick access due to the lack of elevators.

Police

The proposed project would present minor police protection impacts. The Police Department anticipates a potential increase in police service calls of approximately 500 to 750 calls per year as a result of the project (Chief Joseph Colletti, 7-2-90). Calls would typically respond to residential burglaries, thefts and lock-outs. A reduction in the high current level of service would likely result. However, the Police Department could adequately serve the proposed project with existing personnel and equipment, providing appropriate mitigation measures are implemented. Cumulatively, the department would require additional manpower, fleet and facilities to maintain its current level of service as other projects develop.

Schools

The Emeryville Unified School District has a total surplus capacity of 135 spaces in its currently open schools, and an additional 200 potential spaces at the Ralph Hawley School site.

The proposed project would contain 422 new dwelling units and the District estimates that it would generate approximately 60 students. The District could accommodate the new students within its existing facilities either through the reduction in the number of Oakland students or the addition of temporary classrooms.

4.4.3 Mitigations Measures

Fire

Mitigation Measures Required by Regulation:

- The applicant should comply with Fire Department regulations.
- Agreements made between the Fire Department and the applicant regarding access routes, spacing of fire hydrants and pressure requirements that conform to the 1985 Uniform Fire Code should be implemented.
- No exterior overhanging facades or canopies should be used unless tied in as part of the supporting structure and incorporated with fire stop as per Fire Department requirements.
- Stand pipes for connection to fire hoses should be located in all stairwells in the project.

Other Required Mitigation Measures:

- An emergency lighting system should light stairwells and exits. Corridors will require emergency lighting if excluded from natural light.
- Smoke detectors, sprinklers and fire alarms should be provided within buildings.
- The units are to be numbered in compliance with Emeryville Fire Department requirements in order to locate people quickly in an emergency situation.

Police

Mitigation Measures Required by Regulation:

- Applicant shall comply with all Police Department regulations.
- Applicant shall obtain Police Department approval of all personal and public safety equipment installed by the applicant. Items subject to review shall include, but not be limited to, security hardware, exterior lighting and alarm systems.

Other Recommended Mitigation Measures:

- For adequate security and safety, a lighting level of .25 foot candles should be provided at paths along the street. A lighting level of not less than .5 foot candles could be provided at all the residential areas, roads, sidewalks, bike paths and parking areas, including parking garages.

- The main entrances should have schematic maps of the project in order to facilitate emergency access to individual buildings.

- All residents should have single cylinder deadbolt locks on the doors and wide angle viewers.

- Parking spaces and unit numbers should not have the same number to prevent connecting an empty parking space with a particular unit.

- Tempered glass or high strength plastic is recommended when glass is used on doors. Windows using plate glass should be more than 40 inches from door locks.

- Landscaping patterns should channel pedestrian movement. The landscaped courts should have "a private sense of territory to the residents" of that cluster and should not be considered a public place.

- Mail boxes should be in highly visible areas and vandal resistant, i.e., small slot boxes built into the wall and securely mounted with the post office using a master key.

- The tot lot should be clearly visible from units so the parents are able to supervise their children.

- The covered parking and storage areas should have visual access from units.

- Padlocks are recommended for storage lockers; but deadbolts, where possible, are preferred.

- Sliding glass door and windows should have secondary locking devices on the inside track rather than the outside track. Doors and windows should also have a sliding portion on the interior of the unit.

- All entries should be well lit and clearly visible from other units.

Schools

None required if the number of Oakland students attending Emeryville Unified School District were reduced in relation to the number of students generated by the project. If a capacity problem were to develop as a result of project implementation, arrangements would need to be made to accommodate the new students. In the near term, portable facilities could be used to make up the shortfall. In this case, the project sponsor shall provide the school impact fee up to the limit permissible under AB 2926. In the long run, however, if overcrowded conditions were to be caused by the anticipated cumulative projects, the District should consider reopening the Ralph Hawley School site.

4.5 AIR QUALITY

4.5.1 Setting

The Bay Area's climate, as with all of California coastal environs, is dominated by the strength and position of the semi-permanent high pressure center over the Pacific Ocean near Hawaii. It creates cool summers, mild winters, infrequent rainfall, it drives the cool daytime sea breeze, and it maintains comfortable humidities and ample sunshine. Unfortunately, the same atmospheric processes that create the desirable living climate combine to restrict the ability of the atmosphere to disperse the air pollution generated in part by the large population attracted by the climate. Portions of the Bay Area, particularly highly urbanized and poorly ventilated portions of the Santa Clara Valley, therefore, experience air pollution levels somewhat in excess of established clean air standards.

Temperatures in Emeryville, average 58^{0} F annually. The warmest afternoons in September average in the mid-70s while winter mornings drop to around 40^{0}F. Daily and seasonal oscillations of temperature are small because of the moderating effects of the nearby vast oceanic heat reservoir. In contrast to the steady temperature regime, rainfall is highly variable, and confined almost exclusively to the "rainy" period from early November to mid-April. Emeryville averages 18 inches of precipitation annually, but because much of the area's rainfall derives from the fringes of mid-latitude storms, a shift in the annual storm track of a few hundred miles can mean the difference between a very wet year and near drought conditions.

Winds in the Cannery East area display several characteristic regimes. During the day, especially in summer, winds are from the southwest through northwest at 7 to 9 miles per hour as air is funneled through the Golden Gate and then diverges across the entire Bay Area. At night, especially in winter, the land becomes cooler than the ocean and an offshore wind of 2 to 4 miles per hour develops from the Berkeley Hills toward the Bay. After sunrise and after sunset, there is usually a period of light and disorganized flow as one flow regime dissipates and the replacing regime has not yet become fully established. The net effect of the prevailing wind distribution is that the Emeryville area is rapidly ventilated in the daytime with clean marine air with corresponding good air quality. The air stagnation at night during the winter creates a strong potential for elevated air pollution levels, but the air draining off the hills toward the bay is relatively unpolluted. Nocturnal air quality is, therefore, also usually healthful in the East Bay area.

In addition to winds that govern the horizontal rate and trajectory of any air pollutants, the Bay Area experiences two characteristic temperature inversions that control the vertical depth through which pollutants can be mixed. The daytime onshore flow of marine air is capped by a massive dome of warm air that acts like a giant lid over the region. As the clean ocean air moves inland, pollutants are continually added from below without any dilution from above. As this layer slows down in inland valleys of the basin and undergoes photochemical

transformations under abundant sunlight, it creates unhealthful levels of smog (mainly ozone). A second inversion forms at night as cool air pools in low elevations while the air aloft remains warm. Shallow radiation inversions are formed (especially in winter) that trap pollutants near intensive traffic sources such as freeways, shopping centers, etc., and form localized violations of clean air standards called "hot spots." Although inversions are found during all seasons of the year, the summertime regional capping inversion and the localized winter radiation inversions are, by far, the most dominant. The seasonal split in inversion intensity thus contributes significantly to the completely different air quality climate found in summer in the Bay Area than in the winter.

Ambient Air Quality Standards (AAQS). In order to assess the air quality impact of proposed development such as the Cannery East project, that impact, together with baseline air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress such as asthmatics, the elderly, the very young, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollution levels above these standards before adverse health effects are observed. Recent evidence has shown, however, that chronic exposure to ozone even at levels just meeting federal clean air standards has an observable negative health response.

The Clean Air Act Amendments of 1970 established national AAQS with states retaining the option to adopt more stringent standards or to include other pollution species. Because California already had standards in existence before federal AAQS were established, and because of unique meteorological problems in the state, there is considerable diversity between state and federal standards currently in effect in California as shown in Table 4.5.1.

Baseline Air Quality. Existing and probable future levels of air quality in the Emeryville area can be best inferred from ambient air quality measurements conducted by the Bay Area Air Quality Management District (BAAQMD) at its Oakland monitoring station. This station measures both regional pollution levels (ozone), as well as primary vehicular levels near busy roadways (carbon monoxide). The nearest representative data resource for pollutants not measured in Oakland is in Richmond. Table 2 summarizes the last five years of published data from these monitoring stations. The following conclusions can be drawn from this data:

a. Photochemical smog (ozone) levels exceed the hourly state standard about once per year, but the less stringent federal standard has not exceeded in the last five years of published data. Emeryville is, therefore, an ozone attainment sub-area within the designated Bay Area Air Basin ozone non-attainment area.

b. Measurements of carbon monoxide show low baseline levels with the hourly maximum at around 50 percent of the allowable California standard. Similarly, maximum 8-hour CO levels are several ppm below their allowable 8-hour exposure. Nitrogen dioxide standards are similarly well within allowable maximum concentrations.

TABLE 4.5-1

FEDERAL AND STATE AIR QUALITY STANDARDS

TABLE 1 – Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		National Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone	1 Hour	0.09 ppm (180 ug/m3)	Ultraviolet Photometry	0.12 ppm (235 ug/m3)	Same as Primary Std.	Ethylene Chemiluminescence
Carbon Monoxide	8 Hour	9.0 ppm (10 mg/m3)	Non-dispersive Infrared Spectroscopy (NDIR)	9.0 ppm (10 mg/m3)	Same as Primary Stds.	Non-dispersive Infrared Spectroscopy (NDIR)
	1 Hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
Nitrogen Dioxide	Annual Average	-	Gas Phase Chemilumi-nescence	0.053 ppm (100 ug/m3)	Same as Primary Std.	Gas Phase Chemilumi-nescence
	1 Hour	0.25 ppm (470 ug/m3)		-		
Sulfur Dioxide	Annual Average	-	Ultraviolet Fluorescence	80 ug/m3 (0.03 ppm)	-	Pararosaniline
	24 Hour	0.05 ppm (131 ug/m3)		365 ug/m3 (0.14 ppm)	-	
	3 Hour	-		-	1300 ug/m3 (0.5 ppm)	
	1 Hour	0.25 ppm (655 ug/m3)		-	-	
Suspended Particulate Matter (PM_{10})	Annual Geometric Mean	30 ug/m3	Size Selective Inlet High Volume Sampler and Gravimetric Analysis	-	-	-
	24 Hour	50 ug/m3		150 ug/m3	Same as Primary Stds.	Inertial Seperation and Gravimetric Analysis
	Annual Arithmetic Mean	-	-	50 ug/m3		
Sulfates	24 Hour	25 ug/m3	Turbidimetric Barium Sulfate	-	-	-
Lead	30 Day Average	1.5 ug/m3	Atomic Absorption	-	-	Atomic Absorption
	Calendar Quarter	-		1.5 ug/m3	Same as Primary Std.	
Hydrogen Sulfide	1 Hour	0.03 ppm (42 ug/m3)	Cadmium Hydr-oxide STRactan	-	-	-
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm (26 ug/m3)	Tedlar Bag Collection, Gas Chromatography	-	-	-
Visibility Reducing Particles	1 Observation	In sufficient amount to reduce the prevailing visibility to less than 10 miles when the relative humidity is less than 70%		-	-	-
Applicable Only in the Lake Tahoe Air Basin						
Carbon Monoxide	8 Hour	6 ppm (7 mg/m3)	NDIR	-	-	-
Visibility Reducing Particles	1 Observation	In sufficient amount to reduce the prevailing visibility to less than 30 miles when the relative humidity is less than 70%.		-	-	-

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NOTES:

1. California standards for ozone, carbon monoxide, sulfur dioxide (1 hour) , nitrogen dioxide and particulate matter - PM_{10} , are values that are not to be exceeded . The sulfates, lead, hydrogen sulfide, vinyl chloride, and visibility reducing particles standards are not to be equaled or exceeded.

2. National standards, other than ozone and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parenthesis are based upon a reference temperature of 25° C and a reference pressure of 760 mm of mercury. All measurements of air quality are to be corrected to a reference temperature of 25° C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent procedure which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the Environmental Protection Agency.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the implementation plan is approved by the EPA.

7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

8. At locations where the state standards for ozone and/or suspended particulate matter are violated. National standards apply elsewhere.

9. Prevailing visibility is defined as the greatest visibility which is attained or surpassed around at least half of the horizon circle, but not necessarily in continuous sectors.

TABLE 4.5-2

BERKELEY AMBIENT AIR QUALITY MONITORING
(Number of Days Standards Were Exceeded and Maxima for Periods Indicated)

Pollutant/Standard	1984	1985	1986	1987	1988
Ozone:					
1-Hour > 0.09 ppm	2	1	0	0	1
1-Hour > 0.12 ppm	0	0	0	0	0
1-Hour > 0.20 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.11	0.12	0.09	0.09	0.10
Carbon Monoxide:					
1-Hour > 20. ppm	0	0	0	0	0
8-Hour > 9. ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	11	9	12	9	10
Max. 8-Hour Conc. (ppm)	8.0	5.8	7.5	4.9	5.6
Nitrogen Dioxide:					
1-Hour > 0.25 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.15	0.11	0.13	0.09	0.11
Total Suspended Particulates:					
24-Hour > 100 ug/m3	3/61	2/61	0/61	0/61	0/56
24-Hour > 260 ug/m3	0/61	0/61	0/61	0/61	0/56
Max. 24-Hour Conc. (ug/m3)	142	125	85	99	73
Particulate Sulfate:					
24-Hour > 25. ug/m3	----	0/60	0/61	0/61	0/56
Max. 24-Hour Conc. (ug/m3)	----	12.7	12.3	9.8	7.9

Source: California Air Resources Board
Summary of Air Quality Data, 1984-1988
BAAQMD Oakland (Alice) & Richmond (13th Street) Monitoring Stations.

c. Airborne dust levels measured at Richmond show that they may exceed the former state total suspended particulate (TSP) standard, but no measurement in excess of the former national TSP standard has been recorded in the project area since well before 1982. Since the TSP standard has been replaced by an inhalable dust standard for particles of 10-micron diameter (PM-10) based on a size-selective dust monitor, isolated violations of the stringent California PM-10 standard could occur in Emeryville, but such levels are expected to be much lower than those found in many urbanized metropolitan areas of the country. There are no PM-10 measurements at either Oakland or Richmond by which area compliance with the California or national PM-10 standards can be determined.

Air Quality Planning (AQP). Because of continued violation of the federal ozone standard and standards for several other species with national clean air standards in the basin, the Clean Air Act required that regional planning and air pollution control agencies prepare a regional AQP as part of the State Implementation Plan (SIP). The AQP outlined the measures by which both stationary and mobile sources were to be controlled in order to achieve all standards within the Clean Air Act deadlines. For the Bay Area Air Basin, which includes portions of a nine county area, a Bay Area Air Quality Plan was prepared jointly by the Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC) and the BAAQMD. The last AQP was prepared in 1982, and predicted attainment of all national clean air standards within the basin by 1987. Violations of the national hourly ozone standard in the basin have averaged only 5-10 days per year in the last 4 years, but attainment (which allows one violation per year in a three-year average) is still several years away. Similarly, the federal 8-hour CO standard continues to be violated in San Jose, Vallejo and downtown San Francisco, and, therefore, attainment of this standard is also not imminent. Air quality in the Bay Area has never been as bad as many areas of Southern California or even parts of the Central Valley, and has certainly improved in the last decade, but complete attainment is still well into the future as a portion of continued emissions reductions are off-set by new emissions from population and industry growth of the basin.

A project such as the proposed Cannery East development impacts air quality primarily through transportation-related vehicular exhaust emissions. It thus relates to the AQP through the growth assumptions made by ABAG for the region. ABAG uses the general plans from cities such as Emeryville and any specific development plants to predict future patterns of population, housing, employment and land use and their resulting air pollution emissions from transportation sources. To the extent that the proposed project has been anticipated in the ABAG growth assumptions and project proponents implement those available transportation control measures (TCMs) to the best of their ability, the regional emissions from the project will not have a significant air quality impact. If the proposed project causes greater levels of emissions to be generated than anticipated, or if these emissions occur much sooner than currently predicted or if available TCMs are not fully implemented, then the air quality impacts of the project from AQP non-conformity are significant on a regional scale.

4.5.2 Impacts

Residential land use growth in the Emeryville area will impact air quality almost exclusively through the vehicular traffic generated by the development. Such impacts occur basically on two scales of motion. Regionally, personal commuting will add to regional trip generation and increase the vehicle miles traveled (VMT) within the local airshed. Locally, project traffic, especially at rush hour, will be added to the local roadway system near the development site. If such traffic occurs during periods of poor atmospheric ventilation, is comprised of a large number of vehicles "cold-started" and operating at pollution inefficient speeds, and is driving on roadways already crowded with existing traffic, then there is a definite potential for the formation of microscale air pollution "hot spots" in the local Cannery East area.

Secondary development-related atmospheric impacts derive from a number of other small, growth-connected emissions sources such as temporary emissions of dusts and fumes during project construction, increased fossil-fuel combustion in power plants and heaters, boilers, stoves and other energy consuming devices, evaporative emissions from paints, thinners or solvents used in construction and maintenance, dust from tire wear and resuspended roadway dust, etc. All these emission points are either temporary, or they are so small in comparison to project-related automotive sources that their impact is negligible. They do point out, however, that growth engenders increased air pollution emissions from a wide variety of sources, and thus further inhibits the near-term attainment of all clean air standards in the region.

Construction Activity Impacts

Construction activities, including soil disturbance dust emissions and combustion pollutants from on-site construction equipment and from off-site trucks hauling dirt, cement or building materials, will create a temporary addition of pollutants to the local airshed. These emissions are quite variable in time and space and differ considerably among various construction projects. Such emission levels can, therefore, only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

The California ARB uses an universal construction dust emission factor of around 110 pounds per day per acre of disturbance. The Cannery East project will entail about 3 months of heavy soil disturbance during site demolition and rough grading, and dust control levels of 50% are generally achieved with standard construction dust abatement practices. When this factor is applied to the 11.8 acre project site, total dust emissions during grading of 20 tons are predicted. Under prevailing daytime west to east winds, such dust will be carried eastward across primarily industrial uses. With limited residential exposure downwind of the project site, the dust nuisance potential should be minimal during initial clearing and grading. It should further be noted that much of this dust is comprised of large particles that readily settle after leaving the construction site. Because these large particles are chemically inert and because they are readily filtered out by human breathing passages, they comprise much more of a dust nuisance rather than any adverse health impact.

Because asbestos insulation has been used in two of the existing buildings, special care in site demolition must be exercised. Asbestos must be removed separately and encapsulated to prevent escape into the open air. A trained, licensed, bonded and certified contractor will have to perform this task such that by the time total building demolition occurs, there will be no residual asbestos contained within any demolition dust or debris. Certification of asbestos clearance will need to be provided by the asbestos contractor before permits for building demolition and/or new construction will be issued.

In addition to dust emissions, construction activities will cause combustion pollutants to be released from heavy-duty on-site equipment and from off-site trucks hauling dirt, cement or other building materials. The California ARB estimates that typical residential construction in California requires the expenditure of about 300,000 Brake Horsepower Hours (BHP-HR) of on-site and off-site construction equipment operations per acre of residential and roadway construction. Assuming that all on-site equipments and heavy trucks are diesel-powered, the following emissions are calculated for total project construction activities:

Reactive Hydrocarbons	-	5.8 tons
Carbon Monoxide	-	10.6 tons
Nitrogen Oxides	-	40.5 tons
Total Particulates	-	2.4 tons
Sulfur Dioxide	-	4.1 tons

Source: BAAQMD Air Quality and Urban Development, Table VI-D-1.

The mobile nature of these sources, especially the on-road trucks, disperses these emissions widely in space and time. While the cumulative emissions are substantial over the construction lifetime of the project, they are small on a daily or hourly basis when construction is spread out over its anticipated phasing schedule. Given the reasonably low baseline low levels of primary construction equipment emissions such as CO and NOx, the local airshed can readily accommodate the additional temporary project emissions with no measurable degradation in area air quality.

Vehicular Emissions Impacts

The main project-related air quality concern stems from an additional 2,400 vehicle trips that the project will generate at 100% site occupancy. With average trip lengths in the Bay Area Air Basin of around 6 miles per trip (a combination of longer commuting and shorter local trips), the proposed Cannery East Project will add almost 15,000 vehicle miles traveled (VMT) to the regional travel burden. For a 1995 project completion date, the California ARB URBEMIS2 computer model was run to calculate the regional exhaust pollution burden associated with project implementation. The results are attached as an appendix to this report, and are summarized (in pounds per day) as follows:

Pollutant	Project Emissions	BAAQMD Significance Threshold
Reactive Organic Gases	58.0	150.
Nitrogen Oxides	51.7	150.
Carbon Monoxide	687.4	550.*
Sulfur Dioxide	6.9	150.
Suspended Particulates	9.2	150.

* = Project emissions > 550 pounds/day requires microscale impact analysis to determine significance.

Source: URBEMIS2 Model and BAAQMD Air Quality . . ., Table VI-B-2.

The total project-related air pollution burden is below the AQMD's established threshold levels of insignificance for ozone-causing air pollution emissions (NOx and ROG). The proposed project thus creates an insignificant regional air quality impact simply based on its limited scope. Carbon monoxide (CO) levels slightly exceed the daily insignificance threshold, but CO impacts are typically analyzed in terms of any microscale effects near local roadways and not on a regional scale.

In terms of any regional growth-related effects, those are incorporated into the regional transportation and air quality plans. The growth forecasts are based on the existing general plans at the local and sub-regional level. To the extent that any small incremental Emeryville growth is consistent with the existing general plan, any corresponding regional air pollutant emissions will have a negligible air quality impact. For the proposed Cannery East project, site zoning and general plan designations (and associated trip generation estimates) are for commercial use. Commercial uses tend to generate more trips per unit area than residential uses as proposed or industrial uses as found in much of the project vicinity. To some extent, the proposed GPA and zoning change are "down-zones" in terms of trip generation. Air pollution from site-related traffic is probably less than for full site development, and, therefore, has

a reduced project-specific and cumulative regional air quality impact. That conclusion is an over-simplification because people need to live, work, shop, recreate, etc. at one location if not another. Cumulative impact significance thus depends on how well all uses are distributed in such a way as to reduce dependence on the auto. This project will be built in an area that is more job rich and housing poor, and has reasonable access to many non-automobile travel opportunities such as BART or transit. More in terms of its positive contribution to jobs/housing balance and alternative transportation options rather than any absolute emissions magnitude or trip downscaling should the proposed project be considered as having an insignificant cumulative air quality impact.

While the development itself may have only a minimal individual and cumulative regional air quality impact, the increase of traffic on Emeryville roadways may create localized violations of ambient health standards. To evaluate the potential for the formation of any air pollution "hot spots," the BAAQMD screening procedure based on the California line source dispersion model CALINE4 was used to estimate receptor exposure at various intersections near the project area potentially impacted by additional development traffic. This procedure was initialized with maximum traffic and minimum dispersion conditions at a distance of 25' beyond the edge of the sidewalk of each intersection leg with existing and existing plus project peak hour traffic in order to generate a worst-case impact assessment.

The cumulative (2000) scenario was also analyzed. CO was used as the indicator pollutant to determine if there was any air pollution "hot spot" potential. The results of the modeling exercise are summarized in Table 3. The hourly CO exposure near the nine analyzed intersections where maximum localized CO impacts are likely to occur currently total about 2-7 ppm above the regional background level. The maximum project-related microscale CO impact is 0.7 ppm. This increase is related more to a slight degradation in level of service rather than to project traffic volumes. When small additional volumes alone are considered, the project impact is typically a minuscule 0.1-0.2 ppm above the no project case. The proposed development is too small to generate a measurable air quality impact on either a regional or a local scale.

Table 3 does show, however, that the pollution capacity of the local airshed is limited and could be threatened from cumulative growth. For a future 50,000 cars per day on San Pablo and a peak hour LOS of "F" at the Adeline/MacArthur intersection, cumulative future CO levels may rise sufficiently to create a localized air quality problem. As with any other local CO impacts, this "hot spot" potential is a much related to capacity problems as it is to heavy traffic volumes alone.

With an hourly CO standard of 20 ppm, both existing and future CO levels are well below any level of concern except at the future lower San Pablo congestion node, even when a non-local background contribution is included in the total near-roadway exposure. If any standards are threatened, it would most likely be the 8-hour CO standard of 9 ppm. However, since neither the rush hour traffic nor the restrictive dispersion meteorology last for 8 hours, the long-term CO impact near each analyzed roadway will be much smaller than the already small hourly level. There are not enough traffic volumes on local streets to anticipate any significant microscale air quality concerns. The nuisance element of increased exhaust odor near congested intersections should, however, be minimized as much as possible even if standards are not threatened such that maintaining reasonable set-backs of any sensitive receptors from major intersections is strongly encouraged.

TABLE 4.5-3

CANNERY EAST PROJECT
MICROSCALE AIR QUALITY IMPACT ASSESSMENT
(Hourly CO Concentrations [ppm] Above Non-Local Background)

Location	Existing Traffic	Existing+ Project	General Plan Buildout (2000)
Powell Street			
@ West Frontage Road	1.9	1.9	2.7
@ Christie Avenue	4.8	4.9	5.5
@ Hollis Street	4.2	4.4	5.7
@ San Pablo Avenue	6.8	6.9	3.9
San Pablo Avenue			
@ 45th Street	2.1	2.1	1.9
@ Park Avenue	2.2	2.9	5.3
@ Adeline Street	3.0	3.7	11.4
Hollis Street			
@ Park Avenue	2.0	2.7	0.8
@ 45th Street	1.4	1.5	0.8

Source: BAAQMD Air Quality . . ., p. VII-6 (mod. 04/88).

4.5.3 Mitigation Measures

The anticipated Cannery East development does not create a significant air quality impact on either a local or a regional scale. There is, therefore, no requirement to develop any unusual mitigation measures to off-set any project impacts. Further, since air quality impacts derive primarily from the automobile whose emissions characteristics are beyond the control of project proponents and local regulatory agencies, the potential for effective mitigation is quite limited.

Such a pessimistic conclusion notwithstanding, there are some transportation control measures (TCMs) and some temporary construction activity impact mitigation measures that should be considered in any growth planning in the City of Emeryville. Such measures include:

- o Dust control measures required by the AQMD to be implemented during construction should be actively enforced by City staff. Such measures include maintaining adequate soil moisture as well as removing any soil spillage onto traveled roadways through site housekeeping procedures.

- o Reducing interference with existing traffic and preventing truck queuing around local receptors should be incorporated into any project construction permits. The permits should limit operations to daytime periods of better dispersion that minimizes localized pollution accumulation.

- o Various transportation control measures (TCMs) should be evaluated to determine how they might be incorporated into project designs. Such measures include:

    - Ridesharing
    - Vanpool Incentives
    - Alternate Transportation Methods
    - Work Scheduling for Off-Peak Hour Travel
    - Transit Utilization
    - TSM Program Coordination
    - Traffic Signal Coordination

- o Intersection of service should be maintained at LOS "D" where possible in order to minimize odor nuisance impacts from congested traffic idling near intersections operating with LOS "E" or "F". Future intersections operation at LOS "F" at build-out traffic volumes may create a significant microscale air quality impact that can be mitigated to a level of insignificance through congestion reduction.

area would generate lower levels of traffic, parking and transit demand. There would be less of a demand for fire and police services and school facilities than in the proposed project.

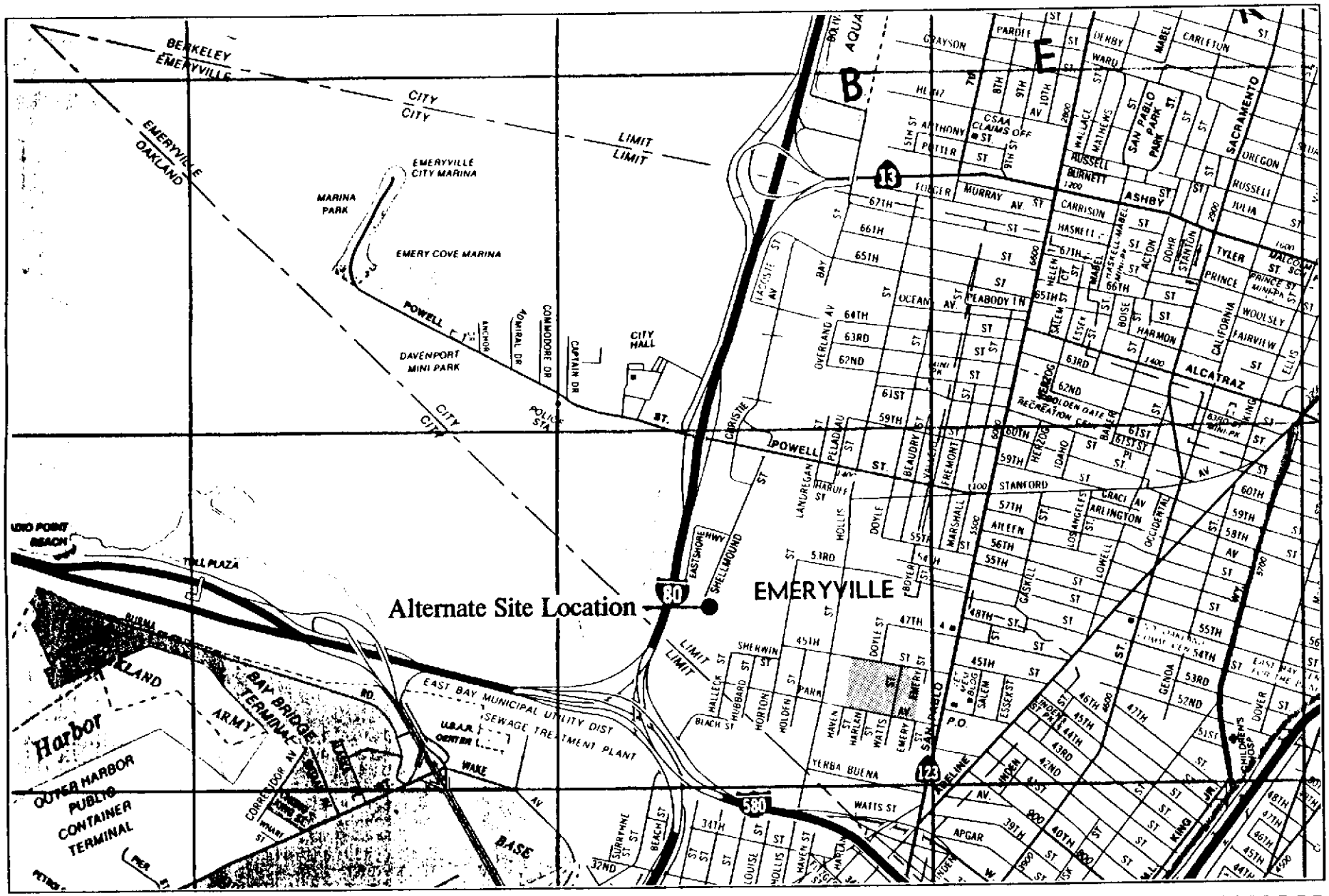
5.5 ALTERNATE SITE DEVELOPMENT

Description. This EIR has been prepared to inform the public about potential significant environmental effects of the proposed development. The City of Emeryville is acting as the lead agency for the proposed project and will use this EIR as a resource document in evaluating the project's impacts on its environment and its conformity with City of Emeryville plans. Therefore, it is reasonable for this analysis to limit alternate site locations to parcels within the City of Emeryville.

The project sponsor analyzed the possibility of constructing the proposed project on a site of approximately 15 acres. The alternative site is located at the southern terminus of Shellmound Street, between Interstate 80 and the Southern Pacific railroad tracks (Figure 5-1). The long narrow site is designated Medium-Density residential in the City of Emeryville's General Plan. Currently, Barbary Coast Steel uses a portion of the site for a rebar manufacturing plant, which is considered a nonconforming use. Two warehouse buildings occupy the site. The possibility of soil contamination exists because of the site's history of manufacturing. The Alternate Site development would differ in site plan from the proposed project as this site is a long, narrow rectangle unlike the square proposed site. However, project elements, building design and concept would be similar.

Impacts. This alternative would change the existing industrial use of the site to a residential use, consistent with the General Plan. Allowable height in this area is 55 feet. Therefore, a conditional use permit would not be required for this site for the buildings if they were 50 feet high. Architectural constraints designated in the General Plan along Park Avenue would not be applicable to this site. Assuming the same number of dwelling units as the proposed project, this alternative would generate the same number of vehicle trips. However, the impacts would occur at different intersections and vehicle trips would be distributed differently from those of the proposed project. Public services impacts would be the same as for the proposed project.

Public health and safety impacts would be different from those of the proposed project. The potential impacts as a result of the site's historical use as a heavy manufacturing plant could be significant and would require evaluation in accordance with CEQA and county, state and federal regulations. The potential cost of monitoring and cleaning a heavy industrial and manufacturing site of potentially contaminated soil and groundwater to make it suitable for residential use could be economically infeasible at this time. Other potential impacts on residents of this site would be from high levels of freeway noise and reduced air quality because of the vehicular emissions due to the site's proximity to a congested segment of Interstate 80.



ALTERNATIVE SITE LOCATION

Cannery East

Wallace Roberts & Todd

Figure 5-1

5. PROJECT ALTERNATIVES

This chapter identifies alternatives to the proposed project and discusses the environmental impacts associated with these alternatives.

5.1 NO PROJECT ALTERNATIVE

Description. The no project alternative would involve no change to the project site as it now exists. The site would remain partially vacant, and the two existing brick buildings would eventually require demolition. Watts Street would remain a local city street and shown as a major pedestrian corridor on the City's General Plan.

Impacts. No environmental impacts associated with the "Cannery East" project would occur. There would be no changes to the General Plan or Zoning ordinances, and the section of the site along Park Avenue would retain its "Commercial" designation. In addition, traffic impacts and impacts to public services would not occur as the result of this alternative. Current levels of parking, transit and public service demand could be subject to cumulative impacts associated with other planned development in the project vicinity.

5.2 LOWER-DENSITY ALTERNATIVE

Description. Under this alternative, the number of dwelling units would be reduced to 300, from the 422 proposed for the project, although other major components of the project would remain the same. There would be a proportional reduction in parking spaces and in total gross square feet of living area. Some of the buildings would be reduced to two stories over parking and some to two stories in height with parking located nearby. Watts Street would be closed and Haven Street would become a local city street and major pedestrian corridor.

Impacts. Overall, the environmental impacts described for the proposed project would be fewer. The 122 fewer dwelling units would reduce project traffic by 29% and would generate less parking demand. Land use impacts would be the same for this alternative because General Plan changes and zoning amendments would still be required.

A Conditional Use Permit might not be required if the buildings' height did not exceed 40 feet. Based on the City's average household figure of 1.7 persons per unit, project population would be reduced to 510 persons from 717 persons in the proposed project. Therefore 207 fewer persons would have less of a demand on fire, police protection and school services.

5.3 HIGHER-DENSITY ALTERNATIVE

Description. As an alternative building and site design to the proposed project, a plan to construct 660 apartments over a parking structure will be analyzed. The building design would be a traditional double-loaded corridor. The number of units would increase approximately 60% and the population would increase (using the city's 1.7 person per household figure) to 1,122 from 717 for the proposed project. To accommodate the increase in total square footage of living space and the addition of a parking structure, the height of the project would be greater than 50 feet. There would be no open space on the project site and the proportional increase in parking spaces would be located in the parking garage.

Impacts. Land use impacts as a result of the higher density alternative would increase. Apartment buildings would be taller than adjacent, surrounding one- and two- story residential, industrial and retail buildings. This alternative would not conform to Community Design Policies 3, 5 and 18 of the General Plan, which urges maintenance of visual relationships to existing brick buildings along Park Avenue, continuous street facades of buildings with similar height and bulk and the use of brick as the predominant building material. This alternative would also require a conditional use permit to allow a height greater than 40 feet.

Impacts on community services would be greater, as demand for fire and police protection would increase substantially. The increase in population on the site would generate more school-age children, increasing the demand for school capacity. Project traffic impacts would be almost double those of the proposed project, as 405 more dwelling units would generate more vehicle trips per day.

5.4 MIXED USE ALTERNATIVE

Description. This mixed-use alternative would be constructed on the same lots as the proposed project. It would contain 300 residential units (29% fewer than the proposed project) and 40,000 square feet of retail and office space along Park Avenue. The residential buildings would be two and three stories over parking as in the proposed project. A recreation center and open space would also be included in the design. The retail and office segment of the design would be a combination of one- and two- story buildings. A variety of residential parking options would be part of this alternative. Parking for the retail and office uses would also be included on-site. Commercial uses would conform to those permitted in the current neighborhood commercial (C-N) district - convenience sales and service, eating and drinking, medical offices and personal services.

Impacts. This alternative would comply with the commercial zoning and General Plan designation along Park Avenue. Retail space would be located at the street level with some office above. As in the proposed project, Watts Street would still be closed and Haven Street would be a local city street and major pedestrian corridor. These changes would require General Plan amendments.

Unlike the proposed project, this design would conform to the General Plan's Community Design Policies by maintaining a continuous building facade along Park Avenue. The one- and two-story buildings would also be similar in height, scale and bulk to those currently existing across the street from the site. The 29% less total gross square footage of living

6. CEQA CONSIDERATIONS

6.1 CUMULATIVE IMPACTS

Cumulative Development. With full buildout of the City as described in the City of Emeryville's General Plan, approved June 2, 1987 by the Emeryville City Council, cumulative effects could indirectly affect the project by competing for transportation systems, public services and utilities. To provide a comprehensive understanding of project-related impacts and mitigations, this report describes cumulative impacts of full buildout under current General Plan policies.

A general plan-based cumulative analysis is one of the two methods of cumulative analyses suggested by the State CEQA Guidelines Section 15130(b)(1)(B). The other method is a land-use based analysis, whereby a list of future projects producing related or cumulative impacts is used to determine combined effects of the whole and to determine the contribution of a proposed project to the overall cumulative effect. This latter method is permitted by State Guideline Section 15130(b)(1)(A).

The following analysis addresses the cumulative impacts of the General Plan's permitted development intensities, plus the net effect of anticipated General Plan amendments. The General Plan calls for reuse of old industrial sites, such as the Barbary Coast Steel and Myers Drum sites, for light industrial and other purposes. Only active industrial or service commercial sites, such as the Pepsi-Cola Bottling Plant, could become available for reuse in the future. At the present time there are no plans for the redevelopment of these sites. It is therefore assumed that their reuse will be in accordance with the General Plan. At the time the Cannery Task project application was submitted, on March 22, 1990, a number of projects were considered in the "pipeline" (see Table 6-1). Of these, only one, the Emeryville Business Center, required a General Plan amendment. That project was Emeryville Business Center, a mixed-use proposal which is not anticipated to result in a significant cumulative increase in traffic and other impacts.

In addition to the pipeline projects, the City of Emeryville Planning Department is aware of a proposal by Catellus Development Corporation for the Santa Fe Pacific property at San Pablo Avenue and 40th Street. No formal application has been submitted. However, the developer has made known the general features of the proposed Yerba Buena Park project. There are currently two proposed schemes: (See Table 6.1.)

Both schemes would increase the demand for public services, including fire, police, schools, recreation and public and private utilities. Both schemes would also result in a net increase in traffic over the volumes anticipated by the General Plan. The analysis presented below addresses the traffic volumes and impacts of Scheme A, as the worst case, and provides the traffic volumes generated by Scheme B.

TABLE 6-1

CUMULATIVE DEVELOPMENT
Pending Projects Submitted by May 1, 1990

Map No.	Project	Description	Unoccupied
1.	Bay Center	325,000 sf office	20,000 sf
2.	Bay Center 2	525 apartments	223 units
3.	Chiron Pilot Plant	72,000 sf manufacturing	72,000 sf
4.	Marketplace	91,000 sf retail	65,000 sf
5.	Office	121,000 sf office	65,000 sf
6.	Hotel 154 rooms	154 units	
7.	Hollis Street project	117,000 sf retail/office	35,000 sf
8.	Heritage Square	96,000 sf mixed use	3,400 sf
9.	Emeryville Business Center	130,000 sf mied use	130,000 sf
10.	Ratcliff Architects	20,000 sf office	20,000 sf
11.	Nabisco	57,000 sf mixed use	38,000 sf
12.	Raven Office/Warehouse	27,000 sf office/lt.ind.	27,000 sf
13.	Emery Villa	37,000 sf apartment (Seniors)	37,000 sf
14.	Emeryville Child Development Center	11,400 sf school/day care	11,400 sf
15.	Sybase	127,000 sf R/D	127,000 sf

Source: City of Emeryville

PRELIMINARY YERBA BUENA PARK CONCEPTS

	Scheme A	Scheme B
Residential	400 units	600 units
Community Retail	150,000 sf	150,000 sf
Regional Retail	104,000 sf	300,000 sf
Office		1,100,000 sf

Source: Catellus Development Corporation, August 23, 1990

Cumulative Impacts. This chapter discusses the possible cumulative effects of the proposed project in conjunction with the ultimate buildout of the General Plan, together with anticipated projects requiring amendments to the General Plan. The latter include the Emeryville Business Center, which is not expected to cause a net increase in traffic and service demands, and the proposed Yerba Buena Park development by Catellus Development Corporation. As described in Chapter 3, this proposed project is still in the formative stages and no formal application has been filed. preliminary. Due to its size, however, it is being considered a "pipeline" project for purposes of this EIR and the net effect on General Plan buildout land uses of the two current schemes has been taken into account in this analysis.

The proposed Cannery East project is essentially consistent with the General Plan designation for the site and would not result in significant increases in impacts over those anticipated as a result of General Plan implementation. Development of the proposed project in conjunction with full buildout of the General Plan and anticipated General Plan amendments with full buildout would cause cumulative impacts in the following areas.

Traffic. Development of the project site in conjunction with anticipated development in the City (buildout of the General Plan) has been evaluated in the General Plan EIR (City of Emeryville, 1987). However, there are two development applications currently on file that could alter traffic projections under General Plan buildout conditions since they would require a General Plan amendment: the proposed project, Cannery East, and the Emeryville Business Center. The project would require a General Plan amendment and rezoning along Park Avenue from commercial to medium-density residential. However, as part of the traffic analysis in the General Plan EIR, the zone that included the project site and the zone to the north (zones 11 and 21) were assumed to have 760 new residential units, and the project's 422 units would be within the range of assumed buildout development. Therefore, traffic that is projected in the General Plan EIR would not change with the proposed project.

The Emeryville Business Center, located on 45th Street between Hollis and Doyle streets (northwest of the project site), would require a General Plan amendment to allow for redevelopment of the existing light industrial use to 130,000 square feet of mixed uses. Considering that the existing use currently generates traffic, the proposed mixed-use project would result in a net increase of 75 AM peak hour trips and 40 PM peak hour trips. It would also generate additional daily volumes of up to 280 to 335 vehicles on 45th Street and San Pablo Avenue (those traveling to and from the south) and up to 225 vehicles on Hollis Street and Powell Street (those traveling to and from the north). These small traffic increases would not change the Level of Service operation at most intersections in the City. This project would degrade projected peak hour Levels of Service by one percent at the San Pablo Avenue intersections with Park Avenue (PM peak hour only) and MacArthur Boulevard; the only change in the Level of Service designations projected in the General Plan EIR would be at the San Pablo Avenue/MacArthur Boulevard intersection which would change from LOS E to E/F. Projected Level of Service operation at study intersections under General Plan buildout conditions (including increases due to the Emeryville Business Center) are listed in Tables 5 and 6 (refer to Chapter 4.2). Average daily traffic volumes on local roadways were also estimated in the General Plan EIR for General Plan buildout conditions and these volumes are presented in Figure 5 (refer to Chapter 4.2). Since these volumes are rounded off to the nearest thousand, the increases associated with the Emeryville Business Center would not change the projections portrayed in the General Plan EIR.

In addition to the traffic increases that would result from new development in the Emeryville area, temporary increases in traffic on San Pablo Avenue would occur during construction of planned I-80 improvements. Although there is limited available capacity on this roadway (particularly through Berkeley), Caltrans anticipates that 200 to 300 cars per hour could divert from I-80 to San Pablo Avenue (Diane Steinhauser, personal communication). Although the I-80 improvements are scheduled to be constructed over four to five years, increases on the section of San Pablo Avenue in Emeryville would only be expected when construction occurs on the section of I-80 in the Emeryville-Berkeley area.

The largest cumulative effect will be an increase in traffic congestion. The traffic analysis in Chapter 4.2, Transportation, contains a cumulative impact analysis. Mitigation measures identified in Chapter 4.2, Transportation, of this EIR should be implemented to reduce the cumulative impacts from increased travel in the project area. Proposed project traffic would contribute incrementally to the cumulative impacts.

Public Services. The addition of new residents at the project site would add to the demand for public services in Emeryville. Cumulative development is already of concern to the Emeryville Fire Department. Fire Department personnel is currently below desired levels, and it is anticipated that the continued development in the City would require additional investment in personnel and capital equipment just to maintain current service standards. Increased tax revenues from new developments and existing development fees from new projects could offset the cost of additional personnel and capital equipment.

Population. The increase in the residental population of the proposed project along with the General Plan buildout would generate a demand for employment. However, the project's impact would be mitigated by the design of housing units adaptable to include office or retail businesses.

Mitigation Measures

The adverse environmental effects of growth in the City of Emeryville could be lessened by the implementation of certain mitigation measures. Implementation of certain mitigation measures is outside the scope of the City of Emeryville's authority. Mitigation measures could include:

- City and County adoption of general plans and zoning ordinances that favor high-density development and urban in-filling to reduce the consumption of open land and wildlife habitat;
- imposition of more stringent vehicular and stationary source air pollutants controls;
- transportation system management (TSM) measures including encouragement of car- and vanpooling, providing of parking lots at transit stops, provision of exclusion carpool and bus lanes, etc.;
- support by the City of efforts to coordinate infrastructure and land use planning on County and regional levels.

6.2 GROWTH INDUCEMENT

Section 1512(g) of the CEQA Guidelines requires a discussion of the ways in which the proposed project could be growth-inducing. A project is generally considered to be growth inducing if it meets any one of the following criteria: extension of urban services into a previously unserved or underserved area; extension of a major transportation corridor into a previously unserved or underserved area; or removal of a major obstacle to housing development and growth. Inducement of disorderly growth generally causes significant adverse environmental impacts.

The proposed project would include 422 dwelling units or 364,470 total gross square feet of living area. Occupants of the proposed project are not known, but could include residents from outside North County locations, residents relocating from outside the North County subarea, and residents new to the Bay Area. To the extent that the project would attract new residents who otherwise would not have been attracted to the Bay Area, the demand for commercial, social and municipal services would be increased.

The project would be built in a developed urban area, and no expansion to the municipal infrastructure would be required to accommodate new development due to, or induced by, the project. The proposed project, together with the General Plan buildout, could have growth-inducing effects by increasing land values and encouraging other similar projects in the city.

6.3 UNAVOIDABLE ADVERSE IMPACTS

The purpose of this section is to identify impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the proposed project, or by other mitigation measures that could be implemented, as described in Section 4, Environmental Issues, Impacts, and Mitigation Measures.

Cumulative development in Emeryville will cause significant effects in traffic increases, BART, A.C. Transit and an increased demand for public services. The proposed project would incrementally contribute to these cumulative effects.

7. EIR AUTHORS AND PERSONS CONSULTED

7.1 LEAD AGENCY

City of Emeryville
2200 Powell Street, 12th Floor
Emeryville, CA 94608

EIR Consultants

Wallace Roberts & Todd
121 Second Street, 7th Floor
San Francisco, CA 94105

Alison Massa, Associate-in-Charge
Ellie Ross, Project Consultant
David Lynn, Planner
Matt Taecker and Karen Kiest, Graphics
Penny L. Firkser, Word Processing

Mark Crane, Principal
Goodrich Traffic Group (Transportation)

Architects

Backen, Arrigoni & Ross
1660 Bush Street
San Francisco, CA 94109

7.2 PERSONS AND ORGANIZATIONS CONSULTED

Frank Alhino, Fire Marshall, Emeryville Fire Department
Steven Belcher, Deputy City Manager, City of Emeryville
Kofi Bonner, Projects Development Director, Emeryville Redevelopment Agency
Dennis Byrne, Hazardous Materials Specialist, Alameda County Department of Health Services

Dr. Peter Corona, Superintendent, Emeryville Unified School District
Barry Cromartie, City Planner, City of Emeryville
John Flores, City Manager, City of Emeryville
Howard Jeffries, AC Transit
Maurice Kaufman, City Engineer, City of Emeryville
Wally Kolb, City Engineer, City of Emeryville
Marge Macris, Interim Planning Director, City of Emeryville
Man Ju, Caltrans
Ray Mailhot, Caltrans
Lynne Miller, Caltrans
Frank Niess, Caltrans
Larry Seto, Project Manager, Alameda County Department of Environmental Health
Diane Steinhauser, Caltrans
Ray Vittori, Fire Chief, Emeryville Fire Department
Linda Vravel, Environmental Planner, City of Fremont

7.3 REFERENCES

Association of Bay Area Governments, Projections 90, December, 1989.
City of Emeryville, City of Emeryville Draft Housing Element, 1990.
City of Emeryville, City of Emeryville Zoning Ordinance, September, 1988.
City of Emeryville, Emeryville General Plan, June, 1987.
City of Emeryville, Shellmound Park EIR, June, 1989.
City of Emeryville, Final Environmental Impact Report for the Emeryville General Plan, June, 1987.
Institute of Transportation Engineers, 1987. Trip Generation - Fourth Edition.

APPENDIX A: Initial Study

NOTICE OF PREPARATION

TO: _____ (Responsible Agency)

FROM: City of Emeryville (Lead Agency)

_____ (Address)

2200 Powell St., 12th Floor (Address)

_____

Emeryville, CA 94608

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report

The City of Emeryville will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considring your permit or other approval for the project.

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Initial Study X is, _____ is not, attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 45 days after receipt of this notice.

Please send your response to Barry Cromartie, City Planner at the address shown above. We will need the name of a contact person in your agency.

Project Title:

Cannery East

Project Applicant, if any: The Martin Group

DATE: _____ Signature _____

Title _____

Telephone _____

Reference: California Administrative Code, Title 14, Sections 15035.6, 15054.3, 15066.

ATTACHMENTS TO INITIAL STUDY FOR CANNERY EAST

II. PROJECT DESCRIPTION

The Cannery East project would be a residential project on 12.43 acres. Some of the residential units along Park Avenue could be adapted to include office or retail businesses. The site is partially vacant; most of the cannery buildings were damaged in the October, 1989, Loma Prieta Earthquake and required demolition. The two remaining brick buildings on Park Avenue contain asbestos and also suffered serious damage during the earthquake and would be demolished and replaced with residential units.

The project sponsor, the Martin Group, will seek a General Plan Amendment and Rezoning on that portion of the site bordering Park Avenue. The General Plan designation would change from Local Commercial to Medium Density Residential, which permits the development of 20 to 45 dwellings per acre. The majority of the site is zoned R-M (Medium Density Residential) district, and the portion along Park Avenue is zoned C-N (Neighborhood Commercial) district. The zoning amendment would permit a change along Park Avenue from C-N (Neighborhood Commercial) to R-M (Medium Density Residential), in order to build residential units.

The project sponsor also proposes trading Haven Streeet to the City of Emeryville in exchange for Watts Street, which intersects the site in a north/south direction. The sponsor requests closure of Watts Street to allow for a more efficient use of the project site.

The project sponsor proposes construction of residential buildings with a height of approximately 50 feet. There would be approximately 422 dwelling units with several floor plans. The proposed units would range in size from approximately 500 to 1250 square feet. Pursuant to the Planning Code, each unit would have at least one dedicated parking space; the project would provide a minimum of 605 parking spaces.

VII. COMPATIBILITY WITH ZONING AND PLANNING

The proposed project is generally in conformance with the intent of the Emeryville General Plan (as amended by the Emeryville City Council on May 3, 1988). The General Plan:

- designates medium density residential uses (20-45 dwelling units/gross acre and a maximum Floor Area Ratio (FAR) of 1.3) on a majority of the site, with local commercial uses (maximum FAR .7) along Park Avenue from Haven Street to the eastern boundary of the site;

- shows Watts Street as a major pedestrian corridor; and

- calls for the use of underutilized industrial land for residential development that incorporates safe, usable, on-site open space, parking and paths linked to a City-wide open space system.

In order to simultaneously comply with these designations and objectives the following amendments to the General Plan would be required:

1. Figure III-14 (page III-91 of the Emeryville General Plan, dated 6/2/87) - Land Use Plan - change area on Park Avenue change from Local Commercial to Medium Density Residential.

2. Change Figure III-15 (page III-93) Building Intensity - change .7 FAR to 1.3 FAR, the same as the remainder of the property.

3. Change Figure III-8 (page III-59) Circulation Plan - Pedestrian and Bicycle Corridor - as follows:

   a) Eliminate Watts Street as a major pedestrian corridor and make Haven Street the pedestrian corridor;

4. Change Figure III-7 (page III-51) Circulation Plan - Roadways - to :

   a) close Watts Street (a local street)
   b) show Haven Street as a local city street

5. On Page III-61 make the following language change to the last item of section 4:

   "A second north-south corridor is proposed along Doyle Street and Haven Street connecting..." [add: Haven Street].

In addition, the zoning of a portion of this site along Park Avenue is proposed to be changed to Medium Density Residential, R-M, from Neighborhood Commercial, C-N.

VIII. ENVIRONMENTAL SETTING OF THE PROJECT

Surrounding land uses include industrial, retail, office and warehouse. On the south side of Park Avenue, across from the project site, are several two-story brick buildings, some revovated into office, retail or light industrial uses. To the east of the site is the PepsiCola bottling plant. Near the northwest corner of Haven Street and 45th are single family houses. The original Emeryville City Hall is also located on Park Avenue, just southwest of the site. An A.C. Transit vehicle storage garage is located on 45th street, north of the project site. The parcel contiguous to the west of the project site is vacant and owned by the Del Monte Company. Some of the buildings to the north and south of this site have been renovated to retail and office uses.

IX. ENVIRONMENTAL EFFECTS OF THE PROJECT, (explanation of answers)

2. Air

Construction activities could generate dust emissions from the action of the wind over exposed earth surfaces. These could be reduced by watering of exposed earth surfaces. Cumulative air quality could be affected by project-generated traffic.

8. Land Use

A portion of the site proposed for residential uses is designated and zoned for neighborhood commercial use. A General Plan Amendment and Rezoning would be necessary to bring the project into compliance. Proposed street closures would also require a General Plan Amendment.

11. Population

The project site was used in the past for manufacturing and industrial uses. As the site is currently unused, the proposed developement would cumulatively increase the human population in the city.

13. Transportation/Circulation

The proposed project would likely cause no measurable net effect on intersection service levels or on regional highways. It could incrementally add to the cumulative demand for transit, parking and existing transportation systems. Further discussion will be provided in the EIR.

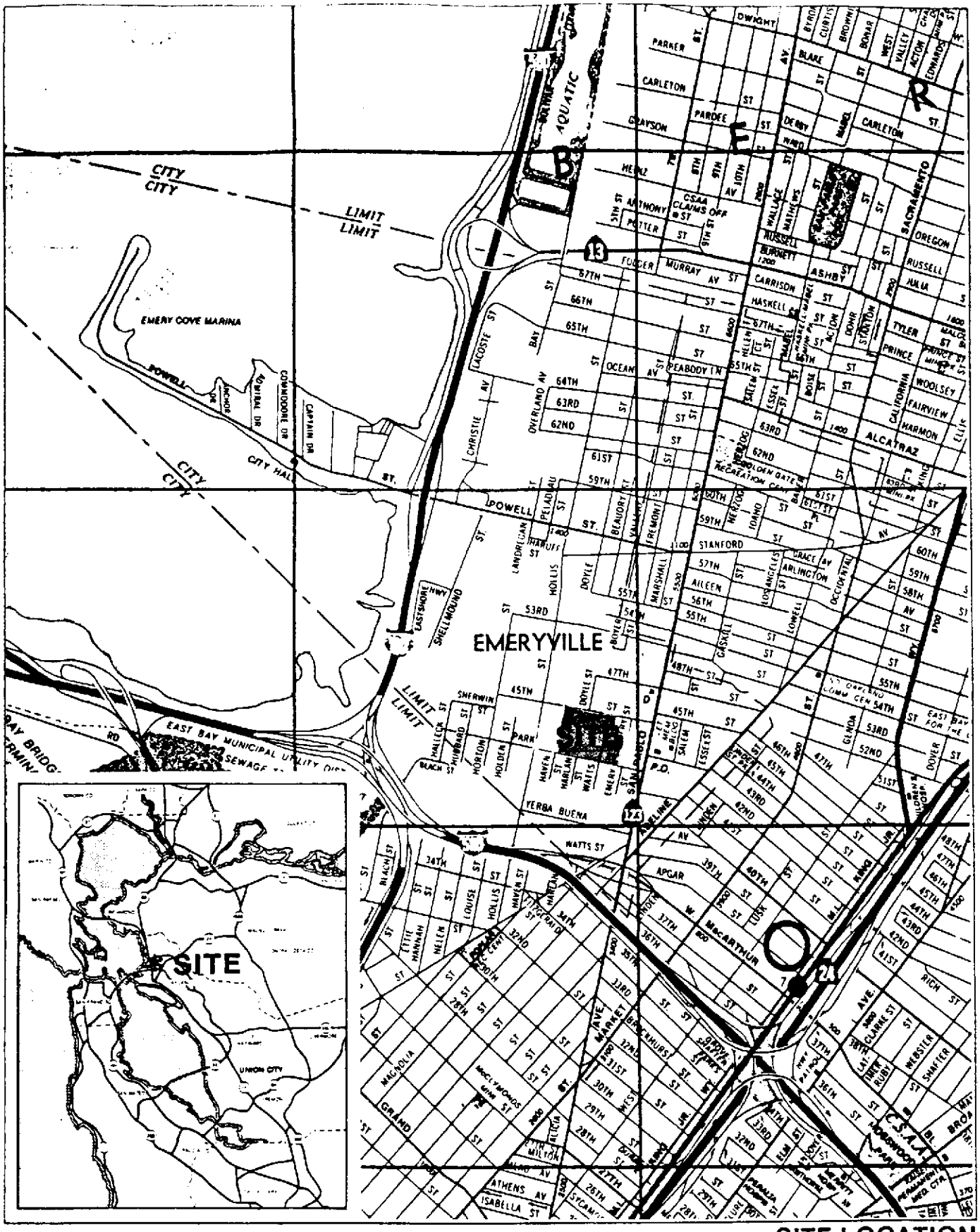
14. Public Services

The impacts on public services will be discussed in the EIR.

15. Energy and 16. Utilities

The project site was used for manufacturing and industrial uses. The proposed project would not increase energy or utility use.

The potential cumulative impacts of the project will be discussed in the EIR.



SITE LOCATION

N

0 2000

FEET

CANNERY EAST INITIAL STUDY

Wallace Roberts & Todd

Figure 1

CITY OF EMERYVILLE
2200 POWELL STREET, 12TH FLOOR
EMERYVILLE, CALIFORNIA 94608
INCORPORATED 1896
(415) 658-8901

INITIAL STUDY

(Prepared pursuant to Article VI of the Environmental Guidelines)

I. Project Title:

CANNERY EAST

II. Full Description of Project:

See attached item II.

III. Energy Usage of Project:

Energy usage of the proposed project would be typical of modern two- and three- story garden apartment buildings. All would meet California energy standards. Units would contain wall and ceiling insulation, and windows would be double-glazed. The complex's swimming pool would have an energy-saving cover.

IV. Exact Location of Project:

Park Avenue to Haven Street to 45th Street, past Watts Street

V. Public agencies: List public agencies, if any, other than the District, which must approve, or give a permit for the project.

The Planning Commission and City Council.

VI. Reason for Project:

The purpose of the project is to: 1. provide secure, moderate-density residential units that will be affordable to moderate-income residents; 2. maintain the streetscape along Park Avenue by the creation of housing units that could be adapted to include office or retail businesses; and 3. make economic use of the project sponsor's land.

VII. Compatibility with Zoning and Planning. Discuss whether the project is compatible with existing zoning and plans:
See attached item VII.

VIII. Environmental Settings of Project:

See attached item VIII.

IX. Environmental Effects of Project. (Complete the following checklist and attach explanations of each "yes" and "maybe" answer. Consider indirect and ultimate results of the project, as well as direct impacts of the project, and secondary as well as primary effects of the project. If readily available, attach or make reference to relevant scientific, technical or other factual data).

	YES	MAYBE	NO
1. Earth. Will the proposed project result in:			
a. Unstable earth conditions?	___	___	X
b. Changes in geologic sub-structures?	___	___	X
c. Disruptions, displacements, compaction or over-covering of the soil?	___	___	X

	YES	MAYBE	NO
d. Change in topography or ground surface relief features?	___	___	X
e. The destruction, covering or modification of any unique geologic or physical features?	___	___	X
f. Any increase in wind or water erosion of soils, either on or off the site?	___	___	X
g. Changes in deposit on or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	___	___	X
h. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	___	___	X
2. Air. Will the proposed project result in:			
a. Substantial air emissions?	___	___	X
b. Deterioration of ambient air quality?	___	___	X
c. A contribution to an existing or projected air quality violation?	___	___	X
d. The creation of objectionable odors?	___	___	X
e. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?	___	___	X
3. Water. Will the proposed project result in:			
a. Changes in currents or the course or direction of water movements, in either marine or fresh waters?	___	___	X

	YES	MAYBE	NO
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?	___	___	X
c. Alterations to the course or flow of flood waters?	___	___	X
d. Change in amount of surface water in any water body?	___	___	X
e. Discharge into surface waters?	___	___	X
f. Alteration of surface water quality, including but not limited to, temperature, dissolved oxygen or turbidity?	___	___	X
g. Alteration of the direction or rate of flow of ground waters?	___	___	X
h. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	___	___	X
i. Substantial reduction in the amount of water otherwise available for public water supplies?	___	___	X
j. Exposure of people or property to water-related hazards, such as flooding or tidal waves?	___	___	X
4. Plant Life. Will the proposed project result in:			
a. Change in the diversity of species, or number of species of any plants (including trees, shrubs, grass, crops, and aquatic plants)?	___	___	X
b. Reduction of the numbers of any unique, rare or endangered species of plants?	___	___	X

	YES	MAYBE	NO
c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	___	___	X
d. Reduction in acreage of any agricultural crop?	___	___	X
5. Animal Life. Will the proposed project result in:			
a. Change in the diversity of species , or numbers of species of any birds, land animals, reptiles, fish, shellfish, benthic organisms or insects?	___	___	X
c. Deterioration to or reduction of, the habitats of birds, land animals, reptiles, fish, shellfish, benthic organisms or insects?	___	___	X
d. Interfere significantly with the movement of any resident or migratory species of birds, land animals, reptiles, fish, shellfish, benthic organisms or insects?	___	___	X
6. Noise. Will the proposed project result in:			
a. Increases in existing noise levels?	___	___	X
b. Exposure of people to severe noise levels?	___	___	X
7. Light and Glare. Will the proposed project produce new light or glare?	___	___	X
8. Land Use. Will the proposal result in a substantial alteration of the present or planned land use of an area?	X	___	___

	YES	MAYBE	NO
9. Natural Resources. Will the proposal result in:			
a. Increase in the rate of use of any natural resources?			X
b. Substantial depletion of any nonrenewable natural resource?			X
10. Risk of Upset. Does the proposal involve the risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset condition?			X
11. Population. Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?		X	
12. Housing. Will the proposal affect existing housing, or create a demand for additional housing?			X
13. Transportation/Circulation. Will the proposal result in:			
a. Generation of substantial additional vehicular movement?		X	
b. Effects on existing parking facilities, or demand for new parking?		X	
c. Substantial impact upon existing transportation systems?		X	
d. Alterations to present patterns of circulation or movement of people and/or goods?	X		
e. Alterations of waterborne, rail or air traffic?			X
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?		X	

	YES	MAYBE	NO
14. Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?	___	X	___
b. Police protection?	___	X	___
c. Schools?	___	X	___
d. Parks or other recreational facilities?	___	___	X
e. Maintenance of public facilities, including roads?	___	___	X
f. Other governmental services?	___	___	X
15. Energy. Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?	___	___	X
b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?	___	___	X
16. Utilities. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:			
a. Power or natural gas?	___	___	X
b. Communications systems?	___	___	X
c. Water?	___	___	X
d. Sewer or septic tanks?	___	___	X
e. Storm water drainage?	___	___	X
f. Solid waste and disposal?	___	___	X

	YES	MAYBE	NO
17. Human Health. Will the proposed project result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?	___	___	X
b. Exposure of people to potential health hazards?	___	X	___
18. Aesthetics. Will the proposed project result in:			
a. The obstruction of any scenic vistas or view open to public view?	___	___	X
b. The creation of an aesthetically offensive site open to public view?	___	___	X
c. The destruction of a stand of trees, a rock outcropping or other locally recognized desirable aesthetic natural feature?	___	___	X
d. Any negative aesthetic effect?	___	___	X
19. Recreation. Will the proposed project result in an impact upon the quality or quantity of existing recreational opportunities?	___	___	X
20. Archaeological/Historical. Will the proposed project result in an alteration of a significant archaeological, historical, paleontological or cultural site, structure, object or building?	___	___	X
21. Mandatory Findings of Significance.			
a. Does the proposed project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife population, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	___	X	___

	YES	MAYBE	NO
b. Does the proposed project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?			X
c. Does the proposed project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)		X	
d. Does the proposed project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

X. Mitigation Measures. List by number all effects on the checklist contained under Part VII above to which a "yes" or "maybe" answer was given and describe the measures, if any, which can be taken by the District to mitigate adverse impacts, of any, of such effects.

XI. Public controversy. Describe public controversy, if any, concerning any environmental effects of the project.

Based on the information contained in this Initial Study, it has been determined that the subject project will require the preparation of the following documents(s):

_____ Negative Declaration (Mitigation measures are attached, if required)

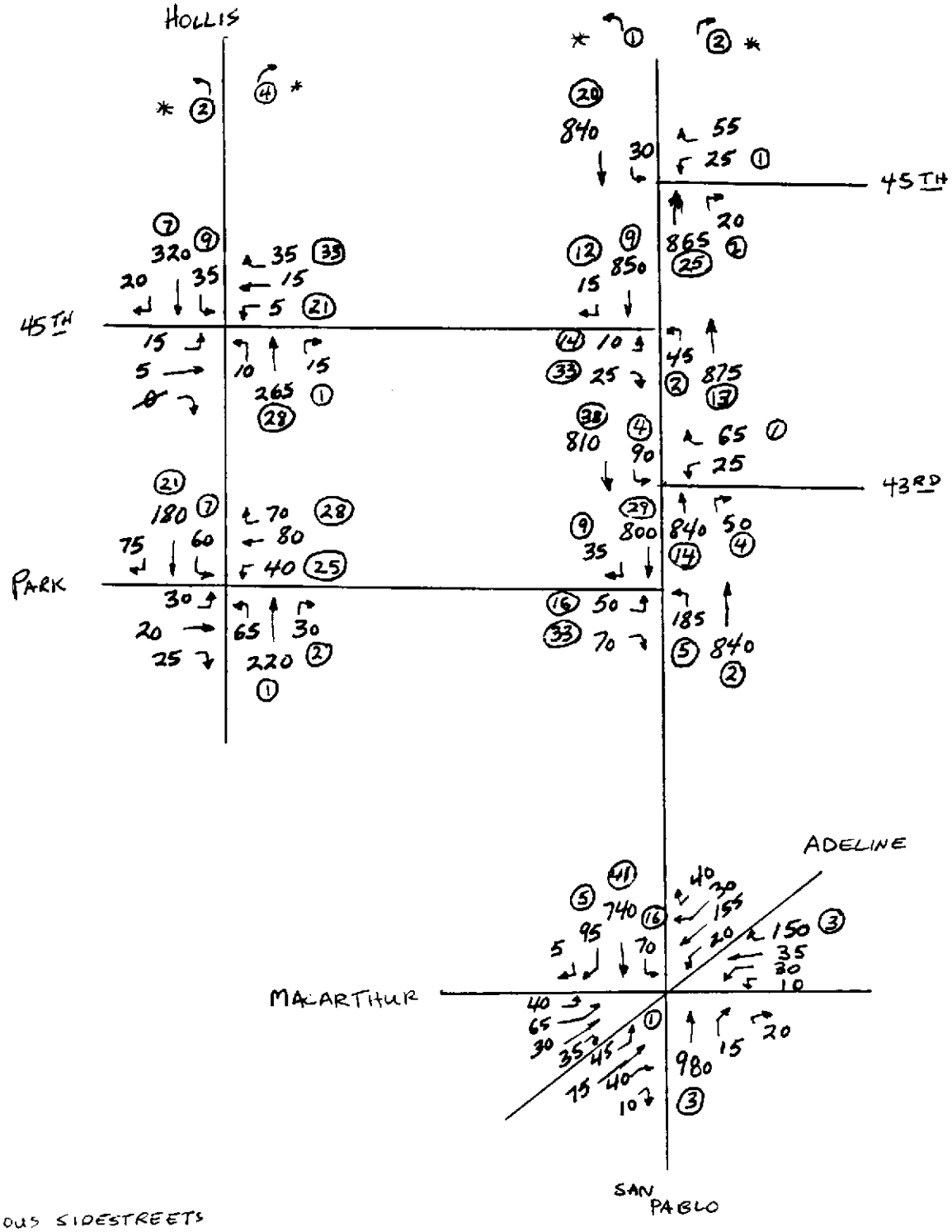
X Environmental Impact Report

By: Cleazine V. Urann, Interim Planning Director
Authorized Person

Dated: 6/20/90

APPENDIX B: Transportation

B1. TRAFFIC VOLUMES



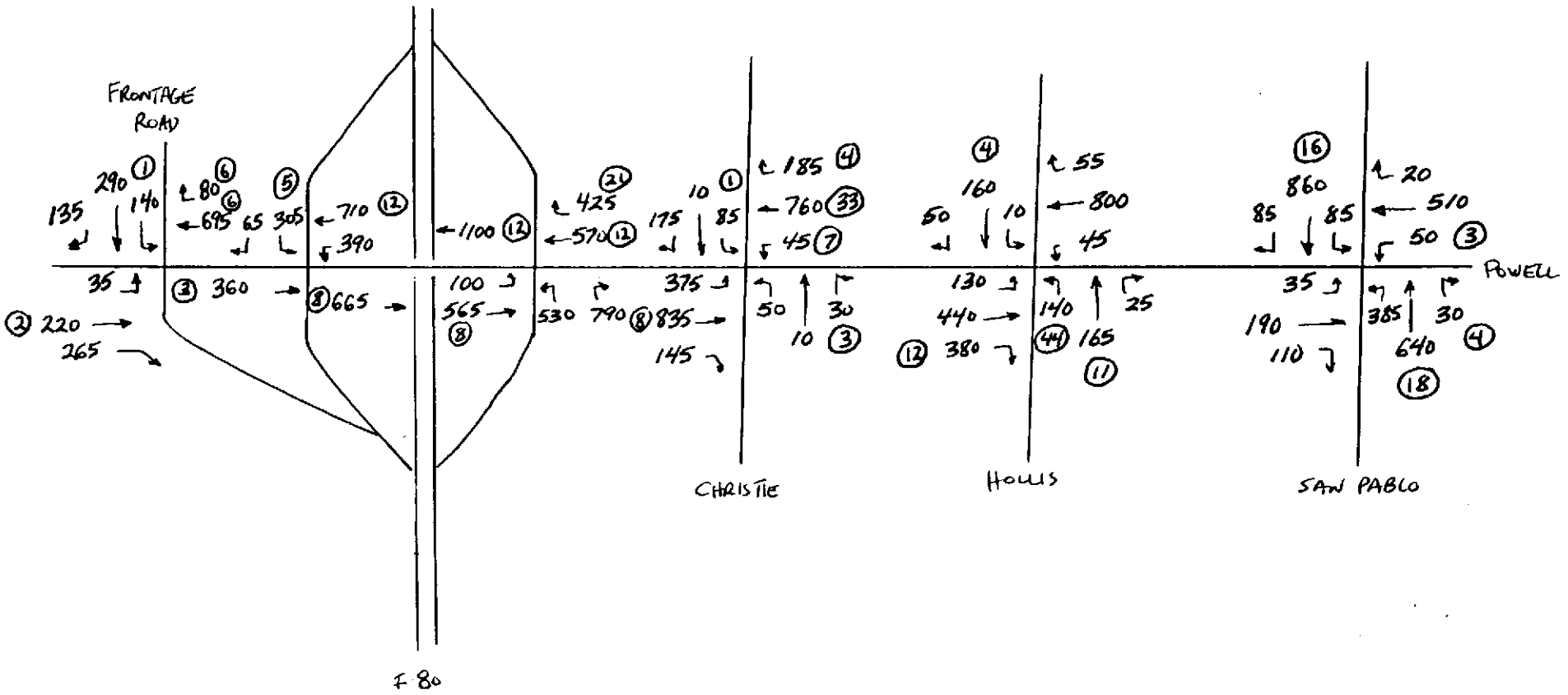
* VARIOUS SIDESTREETS
45TH TO POWELL

EMERYVILLE
A.M. PEAK HOUR
(7:30 - 8:30 A.M)

XX = EXISTING
(XX) = PROJECT

Goodrich Traffic Group

APPENDIX

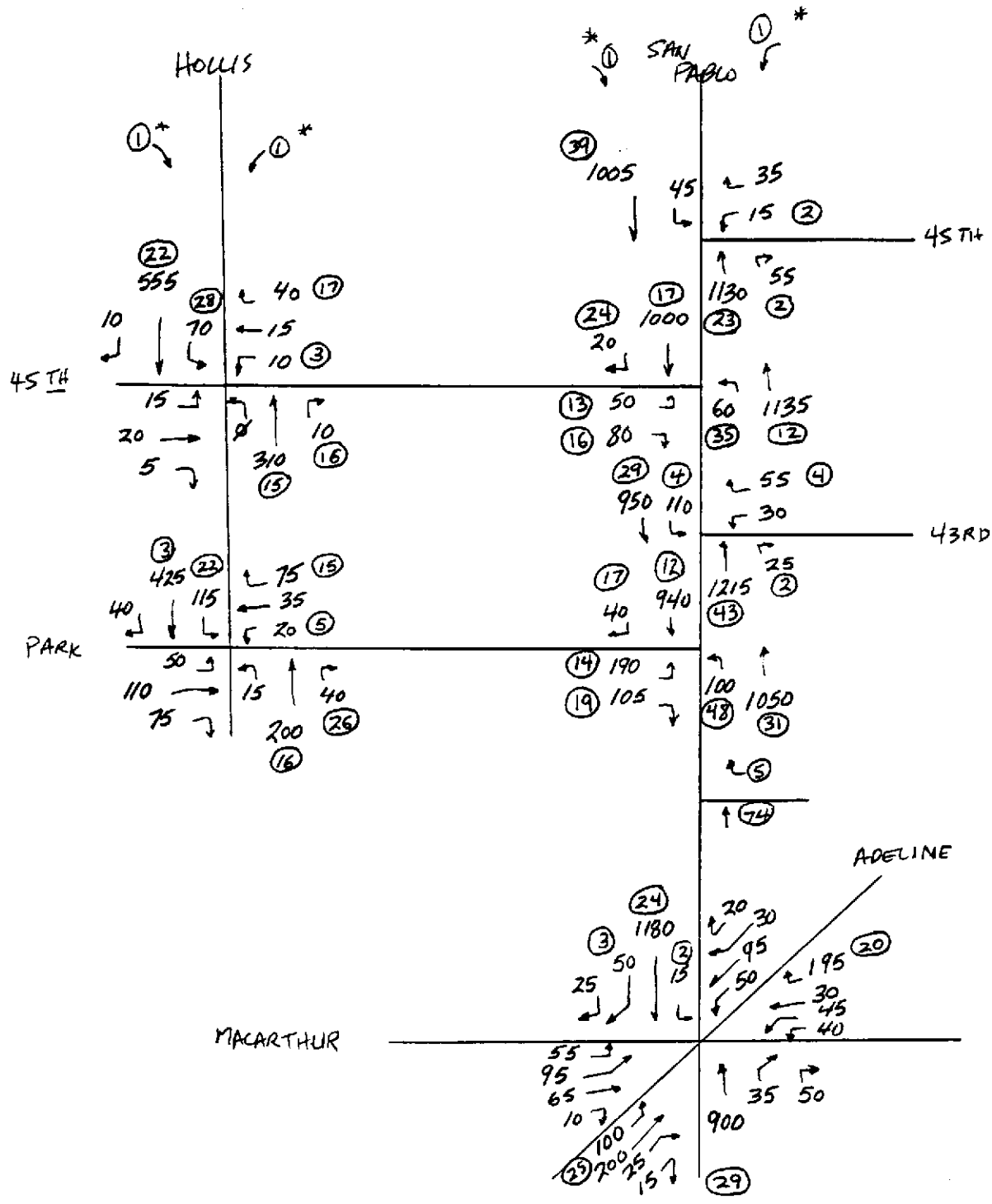


EMERYVILLE
A.M. PEAK HOUR
(7:45 - 8:45 A.M.)

XX = EXISTING TRAFFIC
(XX) = PROJECT TRAFFIC

Goodrich Traffic Group

APPENDIX

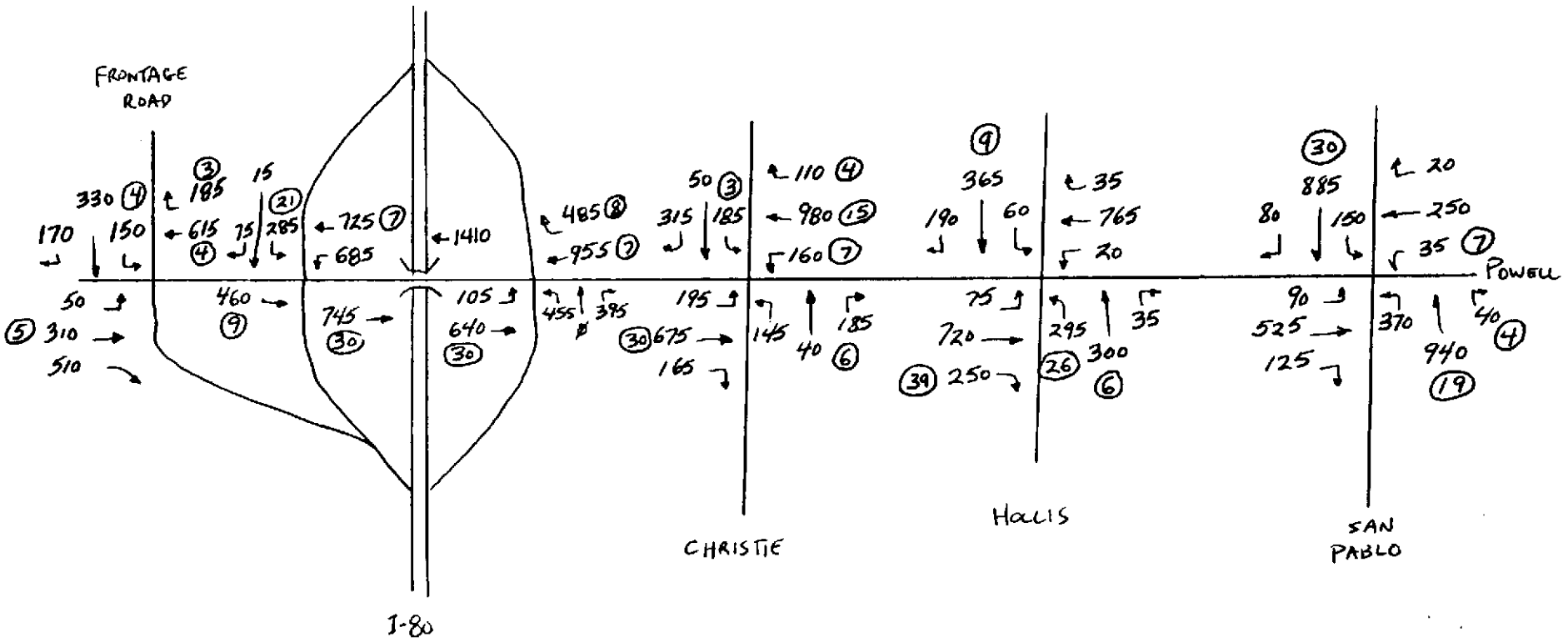


EMERYVILLE
P.M. PEAK HOUR
(4:45 - 5:45 P.M)

XX = EXISTING
(XX) = PROJECT

Goodrich Traffic Group

APPENDIX



EMERYVILLE

P.M. PEAK HOUR

(4:45 - 5:45)

XX = EXISTING

(XX) = PROJECT

Goodrich Traffic Group

APPENDIX

B2. LEVEL OF SERVICE DEFINITIONS

GTG

LEVEL OF SERVICE AND VOLUME-TO-CAPACITY RATIOS

LEVEL OF SERVICE	DESCRIPTION	V/C RATIO
A	Free flow (relatively). If signalized, conditions are such that no approach phase is fully utilized by traffic and no vehicle waits through more than one red indication. Very slight or no delay.	0.00 - 0.60
B	Stable flow. If signalized, an occasional approach phase is fully utilized; vehicle platoons are formed. This level is suitable operation for rural design purposes. Slight delay.	0.61 - 0.70
C	Stable flow or operation. If signalized, drivers occasionally may have to wait through more than one red indication. This level is suitable operation for urban design purposes. Acceptable delay.	0.71 - 0.80
D	Approaching unstable flow or operation; queues develop, but are quickly cleared. Tolerable delay.	0.81 - 0.90
E	Unstable flow or operation; the intersection has reached ultimate capacity; this condition is not uncommon in peak hours. Congestion and intolerable delay.	0.91 - 1.00
F	Forced flow or operation. Intersection operates below capacity. Jammed.	1.00+

Source: Highway Capacity Manual, HRB Special Report 87

GTG

DESCRIPTION OF LEVEL OF SERVICE FOR MINOR MOVEMENTS AT UNSIGNALIZED INTERSECTIONS

Level of Service	Description
A	Little or no delay expected for tested minor movement. The movement's reserve capacity exceeds 400 passenger cars per hour.
B	Short traffic delays expected for tested minor movement. Its reserve capacity is in the range of 300 to 399 passenger cars per hour.
C	Average traffic delays expected for tested minor movement. Its reserve capacity is in the range of 200 to 299 passenger cars per hour.
D	Long delays expected for tested minor movement. Its reserve capacity is in the range of 100 to 199 passenger cars per hour.
E	Very long traffic delays for tested minor movement. Its reserve capacity is less than 100 passenger cars per hour.
F	Demand volume exceeds capacity of the tested minor movement. Extreme delays with queuing may cause severe congestion affecting other traffic movements. Intersection improvements usually warranted.

Source:
1985 Highway Capacity Manual

GTG

DESCRIPTION OF LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

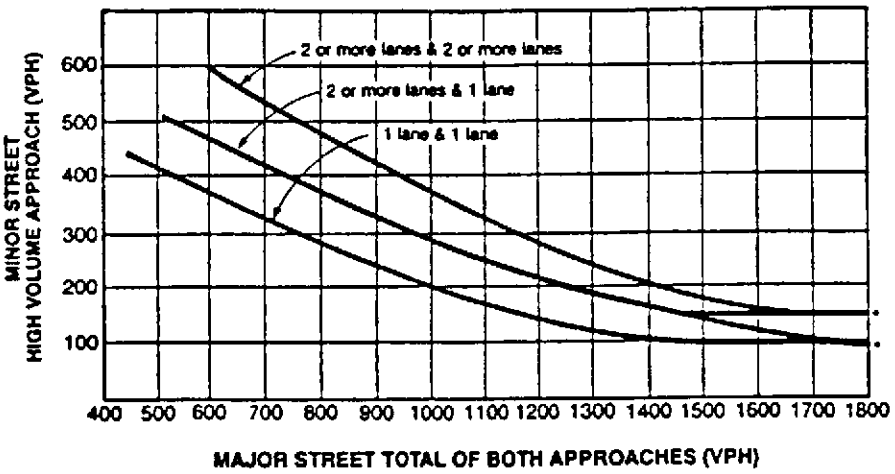
Level of Service	Description
A	Very low delay, less than 5.0 seconds per vehicle. Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths contribute to low delay.
B	Delay in the range of 5.1 to 15.0 seconds per vehicle. Good progression and/or short cycle lengths. More vehicles stop causing higher levels of average delay.
C	Delay in the range of 15.1 to 25.0 seconds per vehicle. Fair progression and/or longer cycle lengths. Individual cycle failures, resulting in drivers having to wait through more than one red signal indication, begin to appear. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.
D	Delay in the range of 25.1 to 40.0 seconds per vehicle. The influence of congestion becomes more noticeable. Unfavorable progression, long cycle lengths, or high volumes. Many vehicles stop, the proportion of vehicles not stopping declines. Individual cycle failures noticeable.
E	Delay in the range of 40.1 to 60.0 seconds per vehicle. The limit of acceptable delay. Poor progression, long cycle lengths, and high volumes. Individual cycle failures are frequent.
F	Delay in excess of 60.0 seconds per vehicle. Unacceptable to most drivers. Oversaturation, arrival flow rates exceed the capacity of the intersection. Many individual cycle failures. Poor progression and long cycle lengths.

Source: 1985 Highway Capacity Manual

B3. SIGNAL WARRANT CRITERIA

TRAFFIC SIGNAL WARRANT CHART

WARRANT 11

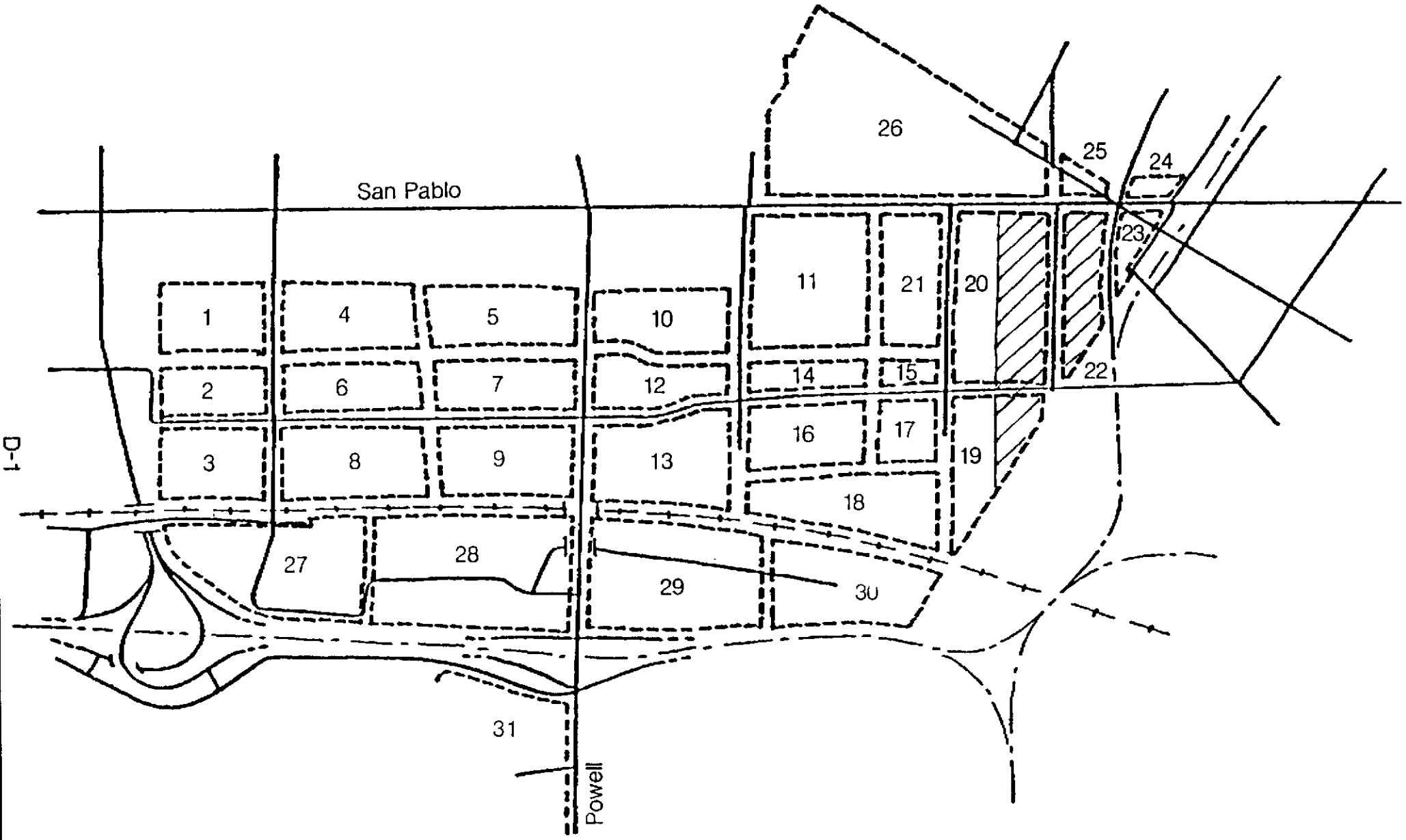


*Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approaching with one lane.

Warrant 11 - Peak Hour Volume
This warrant also includes separate "70% reduction" curves for use when speeds are over 40 mph or in isolated communities with less than 10,000 population.

Source: ITE Journal, December 1985.

B4. CUMULATIVE IMPACT OF THE YERBA BUENA PROJECT



D-1

ANALYSIS ZONES

Source: Emeryville General Plan EIR Page B-3

Portion of Traffic Zones in Emeryville
Part of Yerba Buena Site

TABLE 1: KEY FOR LAND USE INVENTORY

Abbreviation	Land Use
Non-residential	
BPK	Business Park: Light Ind., Research
CMAR	Custom Manufacturing--Art
CMFG	Custom Manufacturing--General
CMFM	Custom Manufacturing--Film
CMFN	Custom Manufacturing--Furniture
CMLB	Custom Manufacturing--Lab
CMPR	Custom Manufacturing--Printing
GC	General Commercial
GIMF	General Industrial--Manufacturing
GIMH	General Industrial--Machine Shop
GIWL	General Industrial--Wholesale
HOTL	Hotel
LIMF	Light Industrial--Manufacturing
LITR	Light Industrial--Trucking
LIWL	Light Industrial--Wholesale
MIXE	Mixed--Existing (Industrial)
NC	No Change from Existing Use
OFC	Office Commercial
PBFC	Public Facility (school, police, fire, City offices)
PBOS	Public Open Space/Park
PBUT	Public--Utilities
PKG	Parking (generally associated with existing Industrial use)
R&D	Research and Development
RET	Retail
Residential	
RS15	Residential: low density (0-20 du/ac)
RS30	Residential: medium density (20-45 du/ac)
RS45	Residential: high density (greater than 45 du/ac)
Other	
STO	Storage (generally associated with existing Industrial use)
VAC	Vacant

			EXISTING					PROPOSALS				IMPACTS				
GRP	BLK	AREA (SF)	EXIST. USE/AC	NO. EMPL	DWELLING UNITS TOTAL	SFD	2-4	5+	PROP USE	FAR	SQ FT/ EMPL	DU/ ACRE	PROP NET CH EMPL	TOTAL EMPL	NET CH DUs	TOTAL DUs	TOTAL AREA
22	A	415,650	LITR	15	0				BPI	0.7	850		342	327	0	0	290,955
22	B	9,700	MIXE	9	0				GC	0.7	500		14	5	0	0	6,790
22	C	13,300	RET	8	0				GC	0.7	500		19	11	0	0	9,310
SUBTOTAL		438,650	10	32	0	0	0	0					375	343	0	0	307,055
23	A	11,700	GC	8	0				GC	0.7	500		16	8	0	0	8,190
23	B	9,400	VAC	0	0				GC	0.7	500		13	13	0	0	6,580
23	C	16,500	GC	10	0				NC				10	0	0	0	0
23	D	41,300	RS1S	0	14	14			GC	0.7	500	0	58	58	0	(14)	28,910
23	E	29,600	GC	22	0				NC				22	0	0	0	0
SUBTOTAL		108,500	2	40	14	14	0	0					119	79	0	(14)	43,680
24	A	31,500	GC	5	0				NC				5	0	0	0	0
24	B	16,500	LIWL	22	0				NC				22	0	0	0	0
SUBTOTAL		48,000	1	27	0	0	0	0					27	0	0	0	0
25	A	15,000	GC	28	0				GC	0.7	500		21	(7)	0	0	10,500
25	B	18,000	GC	8	0				NC				8	0	0	0	0
25	C	20,900	LIWL	12	0				NC				12	0	0	0	0
25	D	46,350	MIXE	2	0				NC				2	0	0	0	0
SUBTOTAL		100,250	2	50	0	0	0	0					43	(7)	0	0	10,500
26	AA	28,000	LIWL	152					RS1S		0	15	0	(152)	10	10	0
26	AB	56,300	MIXE	315					RS1S		0	15	0	(315)	19	19	0
26	AC	670,500	RS1S	0	183	55	106	22	NC				0	0	183	0	0
26	AD	838,700	RS1S	0	238	81	104	53	NC				0	0	238	0	0
26	AE	23,300	GC	10					GC	0.7	500		33	23	0	0	16,310
26	AF	15,000	PBFC	10					NC				10	0	0	0	0
26	A	14,000	VAC	0					GC	0.7	500		20	20	0	0	9,800
26	B	23,000	LIMF	43					GC	0.7	500		32	(11)	0	0	16,100
26	C	40,800	GC	6					GC	0.7	500		57	52	0	0	28,560
26	D	42,900	LIWL	8					GC	0.7	500		60	52	0	0	30,030
26	E	1,900	RET	8					GC	0.7	500		3	(5)	0	0	1,330
26	F	17,600	LIMF	33					NC				33	0	0	0	0
26	G	13,100	GC	2					GC	0.7	500		18	17	0	0	9,170
26	H	96,000	VAC	0					GC	0.7	500		134	134	0	0	67,200
26	I	17,500	GC	2					GC	0.7	500		25	22	0	0	12,250
26	J	5,500	RET	1					GC	0.7	500		8	7	0	0	3,850
26	K	8,100	RET	14					GC	0.7	500		11	(3)	0	0	5,670
26	L	24,000	RS1S	0	18	8	4	6	NC				0	0	18	0	0
26	M	9,000	RET	2					GC	0.7	500		13	11	0	0	6,300
26	N	27,000	PKG	0					GC	0.7	500		38	38	0	0	18,900
26	O	26,100	GC	53					GC	0.7	500		37	(16)	0	0	18,270
26	P	47,100	LIWL	175					NC				175	0	0	0	0
26	Q	7,800	RET	2					NC				2	0	0	0	0
26	R	12,000	PBFC	5					NC				5	0	0	0	0
26	S	18,000	GC	18					NC				18	0	0	0	0
26	T	62,100	GC	0					NC				0	0	0	0	0
26	U	94,400	PBFC	14					NC				14	0	0	0	0
26	V	25,500	RET	4					NC				4	0	0	0	0
26	W	27,000	LIMF	35					NC				35	0	0	0	0

GRP	BLK	AREA (SF)	EXISTING EXIST. USE/AC	NO. EMPL	DWELLING UNITS TOTAL	SFD	2-4	5+	PROPOSALS PROP USE	FAR	SQ FT/ EMPL	DU/ ACRE	IMPACTS PROP EMPL	NET CH EMPL	TOTAL DUs	NET CH DUs	TOTAL AREA
18	H	26,000	STO	0	0				LIMF	0.7	400		46	46	0	0	18,200
18	I	2,800	VAC	0	0				LIMF	0.7	400		5	5	0	0	1,960
18	J	15,300	LIWL	8	0				NC				8	0	0	0	0
SUBTOTAL		954,550	22	528	0	0	0	0					1,567	1,039	0	0	498,057
19	A	10,100	RET	6	0				LIMF	0.7	450		16	10	0	0	7,070
19	B	51,000	LIMF	40	0				LIMF	0.7	450		79	39	0	0	35,700
19	C	18,850	VAC	0	0				LIMF	0.7	450		29	29	0	0	13,195
19	D	58,500	LIMF	49	0				LIMF	0.7	450		91	42	0	0	40,950
19	E	190,000	LITR	8	0				BPK	0.7	850		156	148	0	0	133,000
19	F	23,100	MIXE	12	0				LIMF	0.7	450		36	24	0	0	16,170
19	G	10,000	LIMF	8	0				LIMF	0.7	450		16	8	0	0	7,000
19	H	28,500	RET	2	0				LIMF	0.7	450		44	42	0	0	19,950
19	I	10,500	PKG	0	0				LIMF	0.7	450		16	16	0	0	7,350
19	J	49,800	LIMF	77	0				NC				77	0	0	0	0
19	K	16,200	GC	2	0				NC				2	0	0	0	0
19	L	16,900	MIXE	62	0				NC				62	0	0	0	0
19	M	52,000	LIWL	33	0				NC				33	0	0	0	0
19	O	14,000	GC	8	0				NC				8	0	0	0	0
19	N	8,500	LIWL	18	0				NC				18	0	0	0	0
SUBTOTAL		557,950	13	325	0	0	0	0					684	359	0	0	280,385
20	A	31,200	MIXE	26	0				OFC	0.7	300		73	47	0	0	21,840
20	B	39,000	GC	2	0				LIMF	0.7	450		61	59	0	0	27,300
20	C	108,000	LIMF	130	0				LIMF	0.7	450		168	38	0	0	75,600
20	D	56,000	GC	36	0				LIMF	0.7	450		87	51	0	0	39,200
20	E	30,800	GC	0	0				GC	0.7	500		43	43	0	0	21,560
20	F	660,000	GC	115	0				BPK	0.7	850		544	429	0	0	462,000
20	G	42,900	MIXE	37	0				NC				37	0	0	0	0
20	H	12,000	MIXE	17	0				NC				17	0	0	0	0
20	I	26,600	LIWL	4	0				NC				4	0	0	0	0
20	J	22,500	OFC	57	0				NC				57	0	0	0	0
20	K	77,000	LIMF	55	0				NC				55	0	0	0	0
20	L	50,000	LIWL	25	0				NC				25	0	0	0	0
20	M	188,000	PBFC	25	0				NC				25	0	0	0	0
20	N	32,500	GC	150	0				NC				150	0	0	0	0
SUBTOTAL		1,376,500	32	679	0	0	0	0					1,345	666	0	0	647,503
21	A	66,000	RET	29	0				RET	0.7	700		66	37	0	0	46,200
21	B	59,400	LIMF	150	0				RET	0.7	700		59	(91)	0	0	41,580
21	C1	69,700	LIMF	88	0				OFC	0.7	300		163	75	0	0	48,790
21	C2	69,700	LIMF	88	0				RS30		0	30	0	(88)	48	48	0
21	D	157,500	LIMF	0	0				RS30		0	30	0	0	108	108	0
21	E	244,625	LIMF	0	0				RS30		0	30	0	0	168	168	0
21	F	72,000	RS15	0	17	5		12	NC				0	0	17	0	0
21	G	32,400	VAC	0	0				RS30		0	30	0	0	22	22	0
21	H	19,500	VAC	0	0				RS30		0	30	0	0	13	13	0
21	J	15,600	VAC	0	0				RET	0.7	700		16	16	0	0	10,920
21	I	19,200	PBFC	16	0				NC				16	0	0	0	0
SUBTOTAL		825,625	19	370	17	5	0	12					320	(50)	378	361	147,490