City of Dublin General Plan

Volume 2: Technical Supplement
Draft Environmental Impact Report

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CITY OF DUBLIN GENERAL PLAN

VOLUME 2: TECHNICAL SUPPLEMENT AND DRAFT ENVIRONMENTAL IMPACT REPORT

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SECTION 1
BACKGROUND

1.1 PURPOSE OF TECHNICAL SUPPLEMENT TO THE DUBLIN GENERAL PLAN

This volume contains three items:

1. Background data and analyses used in preparation of the Plan Policies Report (which together with the plan maps constitutes the adopted General Plan for elements other than the Housing Element).

2. The Housing Element, which by law must include in its adopted form data and analyses that exceed the level of detail appropriate to other elements of the General Plan.

3. The Draft Environmental Impact Report (EIR), which must be certified as complete by the City Council prior to adoption of the General Plan. Most of the information required for the EIR appears elsewhere in this volume and is incorporated in the EIR by reference.

The reasons for separating the material in this volume from the Plan Policies report are clarity and brevity. A person attempting to understand the City's adopted policies should not have to search through long analyses or descriptions of existing conditions. Also, it makes no sense to adopt background material as part of city policy. The Technical Supplement is intended to serve as a resource for persons who wish to examine in detail the rationale for the proposed plan policies and as a data base for future planning work in Dublin. The sequence of the Technical Supplement follows that of the Plan Policies report to facilitate cross reference.

1.2 GENERAL PLAN PROCESS AND WORKING PAPERS

The proposed General Plan was prepared by Blayney-Dyett, incorporating data and advice received from members of the public and the City staff as well as decisions (choices among planning options) by the Planning Commission and City Council. The following working papers, portions of which appear in this volume with revisions, served as the basis for discussion at public meetings:

Detailed Work Program, May 2, 1983; revised May 25, 1983

Working Paper 1: Existing Conditions and Planning Issues, June 21, 1983; revised September, 1983

Working Paper 2: Analysis of Planning Options, August 17, 1983

Working Paper 3: Description of Alternative Sketch Plans, November 17, 1983

Some sections of the Technical Supplement include a list of "Planning Issues." These are excerpted from Working Paper 1 and are included to indicate the kinds of questions that were explored during the General Plan preparation process.

SECTION 2
LAND USE AND CIRCULATION

2.1 LAND USE ELEMENT

2.1.1 RESIDENTIAL LAND USE (Residential land use is discussed in the Housing Element)

2.1.2 COMMERCIAL AND INDUSTRIAL DEVELOPMENT: RETAILING

Virtually all of Dublin's commercial and industrial development is contiguous, extending north from the I-580 Freeway at the south edge of the city. In 1980, the total floor area in commercial districts was 2.3 million square feet and 78 percent of the 355 acres of commercially zoned land were developed. Most of the retail outlets are in one of the eleven shopping centers—many adjoining and none with strong separate identity. Only one, San Ramon Village Plaza, a neighborhood center at San Ramon Road and Alcosta Boulevard, is entirely removed from the grouping that forms downtown Dublin. Downtown is perhaps the only true multi-ownership central business district that has been built in in Northern California since World War II, having about twice as many stores as a typical regional shopping center. It was built at a time when the development community thought only in terms of shopping centers, but because the market grew slowly there never was the potential for a dominant shopping center until Stoneridge Regional Shopping Center opened in Pleasanton in 1981. Dublin's anchor tenants are Mervyn's, Ward's, Gemco, and K-Mart, while Stoneridge has attracted the usual mainstays of a Bay Area regional center—Macy's, Emporium/Capwell's, and Penney's.

It appears that Stoneridge may have opened "early"—either with the expectation that growth would be faster or because of a desire to preempt a maket. The overall impact of Stoneridge on Dublin has not been severe, and some Dublin merchants may have been helped by the additional customers attracted to the area. There are few retail vacancies in downtown Dublin, and sales tax figures show sales gains three times the East Bay average during the 1979-82 period, despite low population growth in the trade area, the opening of Stoneridge, and the effect of recession on consumers. Taxable sales in 1982 are estimated at $265 million, based on third and fourth quarter reports of transactions.

Dublin's 251 retail outlets held 39 percent of the total sales tax permits and accounted for 77 percent of the dollar volume subject to sales tax. Table 2-1 compares Dublin sales with those in competing cities. Dublin's share of total taxable sales in Alameda and Contra Costa counties increased nearly 25 percent since 1979—moving from 1.8 to 2.2 percent. During the same period, Pleasanton doubled its share with the opening of Stoneridge, but its total was still below Dublin's.

The following analysis of sales capacity for existing and potentially expanded retail floor area is based on approximate data that are several years old, but the results are sufficiently accurate for planning purposes.

TABLE 2-1
COMPARATIVE TAXABLE SALES,
1979 VS. 1982 (Third Quarter)

City	Sales in Millions of Dollars			Percentage Share of Total Sales in East Bay		
	1979	1982	Percent Change	1979	1982	Percent Change
Oakland	$447	$480	+7.4	18.2	17.3	-4.7
Hayward	218	216	-0.9	8.9	7.8	-12.3
Concord	168	203	+20.8	6.8	7.3	+7.9
Fremont	133	159	+19.5	5.4	5.7	+6.4
Walnut Creek	103	136	+32.0	4.2	4.9	+17.0
Pleasant Hill	51	73	+43.1	2.1	2.6	+25.6
Dublin	**45a**	**62**	**+37.8**	**1.8**	**2.2**	**+24.5**
Pleasanton	22	51	+131.8	0.9	1.8	+100.8
Livermore	35	46	+31.4	1.4	17	+18.7
East Bay (Alameda and Contra Costa Counties)	2,454	2,767	+12.8	100.0	100.0	—

[a]Sales estimate for 1979 is from Board of Equalization for businesses within city limits. Third quarter sales are estimated from annual sales, applying 1981 statewide average of 25.4 percent.

Source: California Board of Equalization.

Sales Capacity

An Alameda County Planning Department survey in January, 1980 found 1.85 million square feet of floor area in the C-N, C-1, and C-2 zoning districts. If there was this much retail floor area in 1979 when taxable retail sales were reported at $139 million, the average annual sales were $75 per square foot. Commercial floor area not devoted to taxable sales (food stores, travel agencies, offices, etc.) accounted for at least 200,000 square feet, raising sales per square foot to the $85 to $90 range. This is lower than the $115 median reported by the Urban Land Institute in 1980 for regional shopping centers in the western United States, but downtown Dublin has many stores

that would not be found in regional shopping centers and did not pay high shopping center rents. The figures suggest that although downtown sales were at satisfactory levels, they could increase by at least 30 percent in constant (adjusted for inflation) dollars in the same floor area. The most successful 10 percent of regional shopping centers in the national survey achieved much higher sales—averaging nearly $200 per square foot.

Floor area also could be increased on many sites, with a total theoretical increase of 47 percent. This figure is derived by assuming 5.8 parking spaces per 1,000 square feet of building area (the national median) and allowing 20 percent of the total land area for open space. Building coverage would be 28 percent vs. the current 19 percent on developed sites in the three zoning districts.

At the time of the survey, 23 percent of the 286 acres in the three commercial zoning districts was undeveloped, allowing for a theoretical 43 percent floor area expansion if developed to maximum one-story intensity. Adding the three expansion factors—more developed land, more floor area on developed land, and increased sales per square foot—results in a theoretical capacity to yield 2.5 times the 1979 constant dollar sales on land currently zoned for retail commercial development.

Designation of additional retail sites might result in increased sales, but most of the gain also could be captured by existing stores or zoned sites. Presently designated sites are more than capable of capturing constant dollar sales increases resulting from the 60 percent Tri-Valley population gain projected by ABAG for the year 2000, although the limitations of the circulation system may prevent bringing 2.5 times the present number of patrons to downtown.

Strengths of Downtown:

- Dominant location (with Stoneridge) to serve 160,000 present residents and a potential population of 250,000 plus a secondary market area including Alamo, Danville, and Tracy. Santa Clara County, a saturated market, supports one regional shopping center for each 135,000 residents.

- Large enough trade area and low enough rents for one-of-a-kind stores serving trade area such as pianos, coins, wigs, trophies, and dictating equipment.

- Dominant auto sales, service, parts, and accessories concentration for trade area.

- Dominant building specialties center.

- Trade area's largest restaurant choice within small area.

In summary, Dublin offers many of the advantages of the traditional downtown—variety, wide rent range, and accessibility.

Weaknesses of Downtown:

- One story buildings and dominance of paved areas make downtown much like a commercial strip despite its relatively compact form.

- Lack of public street frontage and lack of strong shopping center identity make many stores hard to find for first-time shoppers.

- Aside from difficulty in finding specific establishments, the overall layout is difficult to comprehend and offers the newcomer few points of orientation.

- Lack of public streets concentrates traffic at a small number of intersections.

- Vehicular circulation between parking lots of adjoining shopping centers in some instances is inconvenient or not well-defined. Little provision is made for pedestrian convenience and security.

2.1.3 COMMERCIAL AND INDUSTRIAL DEVELOPMENT: OFFICES

Dublin attracted the first regional headquarters offices in the Tri-Valley. Its proven efficiency as an office location for firms doing business throughout the Bay Area has given impetus to the major business park projects underway in Pleasanton. Dublin offices may lack the high-style corporate image available at other Tri-Valley locations, but they can be pleasant—as many are—and will probably continue to maintain rents below and occupancy above the Tri-Valley average. In the near term at least, Dublin office tenants will have the best choice of restaurants and most convenient business services.

2.1.4 COMMERICAL AND INDUSTRIAL DEVELOPMENT: MANUFACTURING AND DISTRIBUTION

By 1980 two-thirds of Dublin's industrially zoned land was developed. It is significant that total floor area in industrial districts represented 28 percent of developed land area, indicating little opportunity for expansion on partially developed sites. With parking and minimal landscaping, a floor area to site area ratio of 35 percent is close to the maximum attainable. A few sites east of Dougherty Road have low intensity uses that could be replaced by more intensive development.

With only about 60 acres of undeveloped industrial land remaining, Dublin continues to lose manufacturers and distributors as they outgrow their space and are unable to find larger space in Dublin. The availability of a variety of small spaces and the relatively low cost basis for Dublin industrial buildings makes them very attractive for new and young industries, allowing Dublin to function as an incubator and ensuring high occupancy.

The 23 percent of Dublin's taxable sales that are contributed by the 393 businesses not classified as retail outlets is evidence of the importance of Dublin as a location for manufacturers and small businesses that make some sales to final consumers—building supply houses, building subcontractors, auto repair establishments, and miscellaneous repair services.

Any business park development on the north frontage of I-580 east of Santa Rita would be directly competitive with Hacienda Business Park and similar projects in Pleasanton and Livermore that must carry high start-up costs for streets and utilities and possibly for mitigation of environmental impacts. Build-out probably would require

20 years or longer, although industries desiring freeway visibility might snap up the frontage. About 700 gross acres would be available, extending to an average depth of 1,300 feet from the freeway. Assuming 30 employees per acre, this north freeway frontage could accommodate up to 21,000 jobs.

PLANNING ISSUES

1. Future character of downtown retailing—continue as low-priced retail center or make effort to attract more high-end stores.

2. Means of improving downtown identity, clarity of organization, and ability to find stores.

3. Potential for cooperative efforts among shopping center owners to improve appearance and circulation between centers.

4. Potential for long-term intensification of downtown by adding stores, offices, parking structures, and possibly housing in multi-story buildings.

5. Comparative contributions to vitality of downtown Dublin from housing and office development on sites near downtown where either use is viable (both west of San Ramon Road and elsewhere).

6. Potential for adding office space through intensification of downtown development by adding parking structures or mid-rise buildings.

7. Type and timing of development of north I-580 frontage east of Santa Rita.

2.2 OPEN SPACE ELEMENT

2.2.1 AGRICULTURAL OPEN SPACE

Most of the unwooded portions of the extended planning area are used for grazing. Typical yields are three times the state average for rangeland. Alameda County, in the Conservation Element of its General Plan, places the entire western portion of the planning area in the PR, prime range land, classification. The portion of the planning area east of the city is classified as prime rangeland in the hill areas near the county line, and PA, prime agricultural land, in the flat area near I-580. A preliminary Draft Important Farmlands Map prepared in 1983 by the Soil Conservation Service designates most of the extended planning area as "Farmlands of Local Importance," excluding the lands of greater slope in the area east of the City.

No survey of the acreage committed or the number of animals grazing is available, but based on studies elsewhere in Northern California, the probable rental value per acre of grazing land is in the $10 to $20 per year range. Since all such land except steep slopes has a market value in excess of 10 times these amounts, it is clear that ownership is motivated in different instances by some combination of personal satisfaction, expectation of capital gain, or desire to tax shelter income from other sources.

Excluding parcels fronting on I-580, about 90 percent of the extended planning area is under Williamson Act agreement (California Land Conservation Act, Administrative Code Section 51200 et seq.). Under this law, an owner agrees not to develop for 10 years and pays taxes based on the agricultural value of the land rather than its market value. Since virtually all land in California has a market value far above its capitalized agricultural income yield, the Williamson Act has been extremely popular with owners who do not anticipate near-term development, particularly before Proposition 13 cut agricultural property taxes by about one-half.

Williamson Act contracts automatically renew each year for a new 10-year period unless the owner or the County states an intention to terminate at the end of the current 10-year period, i.e. contract expiration occurs ten years after non-renewal. Cancellation and immediate removal, even under liberalizing legislation effective since 1982, requires findings that would be difficult or impossible to make in most of the extended planning area (no discontinuous urban development would result, no proximate noncontracted land is available, etc.).

Although the Williamson Act probably has not reduced the total amount of agricultural land converted to urban use in California, it provides justification for regulation to keep Alameda County's ridgelands undeveloped. Some owners may view the contract as a means of low-cost land banking until the market is right for sale for urban use, but if local governments determine that agricultural open space is the appropriate long-term use, the availability of the Williamson Act avoids a charge that government is taxing on one assumption (development potential) and regulating on another (desirability of retaining agriculture).

Much has been written on the desirability of preserving agricultural open space, but the case for preservation of low yield lands such as those in the extended planning area must rest on benefits to the Bay Area as a whole rather than to agricultural

operators in the planning area. Over the long term, regulation to retain open space must be based on characteristics of the land that make it unsuitable for urban development. Because both the environmental quality of the Bay Area and continued viability of agriculture are dependent on retaining substantial areas of developable land as open space, public acquisition eventually will be necessary as development pressures increase.

2.2.2 OPEN SPACE FOR OUTDOOR RECREATION

The Dublin San Ramon Services District (DSRSD) has developed all of Dublin's six parks, and it owns all but Kolb and Cronin parks, which are on Murray School District property (see Table 2-2). In the early 1970s, voters approved a $2.3 million bond issue for improvements and a special tax for equipment and maintenance. In 1978 a detailed Park and Recreation Master Plan Update, prepared with broad community participation, recommended an ambitious program of acquisition and development. Shortly after, passage of Proposition 13 eliminated the tax override and the possibility of additional bond issues. A subsequent advisory election on restoring a parks tax failed.

Currently, the only sources of DSRSD revenue for parks are capital improvement fees levied as a condition of residential subdivision map approval. These fees, authorized under the State's Quimby Act, are determined on the basis of the value of the property being developed. Recent fees have been used to finance capital improvements such as lighting at the Dublin Sports Grounds and solar heating for the Swim Center. No additional acquisition funds are currently available. Maintenance funds come from property taxes and are at approximately one-third of their pre-Proposition 13 levels.

The 1978 Master Plan identifies five of six neighborhood parks as below accepted acreage standards. Additionally, when the planning study compared District resources to National Recreation and Park Standards, it found Dublin's neighborhood parks to be deficient in acreage by over 80 percent and community parks to be lacking by over 18 percent. National standards suggest one neighborhood center for each 10,000 people and one community center for each 25,000 people. By these measures, Dublin presently is 100 percent deficient in neighborhood centers and up to standard for community level centers.

TABLE 2-2
PARK SITES WITHIN THE CITY OF DUBLIN

Site	Acres	Description	Ownership/Maintenance
Shannon Park 11600 Shannon Avenue	9.6	Community Center building, lighted lawns, parking and paved pathways, tot lot, and picnic tables.	Developed, owned, and maintained by DSRSD. Building operated by SRVCC Inc.
Dublin Sports Grounds 6800 Dublin Boulevard	22.7	Five soccer fields, one lit; six baseball fields, two lit; tot lot; restrooms; and snack bar.	Developed, owned, and maintained by DSRSD.
Valley Community Swim Center 8157 Village Parkway	3.0	Lighted pool with tot and competition areas, solar heating, restrooms, and showers.	Developed, owned, and maintained by DSRSD.[a]
Mape Park 11711 Plata Way	2.5	Tot lot and picnic area.	Developed, owned, and maintained by DSRSD.
Cronin Park Penn & York Drive	2.5	Tot lot and lawns.	Developed by DSRSD, maintained by Murray School District.[b]
Kolb Park Brighton Drive & Bristol Road	3.0	Tot lot, lawns, picnic area, and two lighted tennis courts.	

[a]Amador Valley Joint Union High School District property.
[b]On Murray School District property.

Source: Dublin San Ramon Services District.

A March, 1983 survey conducted for the City of Dublin Parks and Recreation Advisory Committee ranked the 20 most popular activity facilities:

TABLE 2-3
POPULAR ACTIVITIES

Rank	Activity	No. of Respondents
1	Aerobics[a]	100
2	Concerts[a]	94
3	July 4th Celebration[a]	87
4	Teen Center[a]	81
5	Computer Class[a]	75
6	Longer Pool Hours[a]	75
7	Tennis	72
8	Gymnastics	68
9	Horseback Riding[a]	65
10	Hiking Trails[a]	57
11	Soccer	53
12	Crafts	52
13	Tennis Courts - additional	51
14	Ceramics	49
15	Ballet or Tap Dance	45
15	Additional Park Space[a]	45
15	Bike Trails	45
16	Family Picnic Areas	43
17	Painting Classes	42
18	Little League	35

[a]Not currently available through public programs.

Although additional park space did not rank near the top as a separate item, additional tennis courts, family picnic areas, and possibly some of the other activities would need more park space.

In its Master Plan, the District identified new types of facilities that should be developed, and adopted standards for parks in the city. The Board of Directors established policies to provide one 5-acre neighborhood park within one-half mile of each home, and to acquire lands adjacent to school sites if possible. Additionally, the Board assumed responsibility for a community beautification program, to be achieved in part through the development and implementation of a formal street tree planting program and the preservation of scenic open spaces in its existing and proposed jurisdiction.

The Board also listed as policy objectives the adoption of cultural arts programming as the primary area of emphasis for provision of new services and the development and implementation of a districtwide bikeways system on streets and through open space in existing and future areas of jurisdiction. None of these objectives have been met.

The 1978 acquisition recommendations were as follows:

1. Ridgetop (Dougherty Hills) trail between Amador Valley Boulevard and Old Ranch Road.

2. Mape Park Expansion (9.2 acres), with trail easement along creek to San Ramon Road.

3. Dolan School Site (23 acres). Develop 12 acres as community park; retain 11 acres as open space.

4. Major community park in Dougherty Hills (37 acres). Site mapped is east of SP tracks adjoining county line.

The State Education Code (Article 5, Section 39390 et seq.) establishes that if a portion of a school site or other land owned by a school district has been used for recreation or as open space for eight years or longer and is declared surplus, it may be acquired by a city or park agency at a favorable price if there is no alternative site for the same uses. In such circumstances the school district must offer to sell or lease (at its discretion) not more than 30 percent of the District's surplus land at a cost computed on the basis of purchase price, cost of living adjustments, and cost of improvements. For its part, the parks and recreation agency interested in acquiring the school surplus land must make a finding of inadequate public land and have a plan for the purchase of surplus school property. The School District has a right to reacquire land at any time, based on the same cost computation.

DSRSD operates two small parks on Murray School District property, including Kolb Park adjoining the recently closed Fallon School. The provisions of the Education Code described above may prove essential to retain this or other parks and may allow the City or DSRSD to increase park acreage at locations that otherwise will have permanently "substandard" park service.

PLANNING ISSUES

1. Disposition or use of undeveloped Dolan site and sites of closed schools.

2. Effect of land use and housing density decisions on school population and socio-economic mix in school service areas.

3. Effect of decline of school enrollment and closure on park sites owned by the Murray School District as part of school sites.

4. Use of current and prospective park fees collected as housing is added.

5. Priority for acquistion or expansion of park lands vs. more intensive development of existing sites.

6. Fewer larger parks vs. more smaller parks.

7. Future of parks on Murray School District property if adjoining school is closed.

8. Potential for acquisition of school property for park use.

2.3 SCHOOLS, PUBLIC LANDS AND UTILITIES ELEMENT

2.3.1 SCHOOLS

As in most communities that have grown rapidly, declining birth rates and a growing proportion of empty-nest households have caused a drastic decline in Dublin school enrollment. School closure is always difficult because it involves loss of both a service and the potential for new development in a long-established neighborhood. In Dublin the case for redeveloping surplus schools is less apparent than in a fully developed community because additional housing may bring increased enrollment.

District Boundaries. Murray School District serves grades K-8 in Dublin, northwest Pleasanton, and the hills to the west. Arroyo Vista housing on Dougherty Road is the only portion of Dublin omitted. The Pleasanton Joint School District serves it and Camp Parks, while the Livermore Valley Joint Unified School District serves grades K-12 east of Camp Parks. Amador Valley Joint Union High School District includes both the Murray and Pleasanton elementary districts.

Murray School District. Established in 1866, the Murray School District operated until 1960 with one two-room school. Between 1960 and 1970, nine schools were built to accommodate an enrollment that increased from 400 to 5,432. In 1971 there were three K-6 and five K-8 schools in the district.

By 1977, in response to declining enrollment, the Board of Trustees decided to group all seventh and eighth grade students in two intermediate schools, Wells and Frederiksen. That decision left Cronin, Dublin, Fallon, Murray, and Nielsen schools as the K-6 schools serving Dublin (see Table 2-4).

In addition to the sites of its 10 schools, the Murray School District owns a 27-acre undeveloped site on Castilian Road in Dublin's western foothills.

Because enrollment decline is averaging about 7 percent per year and current capacity is nearly twice current enrollment, the District must close schools. Dublin School has been leased to the private Valley Christian School since 1980. Consistent with a report by a Citizens' Advisory Committee, the Board closed Fallon School in June 1983 and will close Frederiksen School at the end of the 1984/1985 school year, holding open the possibility that it subsequently may reopen as a K-6 school.

Table 2-4 summarizes Murray School District's potential enrollment under the proposed General Plan and two alternative plans for the primary planning area. Current enrollment in grades K-8 is .54 students per occupied housing unit, down from a high of 1.0 per unit in the early 1970's. Because about 80 percent of the city's housing stock was built between 1960 and 1970, families are growing up and further decline in student population from existing units is expected.

Despite low initial enrollments, new single family homes are likely to have more school age children within ten years after occupancy than existing homes. Enrollment ratios are expected to reach the peak levels of homes built during the 1960's because of lower fertility rates and changes in household and family structure.

Multi-family housing, which will comprise 37 percent of all units in the primary planning area under the proposed Plan, poses the most difficult projection problem.

TABLE 2-4
MURRAY SCHOOL DISTRICT: CURRENT AND POTENTIAL ENROLLMENT AT BUILDOUT
PROPOSED GENERAL PLAN AND ALTERNATIVES

	Enrollment Sept. 1983	Built Capacity	Planned Capacity[a]	Potential K-6 Enrollment			Grades 7-8 Planned Capacity[a]	Potential 7-8 Enrollment[b]		
				No Project	Draft Plan	High Density		No Project	Draft Plan	High Density
West of I-680	583	1,557	707	1,010	1,010	990	—	290	290	280
Dublin (leased)	—	850	—				—			
Nielsen	583	707	707				—			
East of I-680	1,795	2,831	1,023	1,100	1,200	1,230	750	317	350	350
Cronin	331	376	376				—			
Fallon (closed)	—	641	—				—			
Frederiksen (closing June 1985)	400	417	—				—			
Murray	516	647	647				—			
Wells	548	750	—				—			
TOTAL	2,378	4,388	1,730	2,110	2,210	2,220	750	607	640	630

[a]Murray School District; Report of the Citizen's Advisory Committee for School Consolidation/Closure/Reorganization.

[b]See text for discussion of student enrollment assumptions. Students are assumed to be evenly distributed by grade.

Traditionally, apartments have housed few children, but the current and anticipated inability of many families to afford detached units almost certainly will increase enrollments. An assumption must be made as to how much. Murray School District reports that new housing of all types has about 0.2 children per unit.

The projections assume that peak K-8 enrollment will be reached five to ten years after buildout with 0.2 K-8 students per all multi-family units, .6 K-8 students per new single family unit, and .4 K-8 students per existing single family unit, producing 2,570 to 2,740 K-8 students. Built capacity of the four Murray School District schools shown on the plans is 2,480. The discrepancy occurs west of I-680 where Nielsen School capacity is 707, but projected K-6 enrollment is about 1,000 students. Dublin school could be re-opened to accommodate additional students, or capacity at other sites could be increased with use of portable classrooms as necessary.

Amador Valley Joint Union High School District. Currently, Dublin High School has 984 students in grades 9-12. The school's capacity is slightly over 1,200, and administrators expect enrollment to decline at a rate of 1.3 to 3 percent over the next several years. The District has no plans to change school organization or structure and is responding to declining enrollment through program changes and leasing some classrooms to Alameda County for special and vocational education.

Pleasanton School District. The Pleasanton School District has no schools in Dublin, but does serve the residents of the Pleasanton Housing Authority's Arroyo Vista project. Approximately 25 students from Arroyo Vista attend Fairland and Pleasanton schools.

2.3.2 PUBLIC LANDS

Public lands having the greatest relevance to the city's future adjoin the eastern boundary of the incorporated area. Parks Reserve Forces Training Area (RFTA), Tassajara Creek Regional Park, and Alameda County's Santa Rita Rehabilitation Center form a barrier that stretches from I-580 to the county line. The western part of the city's proposed extended planning area contains no significant public lands.

Within the city, public lands are parks owned by the Dublin San Ramon Services District; flood control drainageways owned by the Alameda County Water Conservation and Flood Control District, Zone 7; and school sites owned by the Murray and Amador Valley Joint Union High School Districts.

Parks RFTA

The military installation that now serves as an Army Reserve Forces Training Area has belonged to both the Navy and Air Force at different times since its construction in 1942. The original installation reached from Dougherty to Tassajara roads, extending northward past the county line and south to I-580. In 1964 approximately 1,400 - acres of the Army's land was disposed to various public jurisdictions (see below) as the installation was deactivated.

The Army is now again using Parks RFTA on a continual basis. The site includes 2,268 acres, with 1,633 acres remaining in open space and the remainder used for

administration, living quarters, and storage. Following renovation of living quarters, use of the area increased dramatically in 1980, when activity reached approximately 94,000 "man-days." According to the Commander of the installation, activity is expected to level off at about 100,000 man-days per year, so no major increases in usage are anticipated. Activities are almost exclusively on weekends, with troops generally coming in on Friday evening or Saturday morning and leaving Sunday evening.

The Army circulated a Draft Environmental Impact Statement (DEIS) addressing reactivation and development plans for Parks RFTA in April, 1982. While most of the reactivation plans have already been implemented, one of the primary facilities development strategies—reacquisition of the East Bay Regional Park District's Tassajara Creek Regional Park—is still under consideration. The Park District strongly opposes reacquisition, which the Army favors as a way to improve efficiency and training operations. A final EIS is pending completion of a biological assessment of the area by the Army.

Parks RFTA facilities have been improved over the last two years as use has increased. Those training sites closest to the incorporated city include pistol, rifle, machine gun, and grenade ranges; a confidence course; track; and rappel tower. Ranges are not visible from Dougherty Road. While many buildings on the site have been improved in recent years, a considerable number of buildings visible from Dougherty Road remain in a state of disrepair.

Tassajara Creek Regional Park

The 445 acres composing the East Bay Regional Park District's holding were conveyed to the District in 1973 and held as part of its regional land bank. In 1980 the area was dedicated by EBRPD as a regional park, pursuant to the District's Master Plan. Access to the park, which is essentially unimproved open space, is from Tassajara Road.

Santa Rita Rehabilitation Center

Alameda County's Santa Rita Rehabilitation Center is located on approximately 950 acres of land stretching from I-580 to the southern border of Tassajara Creek Regional Park. The buildings on the county land, which are in the southern part of the parcel, are some of those that were originally constructed by the Navy when Camp Parks was first developed.

The County Sheriff's Department is planning to abandon the present facility and build a new jail in the northwestern corner of the site. Completion of the new jail, which is still in the planning stages, is expected about 1988. The new facility will house the same number of prisoners as the existing jail. While definite plans have not been made, the County is considering proposals to lease or sell its current freeway frontage property when the new jail is built.

PLANNING ISSUES

1. Role public lands play as barriers to City's annexation of land in the eastern portion of the extended planning area.

2. Possible negative impacts (visual, noise, etc.) Parks RFTA activity may have on land west of Dougherty Road and north of Amador Valley Boulevard when it is developed.

3. Effect of possible reacquisition of Tassajara Creek Regional Park by Army on area parklands/open space resources.

2.3.3 SEWAGE TREATMENT AND DISPOSAL

Sewage collection and treatment and effluent disposal are provided to Dublin residents and businesses by the Dublin San Ramon Services District (DSRSD), a member of the Livermore Amador Valley Wastewater Management Agency (LAVWMA). DSRSD owns and operates its own sewage treatment plant, while LAVWMA owns an effluent pipeline used by member jurisdictions. (Other members of LAVWMA are the cities of Pleasanton and Livermore).

DSRSD's treatment plant, which adjoins the I-680 Freeway in Pleasanton, can be expanded to four times its present size, but the LAVWMA pipeline that carries treated effluent through Dublin Canyon to the Bay is nearing capacity. Development of additional LAVWMA capacity in the form of another pipeline out of the valley would require valleywide voter approval.

Current and Projected Usage

Residential: Sewage capacity is allocated by DSRSD through issuance of connection permits. Currently, there are approximately 580 outstanding residential permits in Dublin; i.e., permits that have been issued for dwelling units not yet hooked up to the system. An additional 1,700 residential permits remain to be issued to users throughout the District on a first come, first served basis.

Nonretail Commercial: Distinct from the remaining DSRSD capacity discussed above, the City has an allocation of 100,000 gallons per day set aside to serve new nonretail commercial development. Since business/industrial park space varies widely in terms of water usage, it is difficult to predict the amount of floor area this capacity will ultimately serve.

Obstacles to Further Expansion

With remaining sewage capacity for 1,700 residential permits throughout DSRSD's service area (May, 1983), and remaining residential development capacity in Dublin alone allowing approximately 3,700 additional units, it seems probable that pipeline capacity will be reached before Dublin is built out, and that growth will be curtailed within 2 to 5 years if additional effluent disposal capacity is not available. Although a

major new system would take 5 to 7 years to construct, minor capacity increases could be implemented soon after authorization, possibly alleviating development constraints during pipeline expansion.

Obstacles to further expansion of effluent disposal capacity from the Valley include needed voter approval; high cost of developing a disposal system; and development of an environmentally sound and technically feasible disposal technique. While only expansion of the LAVWMA pipeline requires voter approval by law, any alternatives would likely be controversial and would be subjected to referendum. In such a case, the entire Tri-Valley electorate would be involved, as the Regional Water Quality Control Board will not authorize a system serving only part of a larger natural service area. Any major sewage disposal project would require an EIR considering possible implications for all Tri-Valley resources, including air and water quality. The cost of a new disposal system would surely cause a significant increase in the current $2,100 per unit residential sewage connection fee. At this time sources for funds for such a project are uncertain, but apparent development pressures suggest that financing by user charges will be feasible.

2.3.4 WATER SUPPLY

Dublin's original water system was constructed by the Volk-McLain Company, and was dependent on groundwater pumped from wells along Dublin Boulevard. Today, the city's water is distributed by the Dublin San Ramon Services District (DSRSD), which purchases water from Zone 7 of the Alameda County Flood Control and Water Conservation District. Local groundwater sources have not been used since 1979 due to water quality problems (excessive hardness and total dissolved solids).

Zone 7, the area's water wholesaler, imports water from the Sierra to the East Bay and South Bay via the South Bay Aqueduct (SBA). Zone 7's Del Valle Reservoir and two water treatment plants in the Livermore-Amador Valley serve the planning area. DSRSD's water source is the Zone 7 turnout off Dougherty Road. The turnout's capacity is 4,000 gallons per minute (gpm). Water is fluoridated at the turnout.

In 1981, the firm of Camp, Dresser and McKee prepared the Water Master Plan for Dublin, which has been adopted by the Services District. The plan assumes adequate capacity in Zone 7 transmission facilities to provide the maximum day demands of the District to the year 2020. However, the plan recognizes that increasing demand elsewhere in the Zone 7 service area will have the affect of decreasing the pressure of water delivered to Dublin. To address this potential problem, the plan recommends construction of a reservoir at the Dougherty Road turnout. Other improvements recommended by the plan will provide backup facilities should Zone 7 service be discontinued or shut off; increase storage capacity within the city; and increase pressure in problem areas. Total improvements recommended by the Master Plan are expected to cost $2.4 million, and will be paid for by water connection fees.

The District's water distribution network is currently divided into two zones; the lower pressure zone encompasses most of the city, while the upper pressure zone includes the city's western border, servicing elevations of 390 to 520 feet above sea level. In response to planned development both in and out of the incorporated area, the Master Plan proposes the creation of a third zone, which will serve elevations of up to 740 feet above sea level. This proposed third zone will have three booster pump

stations and a reservoir. Pipes will be installed as part of subdivisions, and pump station construction will begin in conjunction with initial residential development. Following adoption of the Master Water Plan, the Services District expanded its boundaries to include the entire third zone, which is not entirely within the existing City boundaries.

Currently, all of Dublin's water demand is satisfied by Zone 7. A representative of Zone 7 has indicated, however, that supply may become a problem sometime in the 1990s if no new sources are brought into use. Mitigation of future supply problems may be provided by a major State-sponsored water project, or by resuming the use of local well water, requiring extensive treatment. Another response to possible water shortage would be implementation of a water conservation program in the Zone 7 service area. Area residents demonstrated their capacity to conserve water during the 1976-1977 drought, when water consumption levels dropped significantly without any major efforts on the parts of Zone 7 or the Services District. Per capita water consumption has not returned to its predrought levels.

2.3.5 SOLID WASTE DISPOSAL

DSRSD is responsible for solid waste collection, hauling, and disposal within its service area. The District contracts with the Dublin Disposal Service in Livermore for garbage collection and carting, and waste is disposed of at the Altamont Landfill, a sanitary landfill under the criteria established by the Resource Conservation and Recovery Act. The landfill, which is privately owned and operated, has enough unused capacity for an additional 50 years of operation. Pick-up and disposal fees are set by the Services District and collected by the disposal service.

PLANNING ISSUES

1. Adequacy of sewage treatment and effluent disposal capacity given projected Tri-Valley development.

2. Funding and electorate approval of expansion of sewage treatment and effluent disposal capacity.

3. Development of alternative effluent disposal plans.

4. Adequacy of Zone 7 water supply for projected Tri-Valley development.

5. Feasibility of extending all public services to the extended planning area.

2.4 CIRCULATION AND SCENIC HIGHWAYS ELEMENT

Dublin's trafficways system represents the state of the art of transportation planning during the early 1960s. Within San Ramon Village, traffic was to be concentrated on four-lane arterial streets fed by neighborhood collectors that would not attract through traffic. Downtown apparently was designed, but not developed, as a single huge shopping center.

2.4.1 DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE

Existing daily traffic volumes (estimated, June, 1983) on Dublin arterial and collector streets are shown in Table 2-5. The two busiest roadway sections are San Ramon Road between Dublin Boulevard and the I-580 Freeway (35,000 vehicles per day) and Dougherty Road between the freeway and Dublin Boulevard (41,000 vehicles per day). Most other arterial street sections have volumes in the range of 15,000 to 25,000 vehicles per day. Business collectors such as Regional Street, Amador Plaza, and Sierra Court have traffic volumes of approximately 6,000 vehicles per day, whereas residential collector streets such as Silvergate Drive and Davona Drive have traffic volumes in the range of 1,500 to 5,000 vehicles per day.

Typical capacities of various types of roadways are as follows:

2-lane streets:	12,000 to 15,000 vehicles per day
4-lane divided streets:	24,000 to 30,000 vehicles per day
6-lane divided streets:	35,000 to 40,000 vehicles per day

Where homes front directly on the street, the acceptable traffic capacity is substantially less than the physical capacity of the street. The term "environmental capacity" represents a subjective determination of traffic volume levels deemed acceptable from the residents' perspective. "Environmental capacity" may be only 25 percent of the physical capacity. For example, a two-lane residential street with directly fronting single-family homes can be expected to present an undesirable environment to the residents from a traffic standpoint when traffic volumes exceed 3,000 to 4,000 vehicles per day. It can be noted from Table 2-5 that five streets are in this category.

Table 2-6 presents a partial list of key intersections where recent peak-hour turning movement counts have been made. At these locations, the volume to capacity ratio of the intersection and the resulting levels of service have been determined. Levels of Service range from A (very good) to F (totally unacceptable). Levels of Service A, B, and C are considered acceptable and Level of Service D is considered marginally acceptable. Levels of Service E and F are not acceptable. Intersections nearest I-580 interchanges provide poorest service.

TABLE 2-5
ESTIMATED 1983 AVERAGE DAILY TRAFFIC (ADT) ON SELECTED STREETS

Street Section	Existing Right-of-Way (Feet)	Estimated Average Daily Traffic
San Ramon Road		
I-580 to Dublin Blvd.	153	35,000
Dublin Blvd. to Alcosta Blvd.	167	16,000-18,000
Village Parkway		
Dublin Blvd. to Amador Valley Blvd.	100	15,000
Amador Valley Blvd. to Tamarack Dr.	100	19,000
Tamarack Dr. to Kimball Ave.	100	10,700-15,000
Dougherty Road		
I-580 to Dublin Blvd.	100	41,000
Dublin Blvd. to Sierra Ln.	80	13,000
Sierra Ln. to Amador Valley Blvd.	50	7,500
Dublin Boulevard		
West of San Ramon Rd.	100	3,000-5,500
San Ramon Rd. to Clark Ave.	100	20,000-22,000
Clark Ave. to Dougherty Rd.	100	25,000-27,000
East of Dougherty Rd. (Scarlett Ct.)	50	3,000
Amador Valley Boulevard		
San Ramon Rd. to Village Pkwy.	108	17,000
Village Pkwy. to Dougherty Rd.	80	4,100 - 7,500
Alcosta Boulevard (San Ramon)		
Near I-680	100	20,000
Sierra Court	68	6,000
Amador Plaza	60	6,200
Regional Street	68	6,400
Donohue Drive		
Near Amador Valley Blvd.	60	5,400
Starward Drive		2,400
Tamarack Drive	58	1,600-2,300
Brighton Drive	58	2,300-4,600
Davona Drive	60	2,700-4,300
Kimball Avenue	60	3,500
Vomac Road	60	1,500
Silvergate Drive	102	1,500-4,200
West of Peppertree	80	
Hansen Drive	64	2,000

Source: Alameda County; TJKM.

TABLE 2-6
EXISTING PEAK-HOUR INTERSECTION CONDITIONS

Intersection		A.M. V/C	A.M. LOS	P.M. V/C	P.M. LOS
San Ramon Road	and Bellina	0.54	A	0.78	C
	and Vomac	0.50	A	0.70	B
	and Shannon	0.57	A	0.66	B
	and Silvergate	0.68	B	0.60	A
	and Amador Valley	0.63	B	0.83	D
	and Dublin Boulevard	0.80	C	0.92	E
Dublin Boulevard	and Donlon	0.37	A	0.43	A
	and Regional	0.42	A	0.78	C
	and Golden Gate	0.40	A	0.59	A
	and Amador Plaza	0.37	A	0.56	A
	and Village Parkway	0.37	A	0.76	C
	and Dougherty	0.62	B	1.38	F

V/C = Volume to Capacity Ratio.
LOS = Level of Service.

Source: TJKM

Arterial streets on which capacity is, or will soon be, exceeded include San Ramon Road and Dublin Boulevard. Both streets are expected to have future width plan lines adopted soon.

Residential streets having current traffic volumes considered to be environmentally unacceptable by adjoining residents result from the creation of collector streets conveniently serving too many homes. The most notable street section in Dublin with an environmental problem is Amador Valley Boulevard between Village Parkway and the Southern Pacific Railroad tracks. This street is probably of arterial status but constructed as a two-lane divided roadway with fronting homes. As growth occurs, traffic volumes will increase on this street, exacerbating the existing problem.

Two-lane collector streets that have been the subject of residents' complaints because of excessive traffic volumes and speeds have included Donohue Drive, Brighton Drive, Starward Drive, Davona Drive, and portions of Silvergate Drive. Other streets, because of their long and straight alignment, can be the subject of residents' concern even without excessive volumes. Streets in this category include Tamarack Drive, Penn Drive, Vomac Road, and Amarillo Road.

2.4.2 PROJECTED TRAFFIC VOLUMES

TJKM prepared projections of traffic on the arterial and collector street systems using a modification of the simulation model used for the Tri-Valley Transportation Study (1983). Key assumptions are:

- Additional housing units in Dublin per proposed General Plan.
- Additional jobs in Dublin = 2,885 (20 percent higher than increase of 2,400 assumed for General Plan, but reliability of any employment assumption is much less than for housing.)
- Transit diversion (except retail area trip ends): 5 percent to local transit; 5 percent to BART.
- Carpooling: 10 percent of trip ends for offices.
- BART Station: 1,250 parking spaces; 4 trip ends per space less 15 percent diversion to local transit.

The 1983 and 2005 Daily Projected Traffic Volumes map in the Plan Policies report shows the volumes assigned to arterial and collector streets and the number of lanes required. Dougherty Road is proposed as 6 lanes with median despite low assigned volume because Contra Costa County development expected by 2005 was not included in the model. Similarly, the model did not assign traffic generated by business park and residential development north of I-580 and east of Parks RFTA to Dublin Boulevard extension. A four lane arterial with median is proposed.

2.4.3 FREEWAY CAPACITY

TJKM projections for I-680 and I-580 were prepared for the Tri-Valley Transportation Study using four sets of assumptions. Scenario 2A assumes partial completion of Las Positas by 2005 and includes 97,000 dwelling units and 145,000 jobs in the Tri-Valley. Scenario 2B assumes full buildout of all reasonably foreseeable and contemplated projects, resulting in 119,000 dwelling units and 242,000 jobs. TJKM concludes that all of the scenarios except 2B could be served by reasonable expansion of the existing freeway system. Scenario 2B would result in LOS F along most segments of both I-580 and I-680. Thus the freeway system will acommodate demand only if some current development proposals are not realized, if massive freeway improvements are built, or if major changes in travel habits occur.

2.4.4 TRAFFIC ACCIDENTS

Most traffic accidents occur at intersections along the high volume arterials, including portions of Dublin Boulevard, San Ramon Road, Village Parkway, and Amador Valley Boulevard.

2.4.5. PARKING

Downtown Dublin has either sufficient or surplus off-street parking in most instances. The heaviest observed use occurs in the vicinity of Gemco on Friday nights and Saturday afternoons when the peak demand for shopping, restaurants, and movies coincide. As a result, patrons walk longer than normal distances and some park on streets, but at present there is no severe problem.

On-street parking occurs throughout the city in residential districts in both single-family and multiple-family areas. In these cases, on-street parking is typically used out of convenience rather than necessity. One area where on-street parking occurs regularly is near the BART feeder line bus stops. The intersection of Dublin Boulevard and Regional Street is the location of the bus stops serving destinations within the valley and the BART stations. Commuters who drive to the bus stops have been noted to park both on the streets near the bus stops as well as in some store parking lots. Merchants have requested commuters to park elsewhere, either during periods of peak retail demand or at all times.

2.4.6 BICYCLE AND PEDESTRIAN CIRCULATION

Relatively high standard bicycle lanes exist on portions of Dublin Boulevard, Amador Valley Boulevard, and Village Parkway. San Ramon Road has a separated bike path. Both pedestrian and bicycle circulation in Dublin is hampered by the north-south I-680 freeway, which precludes east-west circulation except at Amador Valley Boulevard and Dublin Boulevard. Access to some community facilities such as the high school and swim club is restricted by this barrier to pedestrians and bicyclists. However, most commercial and employment centers in Dublin are in the south end of the city and are served by the Amador Valley Boulevard and Dublin Boulevard crossings of the freeway.

2.4.7 STATUS OF MAJOR TRANSPORTATION IMPROVEMENTS

1. Bart Extension. Extension of BART rail service to Dublin and Pleasanton would have a significant impact on Dublin. One station is contemplated at the south end of Golden Gate Drive between Dublin Boulevard and the I-580 Freeway. A second station is contemplated on I-580 at the proposed Hacienda Drive interchange. Both stations would result in heavy peak-hour traffic at intersections near the station and would be transfer points for local transit service.

2. Coordinated Local Transit. The Pleasanton/Dublin Short Range Transit Plan, 1984-1990, December 1983, study proposed a nine bus local transit system that could be in operation by the end of 1984. Funding would be mainly with state Transportation Development Act money now used for BART buses.

3. Possible Future Light Rail Transit (LRT). Contra Costa County policy calls for preservation of the Southern Pacific rail right-of-way for potential future light rail service. Tracks now run only as far north as the Eastman Kodak plant at the county line, and rail movements occur about once a week. LRT service would be 10 to 20 years in the future.

4. Interstate 680 Freeway Improvement. I-680 has been identified as a freeway corridor needing additional capacity in the future. The State Transportation Improvement Plan (STIP) calls for widening to eight lanes between I-580 and Walnut creek and six lanes south of I-580. The widening to eight lanes in itself will affect Dublin, particularly homes and businesses along the freeway right-of-way, although little or no additional land is expected to be acquired. In addition, the I-580/I-680 interchange will need to be upgraded in the future to accommodate regional traffic demands. This will likely consist of direct connection two-lane flyover ramps serving the heaviest movements. Currently, a.m. peak-hour traffic southbound on I-680 exiting to I-580 in a single lane may back up to Alcosta Boulevard.

   In addition, Dublin is inadequately served by I-680—particularly downtown Dublin, which can be reached from the north only by 1.5 miles of surface street from the Alcosta interchange or by using I-580 to the San Ramon Road interchange. When the freeway-to-freeway interchange is rebuilt—probably in 5 to 10 years—it should be possible to design ramps that would provide access from I-680 directly to Dublin Boulevard or Amador Valley Boulevard. The benefits would include reduced traffic at the San Ramon Road and Dougherty Road interchanges with I-580 and the Alcosta Boulevard interchange at I-680.

5. Extension of Dublin Boulevard. One potential source of additional capacity in the I-580 corridor would be eastward extension of Dublin Boulevard to potentially developable areas east of Parks RFTA. The physical and jurisdictional problems related to such an extension include crossing the Southern Pacific Railroad, crossing Federal Government and Alameda County property, and acquisition of private property near the Dougherty Road intersection.

SECTION 3
HOUSING ELEMENT

DETAILED TABLE OF CONTENTS

LIST OF TABLES

3.1 OVERVIEW

3.1.1 PROFILE OF DUBLIN—THE PRIMARY PLANNING AREA

The City of Dublin, incorporated in 1982, is 4.1 square miles in area, with an estimated 1983 population of 13,700. The primary planning area for the City's first Housing Element and other elements of the General Plan consists of the incorporated area plus .3 square miles to the west, consisting largely of a portion of an approved subdivision which is partly within the City's boundaries.

Most of the City's approximately 4,400 housing units were built by the Volk-McLain Company during the 1960's and are single family, single story houses with three or four bedrooms. Only 386 units, nine percent of the City's stock, are multi-family. The 1980 Census reported that 23 percent of Dublin residents rent their homes. As 85 to 90 percent of multi-family units are occupied by renters, it can be assumed that about 15 percent of Dublin's single family homes were rented in 1980.

For many, Dublin's predominance of single-family homes on 5,000 to 8,000 square foot lots is a desirable feature and one that helps to define a community of families with moderate incomes, typically earning 80 to 120 percent of the Bay Area median. Today's moderate income households, however, cannot afford today's new single-family homes, forcing the City to choose between attempting to maintain its traditional type of housing and maintaining a community with housing available to its traditional residents.

As moderate income households are faced with increasing difficulty in purchasing homes, low income households, those with less than 80 percent of area median income, are finding it more difficult than ever to obtain housing. The regional housing needs determination prepared by ABAG for Dublin projects total housing need as 1,956 units, including 665 units for low and very low income households[1] Under General Plan policies, total units in excess of the figure prepared by ABAG will be produced.

The target for units available to low and very low income households, however, will prove unrealistic unless federal subsidy programs for new construction are revived and sites for construction of affordable housing made available. Regardless of Dublin's interest in meeting this need, households having 80 percent or less of median income must have substantial subsidies to be able to afford to live in an area where nearly all housing is less than 25 years old and there are no older multi-family units.

Unless the economy stagnates or sewage capacity increases are blocked, Dublin will be built-out within the next five to ten years. Only 167 acres of non-commercial land remain undeveloped in the City, including several surplus school sites. As housing demands and City population increase so will other needs, such as those for recreation and public facilities. These needs must be balanced in assigning land use designations to Dublin's remaining undeveloped land.

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[1] Association of Bay Area Governments, Housing Needs Determination, San Francisco Bay Region, July 1983, p.44.

Dublin is a compact city--construction on the sites identified as available for housing development would not result in non-contiguous urbanization; all are infill sites.

Under Alameda County zoning (adopted by the City), most of the city is classified R-1-B-E, a single-family residential combining district allowing lot sizes from 5,000 to 10,000 square feet. Some of the City's larger sites appropriate for residential development are zoned P-D (Planned Development). All residential structures are one or two stories and building heights in commercial districts have not exceeded three stories.

3.1.2 EXTENDED PLANNING AREA

Dublin has designated a 33 square mile extended planning area that "bears relation to its planning" (Govt. Code 65300). The extended planning area is largely undeveloped and is characterized by steep slopes with oak woodlands west of the City and rolling grasslands east of the City. The area also includes the public lands comprising Parks Reserve Forces Training Area (RFTA), Santa Rita Prison, and Tassajara Regional Park. (See map in Plan Policies Report).

General Plan designations for the extended planning area are schematic in nature. Single-family residential densities of 2.0 units per acre apply to slopes under 30 percent. The extended area may accommodate as many as 32 percent of the housing units of the combined primary and extended planning areas. Due to the high development costs for roads and public facilities and services, and the steep slopes of the area, few if any of the units in the extended planning area will be affordable to moderate income households.

While land values are likely to preclude development of mobilehome parks on available level sites in the primary planning area, portions of the extended planning area could accommodate them. An area that provides the exception to the rule of steep slopes and inaccessibility in the extended planning area is the land adjoining the proposed business park area north of I-580 on either side of Tassajara Road. When the General Plan is reviewed and refined for this area, consideration will be given to designating some portion for residential development, including mobile home parks.

The details of developing infrastructure and providing services to the extended planning area have not begun to be worked out. It is therefore assumed that residential development in the extended planning area, with the exception of individual rural residences, will not occur within the time frame of the housing program included in the Housing Element. State law requires Housing Element revision every five years so the document's first revision and program update will appropriately include detailed policies and plans for the extended planning area.

3.1.3 SUBREGIONAL DEVELOPMENT TRENDS

Dublin, like other cities in the Tri-Valley area (the San Ramon, Livermore, and Amador valleys), was developed as a bedroom community oriented toward the major urban centers of Oakland and San Francisco. Now the area is facing a dramatic change as, for the first time, employment growth is expected to outpace housing development, resulting in a net in-commute of workers.

In 1980 the area had 160,000 residents, 51,300 housing units, and 35,000 local jobs. The Association of Bay Area Governments (ABAG) projected a 43 percent population gain to 228,300 by the year 2000. The Tri-Valley was expected to remain a bedroom area, with the 1980 ratio of local jobs to employed residents about 0.73, sliding to about 0.44 as housing for commuters continued to be built during the 20-year projection period (Las Positas DEIR, Tables 5.5 and 5.17). Total job additions by the year 2000 were projected by ABAG at 16,600—far short of the current build-out projection of 129,615 based on announced projects (see Table 3-1). Although this high figure may reflect developer ambitions that will not be fully attained, the Tri-Valley has demonstrated its appeal to employers. Among the attractive features are the relatively low cost of land in comparison to the Bay plain, freeway accessibility to the region, proximity to desirable residential areas, and absence of the political uncertainty characteristic of larger cities. Projections of jobs and housing units for the Tri-Valley are in Table 3-2.

TABLE 3-1
PROJECTED TRI-VALLEY EMPLOYMENT
ADDITIONS AT FULL DEVELOPMENT IN 2005+[a]

City		Jobs Added
Dublin		2,400
Pleasanton		48,945
Livermore		17,800
San Ramon		21,375
	Subtotal	90,520
Spillover secondary employment @ 20 percent[b]		18,100
Las Positas		22,195
	TOTAL	130,815

[a]Alameda County Planning Department. Las Positas DEIR. June, 1982, Tables 2.2, 5.6, 5.7, 5.8, and 5.9.

[b]Gruen Gruen + Associates. An Analysis of the Secondary Employment Impacts of Approved North Pleasanton Commercial/Industrial Development. November, 1982, p. 42. (Spill-over impacts are projected at 21 to 28 percent of employment in industrial/business park projects.)

TABLE 3-2
EXISTING AND PROJECTED
TRI-VALLEY HOUSING AND JOBS

	Population[a]	Housing Units [a]	Tri-Valley Jobs [a]	Employed Residents[b]	Ratio of Jobs to Employed Residents
1980	160,000	51,302	50,373	75,900	0.66
2000; ABAG '83 with Las Positas	253,000	90,000	132,200[a]	133,200	0.99

[a]ABAG Series '83: Preliminary Population, Household, and Employment Projections: 1980-2000, Working Draft, March 1983.

[b]Assumes 1.48 per housing unit valley-wide 1980 census.

3.2 HOUSING ELEMENT REQUIREMENTS AND ORGANIZATION

3.2.1 STATE REQUIREMENTS

Government Code Sections 65580 through 65589 set forth requirements relating to the preparation and content of Housing Elements. By law, the Housing Element must contain:

1) an assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs;

2) a statement of the community's goals, quantified objectives, and policies relative to the maintenance, improvement, and development of housing; and

3) a program which sets forth a five-year schedule of actions the local government is undertaking or intends to undertake to implement the policies and achieve the goals and objectives of the Housing Element.

The housing program must: identify adequate sites available for residential development for a variety of types of housing for all income levels; assist in the development of adequate housing to meet the needs of low and moderate income households; address governmental constraints to the maintenance, improvement, and development of housing; conserve and improve the condition of the existing affordable housing stock; and promote housing opportunities for all persons.

This Housing Element is intended to comply with state law.

3.2.2 ORGANIZATION OF HOUSING ELEMENT

The Housing Element is organized into nine main sections. Table 3-3 provides an index to State required Housing Element Components. Section 3 presents the basic population and household data used to develop needs assessments and projections. Existing market-rate and below market-rate housing resources and services are surveyed in Section 4. Section 5 evaluates housing need, and includes discussion of Dublin's "fair share" allocation as well as city and valley-wide jobs/housing balance.

The five required components of the housing program are described in the remaining sections. Sites available for the development of housing are inventoried in Section 6; constraints are addressed in Section 7, and housing program goals are at the beginning of Section 8. Section 8 also includes all of the strategies for the housing program, separated into three groups on the basis of actions necessary for implementation. All housing program strategies are presented with their associated policy objective, quantified objectives as appropriate, and financing and implementation responsibilities. Housing strategies are related to Dublin's housing goals and State Housing Element requirements in Table 3-21.

TABLE 3-3
INDEX TO REQUIRED HOUSING ELEMENT COMPONENTS

Statutory Requirement	Section(s)	Page Number(s)
Analysis of population and employment trends	3.1, 3.3	3,4,9,10
Quantification of existing and projected housing needs for all income levels - share of the regional housing need	3.5	18-23
Analysis of household characteristics	3.3	10
Analysis of characteristics of the housing stock	3.4	11-17
Inventory of land suitable for residential development	3.6	31-34
Analysis of governmental constraints	3.7	35,36
Analysis of non-governmental constraints	3.7	36-39
Analysis of special housing needs	3.5	28-30
Analysis of opportunities for energy conservation	3.8	53
Statement of community housing goals, quantified objectives and policies	3.8	40
Five year housing program to achieve community housing goals and objectives	3.8	41-53

3.2.3 PUBLIC PARTICIPATION

The General Plan preparation process in Dublin has included a citizen's workshop on the General Plan and a series of Planning Commission and City Council meetings to consider three working papers and alternative sketch plans. Copies of working papers have been available to members of the community; sketch plans and, earlier, maps of the planning area were displayed in the City offices.

Throughout the planning process, and at all Planning Commission and City Council meetings, housing has been a primary concern. The major area of community

controversy relative to project approval has been the density of proposed multi-family residential projects. Through the General Plan the major density questions should be resolved, thereby easing community concern, stabilizing developer and citizen expectations, and speeding the approval process of future development proposals. Another issue raised by Dublin residents is the perceived development of an economic gap between sectors of the City created by differences in housing cost. The policies of the Housing and Land Use elements are intended to counter any such trend.

3.2.4 CONSISTENCY WITH OTHER ELEMENTS OF THE GENERAL PLAN

The Housing Element is intended to be consistent with all elements of the General Plan. All elements of the Plan have been prepared concurrently. This planning process, in which housing, land use, circulation, and environmental issues are considered as a set of interrelated concerns, facilitates the development of a General Plan that is internally consistent and supportive of community goals.

3.3 POPULATION AND HOUSEHOLD CHARACTERISTICS

Dublin's population is relatively homogeneous in terms of age and ethnic characteristics. The short span of time during which most of the City's single family homes were constructed, and low original housing prices resulted in a predominance of young families in the 1960's and then a slowing down of growth and overall aging of the population.

Development in accord with the General Plan will result in about 8,100 dwelling units and 22,400 residents at full development—a 64 percent population addition to the 1983 total.

Even with this population increase, Dublin will probably never again have a school-age population that will fill its built public elementary school capacity. The high cost of new housing and declining family size are among the causes. Current population data for Dublin is included in Table 3-4. Household characteristics, including mobility and household size, are presented in Table 3-5.

Except where otherwise noted, data is from the 1980 U.S. Census, Summary Tape Files (STF) 1 and 3. This data is already four years old, but is in many cases the only available information on Dublin population and households.

TABLE 3-4
CITY OF DUBLIN - POPULATION CHARACTERISTICS[a]

	Total	Percent[b]
Population, 1983	13,700[c]	
Households, 1983	4,428d	
Persons in Group Quarters	0	
Age characteristics, 1980		
persons under 18	5,262	38.9
persons 18-61	7,805	57.8
persons 62 and over	429	3.2
Ethnic Characteristics, 1980		
White Population	12,470	92.4
Black Population	350	2.6
Chinese Population	110	0.8
Native American Population	82	0.6
Japanese Population	71	0.5
Persons of Spanish Origin, 1980	1,159	8.4

[a]1980 U.S. Census.

[b]May not equal 100 percent due to rounding.

[c]Derived from 1983 household count assuming 3.2 persons per single family unit and 2 persons per multi-family unit

[d]Orville McDonald, U.S. Post Master, Pleasanton, CA, personal communication, 5/23/83.

TABLE 3-5
CITY OF DUBLIN - HOUSEHOLD CHARACTERISTICS

	Total	Percent of Dublin Households
Total Households, 1983	4,428	100
Residence in 1975 (persons over 5 years old), 1980		
same house	5,332	39.5
different house, same county	3,697	27.4
different house, different county	2,299	17.0
different state	803	5.9
abroad	262	1.9
Median Household Income,[a] 1983	$33,180	
Households by size, 1980		
1 person households	311	7.9
2 person households	899	23.0
3 person households	859	22.1
4 person households	1,035	26.5
5 person households	566	14.5
6 or more person households	213	5.5
Average Household Size, 1980	3.41	
Single-parent households, 1980		
Female-headed Households	222	5.3
Male-headed Households	57	1.4
Female-headed households below poverty[b] (with children), 1979	135	3.0

[a]Figure derived from HUD 1983 Bay Area median income.

[b]Families and unrelated individuals in the census were classified as being below or above the poverty level, based on income in 1979 using an index which provides "poverty thresholds." These thresholds vary by size of family, number of children, and age of the family householder or unrelated individual. The threshold used for a four person family, for example, was $7,412.

Source: 1980 U.S. Census; extrapolation by Blayney-Dyett.

3.4 EXISTING HOUSING RESOURCES

3.4.1 EXISTING HOUSING STOCK

Dublin's housing stock is characterized by single-family detached homes built within the last 25 years (see Table 3-6). In terms of price, size and type, the City's supply of housing units is relatively homogenous. However, with the completion of approved projects, the overall nature of the housing stock will begin to change, as is indicated by the anticipated increase in the percentage of multi-family units in the City.

City of Dublin
Existing and Planned Housing Units By Type

	Total Units	Single-Family	Multi-Family	Cumulative Percent Multi-Family
Existing Occupied or Previously Occupied[a]	4,428	4,042	386	9
Approved or Under Consideration[b]	1,800	700	1,100	24

[a]Orville McDonald, U.S. Post Master, Pleasanton, CA, personal communication, 5/23/83.

bCity of Dublin Planning Department, updated 11/15/83.

A May, 1983 Postal Service count shows 4,428 housing units in the City currently or previously occupied (the only units omitted are new units as yet unoccupied). Of these, 4,042, or 91 percent, were single-family homes. There were 386 multi-family units. Approximately 15 percent of Dublin's single-family homes were rented in 1980.

TABLE 3-6
HOUSING UNITS BY TENURE AND YEAR STRUCTURE BUILT, 1980

	Units Built	Percent of Existing Units	Owner Occupied	Renter Occupied
1979 to March 1980	35	.8	18	5
1975 to 1978	123	2.9	107	7
1970 to 1974	304	7.3	182	109
1960 to 1969	3,314	80.2	2,605	656
1950 to 1959	156	3.8	91	65
1940 to 1949	186	4.5	0	94
1939 or earlier	15	3.6	0	15

Source: 1980 U.S. Census.

While the single-family house has remained dominant, the composition of Dublin households has been changing. The 1980 Census reported an average household size of 3.41, as compared with 4.0 in 1970. We estimate a 1983 average household size of 3.2. This sharp decline is typical of similar communities in the state and nation. At what point household size will "bottom out" is unclear; factors influencing household size and structure include marriage and divorce trends, birth and death rates, general economic conditions, patterns of young adult behavior, and regional housing availability.

Not all change is toward small household size. There is evidence that "doubling up," i.e. more than one family living in a single-family house, is becoming increasingly common. While data are not available to gauge this phenomenon precisely, it was mentioned several times in the course of interviews conducted for this report. Doubling up is a typical consequence of hard economic times, when young people cannot afford their first homes, elderly family members move in with children, and many people are reluctant or unable to make major financial commitments.

Difficulty in affording housing may not be the only reason for doubling up in Dublin; small families may choose to share a home for convenience, companionship, or reluctance to assume responsibility for an unneccesarily large unit. This trend indicates both a change in the nature of the community's households and a mismatch between available housing and those in the housing market, in terms of both price and type of units available. Some amount of doubling represents efficient use of single-family stock as family size declines.

The next five to ten years will bring the second major burst of growth in Dublin's housing stock, with over 1,600 units approved but not built or occupied by the end of 1983. These units will result in a major change in the type of unit in Dublin--with multi-family units approved, the City will see an increase in the percentage of multi-family units even if all units yet to be approved were single family.

The predominance of buildings constructed within the past twenty years means that few units in the City are obsolete. Maintenance varies from poor to excellent, but instances of poor maintenance are few and are scattered. Dublin's building inspector reports few code violations as of early 1984. Most violations reported stem from landlord/tenant conflicts.

Dublin offers a somewhat narrower range of housing prices than other Tri-Valley communities. Because it is a new community, there are no modest cottages remaining from a "pre-commuter" era available now to low income households. Because Dublin's initial subdivisions were moderately priced, developers have been slow to add luxury homes. However, Dublin's western hills offer an environment attractive to higher-priced homes and some are beginning to appear, as are less costly multi-family units elsewhere in the City.

Developments now being completed in Dublin consist mainly of single-family homes that are considerably more expensive than resale units in the city. New homes in three subdivisions surveyed range from $115,000 to $209,000 in May, 1983, while city-wide average resale price in the first quarter of 1983 as reported by the Southern Alameda County Board of Realtors was close to $111,000 (see Table 3-7). As reported by sales representatives, buyers of these new homes seem to be divided evenly among those moving from within the Tri-Valley, from the nine-county Bay Area, and from outside of the Bay Area, with many of those in this last group coming from out of state as corporate transferees. Sales representatives, apartment managers, and public housing officials have all noted a significant increase in the number of transferees beginning in 1982, reflecting new major commercial/industrial development in the Tri-Valley.

TABLE 3-7
TRI-VALLEY SINGLE-FAMILY HOMES:
AVERAGE AND MEDIAN RESALE PRICES,
1ST QUARTER 1983

	Dublin	San Ramon	Pleasanton	Livermore
Average Sales Price, 1st Quarter 1983	$110,831	$154,709	$145,291	$109,538
Median Price, January 1983	$109,225	$154,225	$135,500	$102,225
Median Price, February 1983	$107,060	$142,250	$137,500	$102,896
Median Price, March 1983	$99,900	$138,000	$135,000	103,225
Average Home Value, 1980 U.S. Census	$92,397	na	na	na

Source: Southern Alameda County Board of Realtors

It can be seen that while home prices have risen over the past 4 years, homes in Dublin remain available to a wider range of households than units in other Tri-Valley cities. The median home price for Dublin, when compared with that of San Ramon, and Pleasanton, suggests that there are a greater percentage of resale units available in the $100,000 range, and thus relatively more opportunities for homeownership by moderate income households in Dublin than elsewhere in the area.

Home ownership is out of reach for many area residents, and this fact increases the demand for rental housing. The number of single-family homes offered as rentals boosts Dublin's rental stock significantly. While Dublin's housing stock includes only 356 multi-family units, at least 950 additional units, all single-family, were rented out in 1979. Counting multi and single family units, Dublin's rental housing stock included 988, or 23 percent, of the City's housing units, as compared with 44 percent for the nine-county Bay Area, according to the 1980 Census.

The 1980 Census reported slightly over 85 percent of Dublin's housing units as having 3 or 4 bedrooms, with the breakdown by occupancy and tenure as follows:

TABLE 3-8
1980 HOUSING UNITS BY NUMBER OF BEDROOMS, OCCUPANCY STATUS, AND TENURE

	Total	Total Occupied	Renter Occupied
None	5	5	5
1	118	118	97
2	269	239	196
3	2,045	1,926	428
4	1,495	1,469	218
5 or more	201	197	1
TOTAL	4,133	3,954	945

Source: 1980 U.S. Census.

3.4.2 SUBSIDIZED HOUSING IN DUBLIN AND THE TRI-VALLEY

In addition to the market rate housing units in Dublin, Livermore and Pleasanton, some form of subsidized housing exists in each of the three cities (See Table 3-9).

In Dublin, the Pleasanton Housing Authority owns and manages Arroyo Vista, a 150-unit housing complex for low income families on the site of the former Komandorski Village. The Arroyo Vista project was approved by a two-thirds majority in a vote in the unincorporated area of Alameda County under Article 34 of the California Constitution as required for publicly owned subsidized housing.

Applicants for Arroyo Vista are selected on the basis of housing authority policies that make income the primary criterion. Local applicants are given preference. Local is defined by the Housing Authority as currently living or working in Dublin or Pleasanton. Numerous applications have been received from families being transferred to the area.

Most Arroyo Vista tenants and applicants are young families from Dublin and Pleasanton with preschool-age children. The majority of requests received by the housing authority are for two-bedroom units, suggesting that the average household size at Arroyo Vista is close to that in Dublin as a whole. Racially, the population of Arroyo Vista is more diverse than that of the City, with 60 percent Caucasian tenants, 22 percent Hispanic, 11 percent Asian, 6 percent Black, and 1 percent American Indian.

Other subsidized housing in Dublin is available through two Section 8 programs. Section 8 new construction funds were used in the construction of The Springs apartments, a 176-unit complex including 36 subsidized units. There is a short-term waiting list continuously maintained for the Section 8 units at The Springs, and turnover is very low. The Section 8 certificate program for Dublin is administered by the Alameda County Housing Authority. Currently, the Housing Authority contracts for 19 Section 8 units in Dublin. According to a representative of the County Housing Authority, applications for certificates by Dublin residents are few, and Dublin is the Alameda County city with the least participation in the Section 8 certificate program.

TABLE 3-9
SUBSIDIZED HOUSING IN THE LIVERMORE/AMADOR VALLEY, 1983

City	Complex	Total (# of Units)	Unit Size (# of Bedrooms)	Age Group of Tenants	Type Rent Subsidy
Dublin	Arroyo Vista (Pleasanton Housing Authority)	150 (85 complete as of 6/83)	16 - 1's 78 - 2's 32 - 3's 24 - 4's 8 - Hdcp.	Elderly Family Handicapped	Q.I.
Dublin	The Springs	176 (36 subsidized)	7 - 1's 29 - 2's 3 - Hdcp.	Elderly Family Handicapped	Q.I.
Livermore	Hillcrest Gardens	54	28 - Studio 26 - 1's	Elderly Handicapped	Q.I. S.S.
Livermore	Leahy Square (Livermore Housing Authority)	125	12 - 1's 48 - 2's 45 - 3's 18 - 4's 2 - 5's	Family Elderly Handicapped	Q.I.
Livermore	Livermore Gardens	96	56 - 2's 32 - 3's 8 - 4's	Family	Q.I. S.S.
Livermore	Meadowbrook	47	20 - 1's 22 - 2's 3 - 3's 2 - Hdcp.	Elderly Family Handicapped	Q.I.
Livermore	Vineyard Village	74	74 - 1's 8 - Hdcp.	Elderly Handicapped	Q.I.
Pleasanton	Kottinger Place	50	32 - Studio 16 - 1's 2 - 2's	Elderly Handicapped	Q.I.
Pleasanton	Pleasanton Gardens	39	19 - Studio 20 - 1's	Elderly Handicapped	S.S.
Pleasanton	Pleasanton Greens	131	31 - 1's 66 - 2's 34 - 3's	Elderly Family Handicapped	S.S.

Q.I. = 25 percent of income
S.S. = Sliding Scale
Source: Blayney-Dyett survey, May, 1983

3.4.3 HOUSING SERVICES AVAILABLE TO DUBLIN RESIDENTS

For those in need of housing counseling or emergency shelter, a variety of services exist (see Table 3-10). Providers of housing services interviewed for the Housing Element feel that their programs would be more effective if area residents were better informed about available housing services and resources.

TABLE 3-10
TRI-VALLEY HOUSING SERVICES

For Seniors	Alameda County Department of Aging - housing services for seniors, Hayward.
General Advisory and Counseling Service, Shared Housing Placement	ECHO Housing Assistance - Housing advisory Services, discrimination investigation, shared housing placement, mediation services. Free to Southern Alameda County Residents, Livermore.
Emergency Shelter	Emergency Fund Center - Emergency shelter and health services, free to all, Livermore. Good Samaritan Family Crisis Center - Emergency shelter for low income area residents, Livermore. Emergency Shelter Program, Inc. - Temporary shelter for women and children, with meals provided. Also education, and mental health and counseling services, Hayward. Tri-Valley Haven for Women - Housing for victims of domestic violence and rape. Information and referral service, counseling, advocacy, Livermore. Buenas Vidas Ranch - Emergency Housing for youth ages 10 to 19 years, Livermore

Source: Valley Human Services Directory, City of Pleasanton

3.5 EVALUATION OF HOUSING NEED

3.5.1 OVERVIEW OF HOUSING AFFORDABILITY AND NEED ISSUES

Given the limited amount of undeveloped land remaining in Dublin and the extent of planned commercial and industrial growth in the Tri-Valley area, it can be reasonably assumed that there will be demand for as many units as can be produced in the city. At issue, then, are the types of units to be produced, primarily in relation to density, tenure, and cost.

General Plan policies will result in the production of more housing units at higher densities than could be expected if zoning based on the Alameda County General Plan at the time of incorporation were to continue. Housing construction in Dublin will exceed "projected need" as included in Bay Area Regional Housing Needs Determination by over 80 percent. However, needs by income category as determined by ABAG and accepted by the City will likely not be met. The major constraint on production of below-market rate units is the lack of public funds devoted to that purpose.

While Dublin has had and will continue to have relatively affordable homes for the Tri-Valley area, current market conditions make production of units affordable to even moderate income households a challenge. Using a method developed by the Bay Area Council, assuming the traditional 25 percent of income spent for housing, the maximum affordable home price for a moderate income Dublin household is $75,000. Few if any units are currently being built at or below that price. For example, while a recent proposal for a "mini-condominium" project initially proposed units priced at $60,000 - $70,000, approval has been made contingent on density reductions and provision of some townhouse units, raising expected unit prices to the $65,000 - $130,000 range.

New higher cost units in Dublin are selling, indicating that households with higher incomes are moving into the City. Some households are able to purchase homes which, according to the formula on page 22, they cannot afford because they purchased homes when home prices and interest rates were low and they now have assets that enable them to "move up" into houses which they would not be able to afford on their incomes alone. Renters, who have no equity from a current home, have much more difficulty purchasing a first unit. The relatively low cost of renting and absence of a requirement of a large down payment makes rentals an important source of affordable market rate housing.

3.5.2 ASSOCIATION OF BAY AREA GOVERNMENTS' (ABAG) HOUSING NEEDS DETERMINATION

Dublin's regional fair share allocation is presented in Housing Needs Determinations - San Francisco Bay Region (July 1983). Needs determinations have been prepared for the nine Bay Area counties, their incorporated cities, and the total unincorporated area for each county.

Existing Need represents the number of additional units a jurisdiction would have provided in 1980 in order to have a housing market in "better" supply-demand balance based on the "optimum vacancy rate." According to ABAG, Dublin's "existing need" in 1980 was 296 units. The "existing need" figure is, in effect, an analysis of the city's housing situation, reflecting the extent of unmet housing demand. "Existing need" is included in "projected need."

Projected Need is the total number of units needed to accommodate anticipated growth in the city and provide for a desirable vacancy rate. The "projected need" figure is the number of additional units that would ideally be developed in the City by 1990, based on the household projections developed by ABAG and presented in its Projections '83. Household projections reflect the distribution of employment opportunities, availability of suitable sites, and commuting patterns, although no detailed information is presented by ABAG to show how the figures were derived. ABAG's determination of Dublin's "projected need" is 1,956 housing units.

Projected Housing Need by Type and Tenure is one of the factors that must be taken into account in the determination of the regional need for housing as required by state law. ABAG presents "housing need by type and by tenure" in two separate sets of tables. Distribution by type and tenure rests on the assumption that "the relative distribution of housing would be approximately that of the 1980 Census" (ABAG, p.17). Using this assumption, ABAG has projected a need for 1,794 single family units (92%), 162 multi family units (8%), and no mobile homes. ABAG projects a need for 1,485 owner-occupied units (76%) and 471 rental units.

Projected Need by Income Category is not a continuation of current patterns but rather a figure that includes a redistribution of households by income category throughout the region. The objective of the redistribution is to "avoid further impaction of localities with relatively high proportions of lower income households" (Government Code Section 65584). To generate the figures, ABAG averaged existing city percentages in each income category with the existing county and regional percentages. For example, to derive Dublin's projected need for very low income households, ABAG averaged Dublin's existing percentage of very low income households (9 percent) with Alameda County's percentage of very low income households (28 percent) and the regional percentage (23 percent), to come up with a projected need for 20% of units for very low income households (9+28+23=60; 60/3=20).

Median household income as reported by the Census and definitions of income grouping established by the U.S. Department of Housing and Urban Development form the basis of ABAG's calculations. Existing distribution of households by income category is presented in addition to "projected housing need by income category."

Planned and projected units will produce a more diverse mix of housing types than has previously been available in Dublin, which means greater opportunity for production of affordable units. The number of rental units that will be developed cannot be projected, since the division of multi family units between condominiums and rental units is not known. However, with 2,600 multi-family units anticipated, the City will meet the projected need for 471 additional rental units if only 18 percent are rental.

ABAG presents "projected need by income category" as both an absolute number of units and a percentage of units in each income grouping. It is very unlikely that 34 percent of the units produced in Dublin over the next ten years could be made affordable to low and very low income households. This percentage seems particularly unrealistic in light of the extremely limited availability of public subsidies for housing, which would be necessary for production of affordable units at such a large scale.

TABLE 3-11
DUBLIN HOUSEHOLDS:
DISTRIBUTION BY INCOME CATEGORY, 1980
AND ABAG PROJECTED NEED

	Income Categories			
	Very Low	Low	Moderate	Above Moderate
Household income by percent distribution, 1980 Census	9%	11%	26%	54%
Projected need for housing units by income category (ABAG),1983	391	274	450	841
Desired distribution of households by income category (ABAG),1983	20%	14%	23%	43%

ABAG's regional redistribution of households by income category would result in more than double the percentage of very low income households in Dublin with relatively slight changes in the percentages of low and moderate income households.

The total "projected need" for Dublin represents slightly more than the number of units currently approved or under consideration by the City. Comparing ABAG's total "projected need" figure of 1,956 to the 3,700 total additional units expected under General Plan policies, it can be seen that the demand for housing units in Dublin as determined by ABAG will be more than satisfied by anticipated construction. (See Table 3-12).

TABLE 3-12
CITY OF DUBLIN: ABILITY TO
MEET ABAG PROJECTED NEEDS, 1980-1990

	Buildout Under General Plan Policies
Existing Units, May, 1983	4,428
Units Approved or Under Consideraton, November, 1983	1,800
Anticipated Units on Currently Unsubdivided Land	1,900
Total Additional Units	3,700
Units in Excess of ABAG Projected Need	1,744
Percent in Excess of ABAG Projected Need	89%

Planned and projected units will produce a more diverse mix of housing types than has previously been available in Dublin, which means greater opportunity for production of affordable units. The number of rental units that will be developed cannot be projected, since the division of multi family units beteen condominiums and rental units is not known. However, with 2,600 multi-family units anticipated, the city will meet the projected need for 471 additional rental units if only 18 percent are rental.

ABAG presents "projected need by income category" as both an absolute number of units and a percentage of units in each income grouping. It is very unlikely that 34 percent of the units produced in Dublin over the next ten years could be made affordable to low and very low income households. This percentage seems particularly unrealistic in light of the extremely limited availability of public subsidies for housing, which would be necessary for production of affordable units at such a large scale.

The City of Dublin accepted the Housing Needs Determination after the legal comment period following issuance of the ABAG document in July, 1983. The action by the City does not indicate adoption of the ABAG figures as the City's housing goals, but rather acceptance of the figures as accurately reflecting the City's housing needs.

Definitions of Income Categories for Dublin. Discussion of housing needs refer to households of "low," "moderate," or "above moderate" income. These terms are precisely defined in state law, and establish the categories used in determining eligibility of housing consumers to a variety of housing programs, as well as availability of public funds and assistance to housing providers. State statute bases the definitions on a household of four, and does not relate income definitions to different household sizes for most purposes.

In 1979, the most recent year for which income data for Dublin households is available, median household income in the City was 105 percent of the Five County San Francisco Area Standard Metropolitan Statistical Area (SMSA) median as reported by U.S. Housing and Urban Development (HUD). To update these figures, the Housing Element assumes that the same relationship prevailed in 1983, and uses available data to derive a 1983 median Dublin household income of $33,180.

Income categories for Dublin are defined as follows based on derived Dublin income of $33,180. Explanations of each income grouping is as per Chapter 6.5 (commencing with Section 6910) of Title 25 of the California Administrative Code.

Very low income - $16,590 and below.
Less than 50% of the area or county median income.
Other lower income - $16,590 - $26,544
Between 51% and 80% of the area or county median income.
Lower income - $26,544 and below
Less than or equal to 80% of the area or county median income (i.e., combination of very low income and other low income).
Moderate income - $26,544 - $39,816
Between 81% and 120% of the area or county median income.
Above moderate income - $39,816 and above
Above 120% of the area or county median income.

Determination of Moderate Income Unit Price. While State law establishes definitions for different income categories, it does not define affordability for the purposes of housing programs. Determination of a unit price affordable to moderate income households is important, as the State requires jurisdictions give developers density bonuses if 25 percent of the units in a project are affordable to low and moderate income households.

The following method for determining housing cost affordable by a moderate income household was developed by the Bay Area Council.[5] This approach takes into account likely interest rates and loan periods, but does not consider assets of the household. It should be recognized that many moderate income households live in homes which they "should not" be able to afford, as they were purchased with large down payments or when home prices and mortgage rates were lower. The advantage such households have in moving to a new home is clear. The flip side of the coin reveals the difficulties faced by first time home-buyers of moderate income, without similar assets.

DETERMINATION OF THE MODERATE-INCOME UNIT PRICE

a. Moderate-income definition (120% of median) = $39,816

b. $39,816 x .9 = $35,834 income to be used in determining price. In order to establish a practical range of incomes able to afford a specific price for a unit, it must be affordable to those having 90 percent of the calculated income. Without this "window" only those whose income was $39,816 or more would qualify.

c. $\frac{\$35,834/12}{4}$ = $746, maximum monthly mortgage payment, or maximum rent payment at 25 % of gross income. (Utilities and insurance not included).

d. $746 payment at 13% fixed rate, 30-year term = $67,438 mortgage

e. $\frac{\$67,438}{.9 \text{ (downpayment adjustment)}}$ = $74,931 moderate income affordable purchase price assuming 10% downpayment

3.5.3 IMMEDIATE HOUSING NEED

State law requires that the Housing Element include an identification and analysis of existing and projected housing needs (Government Code 65583). Indicators of need include level of payment compared to ability to pay, analysis of special housing needs, vacancy and overcrowding. While data regarding overcrowding and "overpayment" can be readily assembled and presented, such figures need to be qualified before they are "translated" into existing need.

By long standing rule of thumb, overpayment occurs when a household pays more than 25 percent of monthly income for housing, although some of the recent literature uses 30 percent. Clearly, higher income households are more able to spend a greater portion of income on housing without sacrificing basic needs than are low income households. However, households that are technically "overpaying" are not necessarily in immediate need of affordable units. Put another way, there is no evidence to suggest that all (or even a majority) of overpaying households in Dublin or the region would relocate were affordable housing available in the City. The fact that those households identified by the Census as overpaying are living in Dublin indicates the ability to pay.

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[5] Bay Area Council, Proposal for a San Mateo County Affordable Housing Incentive Program, June 1983, prepared by the Bay Area Council and submitted to the San Mateo County Board of Supervisors.

The impossibility of pairing households and housing units raises a basic difficulty in solving overcrowding and overpayment problems. For example, while production of additional large units would surely provide the opportunity for large households to be adequately housed, it does not guarantee it. If it can be supposed that households living in overcrowded conditions are those with the least housing choice because of limited ability to pay, it becomes even less likely that the production of market rate large units would alleviate overcrowding in Dublin.

The policies and programs of the Housing Element are not likely to reduce the number of overpaying households in the City. If successful the housing program will limit the increases in the incidences of overpayment and overcrowding in Dublin.

Waiting Lists for Subsidized Housing. One index of immediate need is the length of waiting lists for subsidized housing in the Tri-Valley. Households on waiting lists are in need of affordable housing and actively seeking to relocate. Table 3-13 reports on waiting lists for subsidized housing. There is probably some overlap, with a number of households on lists for more than one housing complex.

Level of Payment as a Function of Ability to Pay. Tables 3-14 and 15 compare level of payment for housing to ability to pay. As discussed above, overpayment has traditionally been defined as expenditure of over 25 percent of income on housing. As can be seen from Table 3-16, over 1,300 Dublin households, occupants of 33 percent of the City's housing units, spend more than 25 percent of their income on housing. This figure suggests one of two possible interpretations—that there is a major overpayment problem in Dublin, or that the accepted standard used to define overpayment does not hold true in today's housing market.

The latter interpretation seems to have validity, as an increasing number of households make the choice to spend a relatively large portion of household income on housing. Such choices are available to some households and not to others; clearly the fact that no households that reported 1979 earnings of less than $5,000 pay less than 33 percent of income for housing indicates a group of households that are overpaying for housing; for those households, housing expenditures "take away" from expenditures for other basic needs.

TABLE 3-13
WAITING LISTS FOR SUBSIDIZED HOUSING[a]

City	Complex	On Waiting List (June 1983) From Dublin	From Pleasanton	From Livermore
Dublin	Arroyo Vista (Pleasanton Housing Authority)	4 Elderly 86 Family	9 Elderly 88 Family	N/A
Dublin	The Springs	Long term waiting list not maintained		
Pleasanton	Kottinger Place (Pleasanton Housing Authority)	N/A	29 Elderly	N/A
Pleasanton	Pleasanton Gardens	N/A	27 Elderly	N/A
Pleasanton	Pleasanton Greens	N/A	57 Elderly	N/A
Livermore	Hillcrest Gardens	Estimated at 110, almost all from Livermore; no breakdown available		
Livermore	Leahy Square (Livermore Housing Authority)	Estimated at 150; no breakdown available		
Livermore	Livermore Gardens	Estmated at 50; no breakdown available		
Livermore	Meadowbrook	70 on waiting list; no breakdown available		
Livermore	Vineyard Village	Estimated at 85 elderly, 1 disabled; no breakdown available		

aDescriptions of housing complexes are in Table 3-9.

Source: Blayney-Dyett telephone survey, Spring, 1983

TABLE 3-14
MONTHLY OWNERSHIP COST AS A PERCENTAGE OF INCOME
(Selected Noncondominium Units - City of Dublin)

Income Level	Less Than $5,000		$5,000 to $9,999		$10,000 to $14,999		$15,000 to $19,999		$20,000 or more	
Households Surveyed	50		116		131		337		2,185	
Portion of Income Spent on Housing	Households	Percent Distribution	Households	Percent Distribution	Households	Percent Distribution	Households	Percent Distribution	Households	Percent Distribution
Less Than 20%			13	11.2	35	26.7	88	26.0	1,248	57.0
20%-24%			5	4.3	32	24.4	68	20.2	327	14.9
25%-34%			24	20.7	25	19.1	84	25.0	437	20.0
35% or more	50	100	74	63.8	39	29.8	97	28.8	173	8.1

Source: 1980 U.S. Census

TABLE 3-15
MONTHLY GROSS RENT AS A PERCENTAGE OF INCOME
(Selected Units - City of Dublin)

Income Level	Less Than $5,000		$5,000 to $9,999		$10,000 to $14,999		$15,000 to $19,999		$20,000 or more	
Households Surveyed	50		116		131		337		2,185	
Portion of Income Spent on Housing	Households	Percent Distribution	Households	Percent Distribution	Households	Percent Distribution	Households	Percent Distribution	Households	Percent Distribution
Less Than 20%			5	5.8	35	24.0	29	16.6	238	52.0
20%-24%			14	16.3	7	4.7	21	12.0	124	27.0
25%-34%			15	17.4	18	12.3	74	42.3	82	17.9
35% or more	57	76	52	60.5	86	60.0	51	29.1	8	1.7
Not Completed	18	24	—	—	—	—	—	—	—	—

Source: 1980 U.S. Census

TABLE 3-16
DUBLIN HOUSEHOLDS SPENDING 25 PERCENT OR MORE OF INCOME ON HOUSING, 1980

	Percent of Income Spent on Housing	
	25%-35%	35%+
Renting Households		
Total	190	100
Percent of All Renting Households	20%	10%
Home-Owning Households		
Total	604	459
Percent of All Home-Owning Households	20%	15%

Source: 1980 U.S. Census; extrapolation by Blayney-Dyett.

Vacancy rates. Vacancy rates, a commonly used indicator of the adequacy of the existing housing stock in meeting market area needs, are particularly difficult to obtain for Dublin because several of the customary providers of vacancy data have not conducted surveys in the city. The 1980 census reported vacancy rates as follows:

VACANCIES - DUBLIN HOUSING UNITS, 1980

	Vacant Units	Percent of Total Units
Vacant for Sale	28	.9
Vacant for Rent	17	1.8

The California Department of Housing and Community Development reports that in California a rental vacancy rate of six percent and a for sale vacancy rate of two percent are desirable to provide for the number of moves generally made by households in a period of a year. The for sale and for rent vacancy rates as reported by the 1980 Census are considerably lower than these standards. A sample survey of Dublin apartments conducted in mid-1983 by Blayney-Dyett found virtually no vacancies in Dublin apartments, with waiting lists typical.

Overcrowding. An overcrowded housing unit is defined as one in which there are more than 1.01 persons per room. The 1980 Census reported 109 overcrowded units in Dublin, 2.6 percent of the City's housing units. While overcrowding has been declining statewide since the 1960's, the 7.4 percent overcrowding in California reported in 1980 represents a substantially higher incidence of overcrowding statewide than in the City.

3.5.4 SPECIAL HOUSING NEEDS

Housing for the Elderly. The 1980 Census reported 429 Dublin residents over age 62, representing 3.2 percent of the City's population, considerably below the nine-county Bay Area total of 12.6 percent. Unfortunately, data is not available which indicates what portion of Dublin's elderly households are overpaying. The generally low incidence of overcrowded and unsafe housing units city-wide suggests that these are not problems for the elderly or other groups with special housing needs. There is evidence for a need for small units in Dublin, desirable for both their lower cost and convenience to small households, many of which are elderly. While the Census reported 29 percent (1,210) of Dublin's households having only 1 or 2 persons, only 392 1980 housing units, or 9.5 percent of the City's housing stock, were studio or one or two bedroom units.

Cost is not the only housing concern of the elderly. Access to services and facilities is another. The shopping opportunities in Dublin's relatively compact downtown are attractive to those with mobility problems, but may be offset by the minimal public transit within the City.

Below market rate elderly households have greater opportunities to find subsidized housing in the Tri-Valley area then do families, attributable to the relative ease of gaining acceptance for affordable housing when it is provided for seniors instead of families with children. Five of the area's subsidized housing complexes are for elderly and disabled households only. One type of housing for the elderly which is not available in the Tri-Valley is congregate housing, which provides a level of independence and privacy between individual units or senior complexes and nursing homes or other institutions.

Housing Accessible to Disabled Persons. Table 3-17 reports on the number of persons in Dublin and the Valley corridor with major disabling conditions. Some unavoidable double-counting may have resulted in slightly inflated totals.

While those conditions surveyed are not correlated with special housing needs, it may be assumed that none of the categories of mental disorders and only some of the categories of physical disorders represent populations in need of accessible housing. Taken together, the two categories likely to include the greatest portion of people with special housing needs "Amputees and Others" and "Other Physical Disorders" total 803, or 5.9 percent of Dublin's population. This figure can be compared with the 1980 Census counts of those with workplace and public transportation disabilities, totalling 722, or 5.3 percent of the City's residents. The figure double counts an unknown number of people who have both workplace and public transportation disabilities, and includes an unknown number of disabled persons who do not have special housing needs. In sum, 5 percent represents the high end of an estimated portion of Dublin's households with special housing needs relating to disabling conditions.

TABLE 3-17
PERSONS WITH MAJOR DISABLING CONDITIONS:
VALLEYS CORRIDOR AND DUBLIN, 1982

	Valleys Corridor[a]	Dublin[b]	
	Number	Number	Percent of City Pop.
Total Disabling Conditions	25,199	2,219	16.4
Total Sensory Disorders	2,418	212	1.5
Blind	176	15	.1
Visually Impaired	453	39	.3
Deaf	554	49	.4
Hearing Impaired	1,235	109	.8
Total Physical Disorders	12,373	1,088	8.1
Amput. and Others[c]	4,713	415	3.1
Epilepsy	252	22	.2
Heart Disease	1,638	144	1.1
Speech Impaired	327	29	.2
Digestion Disorder	1,033	90	.7
Other Physical Disordersc	4,410	388	2.9
Total Mental Disorders	10,408	916	6.8
Mental Illness	907	80	.6
Mentally Retarded	1,588	140	1.0
Drug and Alcohol	6,779	596	4.4
Other Character Disorders	1,134	100	.7

[a]"Valleys Corridor" includes the cities and Census designated places of Alamo, Danville, San Ramon, Dublin, Pleasanton, and Livermore, total 1980 population 154,312.

[b]Assumes even distribution of disabled population throughout Valleys Corridor.

[c]Populations most likely to have special housing needs, totaling 803, 5.9 percent of Dublin's population.

Source: Valleys Corridor Project, United Way of the Bay Area: extrapolation by Blayney-Dyett.

Unfortunately, no data is available on the ability of disabled households to pay for housing. Like low income elderly households, below-market rate disabled households have a relatively great opportunity to obtain subsidized housing somewhere in the Tri-Valley.

For market-rate households, finding accessible housing is the challenge. Information on the number of accessible units currently in the City is not available. The bulk of Dublin's housing units, those constructed by Volk-McLain in the 1960's, are single story structures. These are, and will probably continue to be, the units most easily adapted for accessibility. Expenses incurred due to remodeling in order to permit access by elderly or disabled persons are tax deductible.

Needs of Female Headed Households. The 1980 Census reported 222 female headed households with children present, 5.3 percent of the City's population, as compared with almost 10 percent reported for the nine-county Bay Area. The number of female headed households with children living below poverty is 22, 0.6 percent of all Dublin households. The corresponding figure for the nine-county Bay Area is 44,061, or 2.2 percent of all households.

Other Groups with Special Housing Needs. Two groups often identified as having special housing needs are large families and farmworker households. There is no evidence that either of these groups represent a significant number of households with housing problems in Dublin.

Though data is not available that relates family size to ability to pay, the frequency of large families living in unsuitable housing units would presumably be evident by a high incidence of overcrowding. As overcrowding is reported to occur in less than 3 percent of Dublin's housing units, it appears that large families are not facing severe housing problems in the City.

The ABAG housing needs determination does not present figures relating to farm-workers' housing needs. The report does note that there will be a decline in the number of farmworker households in the Bay Area, and that the need for additional housing for farmworkers in the region is not demonstrable. Given this general projection, along with the limited extent of agricultural activities other than grazing in the Dublin area, farmworker household needs are not considered in this Housing Element.

3.5.5 JOBS/HOUSING BALANCE

State law requires that the Housing Element include an assessment of population and employment trends. In Government Code Section 65913.1, State Statute mandates that:

> A city, county, or city and county shall designate and zone sufficient vacant land for residential use with appropriate standards, in relation to zoning for nonresidential use, and in relation to growth projections of the General Plan to meet housing needs as identified in the General Plan.

The jobs/housing balance, reflecting the relationship between persons employed and employed persons residing in a given jurisdiction, is included in the Housing Element to satisfy the State requirement.

In 1979, 5,992 Dublin residents, 1.45 persons per household, a slightly lower average than that reported Valley-wide, were employed. Using 1980 Alameda County data on commercial and industrial floor area, we estimate that there are about 6,000 jobs in Dublin, roughly the same number as employed residents. At build-out the Primary Planning Area is expected to have 8,400 jobs and 8,100 housing units. If the number of workers per household continues at 1.45, 11,745 employed persons would be housed in the city, indicating a net out-commute.

When anticipated development of the extended planning area is included in a job/housing balance calculation for Dublin a different picture emerges. While the General Plan designations for the extended planning area are only schematic, the proposals suggest that as many as 21,000 jobs and 3,800 housing units could exist there. Adding these figures to the total anticipated jobs and housing units for the primary planning area results in a projection of 29,400 total jobs and 17,300 employed residents, yielding a jobs to employed residents ratio of 1.7:1.

ABAG's preliminary 1983 projections anticipate 253,000 Tri-Valley residents by the year 2000 with Las Positas new town included. This would result in 90,000 housing units and 130,500 employed residents (at 1.45 per unit). ABAG projects 132,200 jobs in the Tri-Valley, so the ratio of jobs to employed residents would be 1:1. If, however, all of the 129,615 "planned jobs" listed in Table 3-1 materialize and are added to the 50,400 jobs existing in 1980, the job total will be 180,000 instead of 132,000 and the jobs to employed residents ratio will rise to 1.4:1 unless housing construction also exceeds ABAG's projection. The ABAG projections do not include development in the Dublin extended planning area, which would increase the imbalance between houses and jobs Valley-wide. With 201,000 jobs (including 21,000 in the Dublin Extended Planning Area) and the 90,000 housing units projected by ABAG the jobs/employed residents ratio would be 1.49:1 assuming there are 1.45 employed persons per household.

Valley-wide, employment growth is likely to outpace housing additions. To create jobs/housing balance; i.e., the same number of jobs as resident workers, regardless of commute pattern, residential development will have to exceed planned levels. Using the ABAG employment projection, which is lower than the total "planned jobs" reported by the Alameda County Planning Department, 98,000 housing units would be needed to achieve Valley-wide jobs/housing balance, but with the "planned jobs" figure, 133,000 units would be required. The higher figure exceeds the 1980 stock by 83,000 units. To reach this total would require housing construction equivalent to 20 communities with the number of dwelling units presently in Dublin.

Valley-wide "fair shares" are essential if jobs-housing balance is to be attained because each jurisdiction tends to act in its perceived fiscal self-interest. Dublin, with lower per household income than Pleasanton, cannot be expected to accept more market minimum housing so that Pleasanton can devote similarly situated land to employment if both cities believe jobs to be more beneficial.

3.6 IDENTIFICATION OF SITES AVAILABLE FOR THE DEVELOPMENT OF HOUSING

Only one large undeveloped site zoned for residential development remains in the Dublin primary planning area. Fortunately, several sites previously reserved for other purposes are expected to become available for development within the housing program time frame of five years. These are school sites, two of which are currently developed as schools with parks on the grounds and one, the Dolan site, which has never been developed for school use.

All of the sites except for the largest, an approximately 80 acre area west of Dougherty Road and north of Amador Valley Boulevard, are infill sites. The Dougherty Road site is adjacent to another large site for which townhouse-type development has been approved. Services will be provided to new development by the Dublin San Ramon Services District (DSRSD) and the Dublin police and (DSRSD) fire departments.

3.6.1 SITES CURRENTLY ZONED FOR RESIDENTIAL USE

The sites listed in Table 3-18 and identified in Figure 3-1 are currently zoned for residential development. As the table shows, none (with the possible exception of the two small sites located in planned development (PD) districts are in zoning districts that permit lots smaller than 5,000 square feet. Table 3-18 includes three sites that are outside the incorporated area.

3.6.2 SITES NOT CURRENTLY DESIGNATED FOR RESIDENTIAL USE

Table 3-19 lists sites not currently designated for residential use, but with potential for the development of housing. These range from school sites surrounded by residential development to the downtown intensification area, where mixed commercial/residential buildings might include apartments or condominiums.

Murray School District intends to sell the entire Dolan site and all or a portion of the Fallon site. The Frederiksen school is scheduled for closure at the end of the 1985 school year. The acreages reported available on the Fallon and Frederiksen sites are based on continuation of neighborhood parks on both sites and school District disposition of the entire properties.

TABLE 3-18
SITES AVAILABLE FOR DEVELOPMENT OF HOUSING
CURRENTLY ZONED FOR RESIDENTIAL USE

Site Location	Number On Map	Approximate Acreage	Current Zoning
East of Dougherty Hills, north of Amador Valley Boulevard to County line	1	79a	R-1-B-Eb
Pleasanton Housing Authority property, southwest portion of site	2	5	PD
South of Alcosta Boulevard, east of I-680	3	2	
South side of Betlen Drive north of Prow Way	4	9	R-1-B-E
Abutting approved Neilsen tentative map multi-family north of Hansen Road	5	4	—
Southwest of approved Neilsen tentative map, north of Valley Christian Center	6	7	—
Abutting north property line of Valley Christian Center	7	12	—

aThe almost 100 acres of the total site includes a designated park and Alamo Creek. Estimated area available for residential development is 79 acres.

bR-1-B-E allows for sites from 5,000-7,500 square feet.

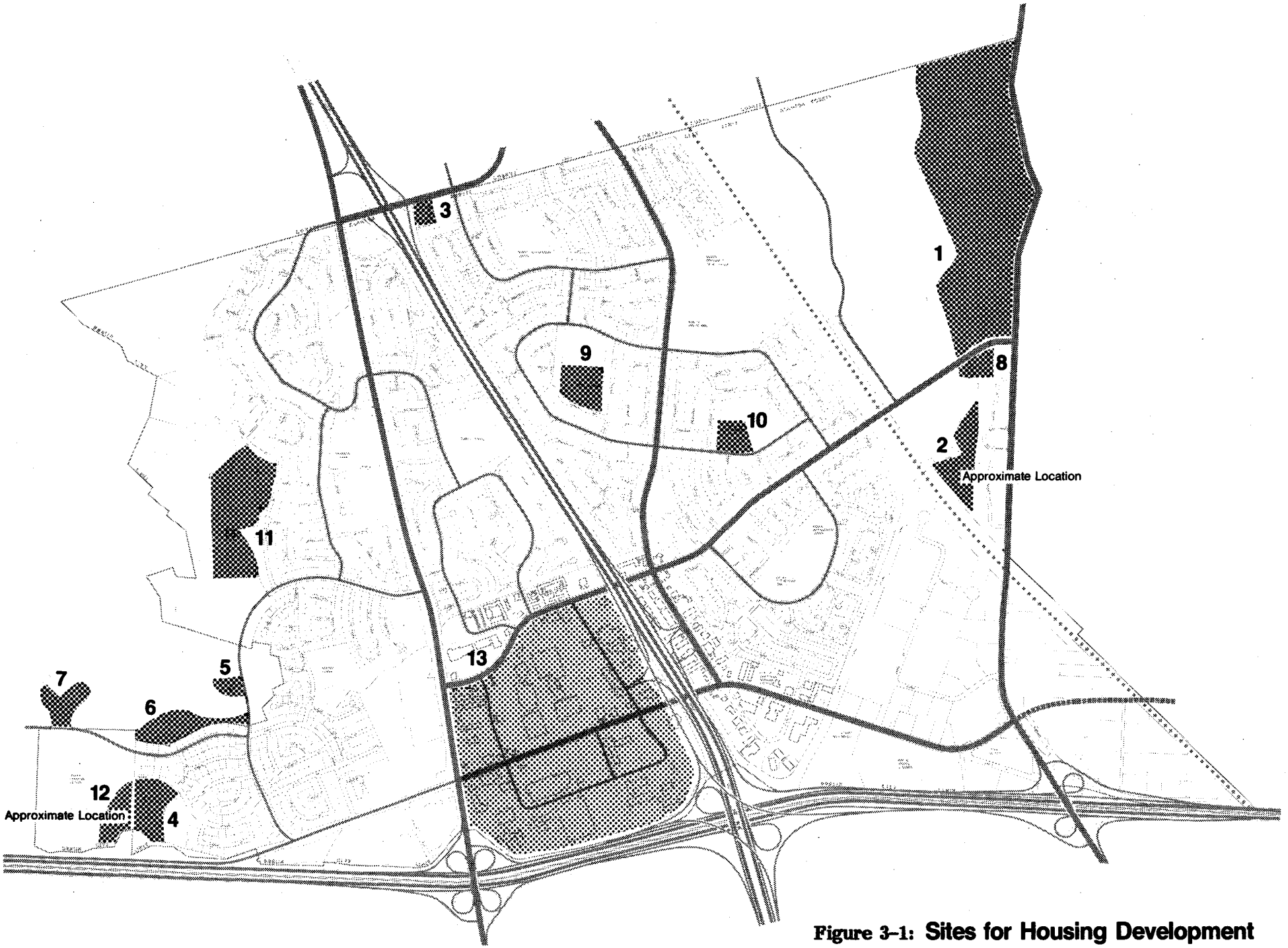

Figure 3-1: Sites for Housing Development

TABLE 3-19
SITES AVAILABLE FOR DEVELOPMENT OF HOUSING NOT CURRENTLY DESIGNATED FOR RESIDENTIAL USE

Site Location	Number On Map	Approximate Acreage	Current Zoning
West of Dougherty Road, south of Amador Valley Boulevard	8	2	C-N Neighborhood Business
Fallon School	9	8	R-1-B-E
Frederiksen School	10	7	R-1[a]
Dolan School Site	11	27	R-1-B-E
Valley Christian Center property—southeast portion	12	1—12	Agricultural
Downtown Intensification Area	13	—b	Mostly C-1, some M-1, C-2, and PD

[a]Minimum lot size in an R-1 district is 5,000 square feet.

[b]The extent to which residential development is appropriate in the downtown, and the area of future intensification is not known at this time.

3.6.3 SITES FOR THE DEVELOPMENT OF MOBILE HOMES AND MANUFACTURED HOUSING

Opposition to mobile homes and manufactured housing sometimes arises when a landowner proposes mobile home or manufactured housing on an undeveloped parcel in a developed neighborhood of traditional single family detached homes. Such conflict is unlikely in Dublin, where very few subdivided parcels are available for development.

Development of mobile home parks is also unlikely in Dublin. The few large sites available are designated medium density residential (6.0 to 14.0 units per acre) by the General Plan, allowing more intensive use than can be achieved under most mobile home park standards[6]. The strategies of the housing element presented in Section 8

[6]U.S. Department of Housing and Urban Development, Office of Policy Development and Research, Guidelines for Improving the Mobile Home Living Environment, August 1977, p. 7. National average densities are 6 to 7 units per acre.

focus on providing opportunities for multi-family units at medium densities. Such designations remove developer incentive for mobile home parks on undeveloped sites in the primary planning area and will result in production of more units than would mobile home park development. As mentioned in Section 1, opportunities for mobile home park development in the extended planning area should be considered when the Housing Element is updated and when development proposals are reviewed.

3.7 CONSTRAINTS TO THE PRODUCTION OF HOUSING

3.7.1 GOVERNMENTAL CONSTRAINTS

State law requires that the Housing Element "address" and, where appropriate and legally possible, remove governmental constraints to the maintenance, improvement, and development of housing. With 1,619 units approved or under consideration in Dublin, increasing the city's housing stock by 36 percent, it becomes clear that, overall, governmental constraints are not impeding development. However, the level of activity does not indicate whether governmental constraints are increasing housing costs.

Lack of Programs for Subsidized Housing. The major housing problem area is the failure to produce units affordable to low and moderate income households. While several of the strategies outlined in Section 8 of the Housing Element will bring more market-rate housing within the reach of moderate income households, below market-rate households will not be assisted by most of the steps the City is capable of taking.

The primary governmental constraint relative to the production of housing for low income households is the drastic cut-back in federal funds and programs previously available to subsidize housing. For example, Section 8 funds, formerly the main federal housing subsidy program, decreased from $30 billion in fiscal year 1981 to less than $9 billion in fiscal year 1983. The president's proposed budget for fiscal year 1984 included only $514 million in new budget authority for assisted housing under Section 8, to be used for the construction of 10,000 units nationwide for the elderly and handicapped. Dublin's arithmetical share would be half of one unit.

The current federal strategy is to provide assistance to the states through the Block Grant Program, shifting the burden of allocation of a dwindling "pie." As part of Alameda County's "urban county," Dublin is eligible for Community Development Block Grant (CDBG) funds. Though Block Grant funds may not be allocated for housing construction, they may be used for site development and other related costs. Competition for Block Grants is intense, both among jurisdictions and between activities.

Currently, Alameda County nonentitlement cities that are part of the urban county receive a maximum of $250,000 per year. Dublin used its 1982 allocation to assist the Kaleidoscope Center for the developmentally disabled and for Dougherty Road improvements. These allocations indicate the range of deserving uses to which CDBG funds can be put, and suggest that they will not be a major source of housing subsidies.

Existing Zoning. Alameda County zoning, adopted by Dublin after incorporation, designated most of the City for single family residential development. Existing zoning constrains both the total number of units which can be produced and the number of multi-family units constructed, thereby limiting opportunities for the development of affordable housing in Dublin.

Processing and Permit Procedures. None of the land owners, realtors, or developers contacted in the course of the General Planning process cited building code requirements, site improvements, permitting procedures, or other governmental actions as obstacles to the approval and construction of residential developments.

Limited planning staff may have slowed down some permit processing by the City in its first year of operation, but the staff has recently been expanded and should now be able to handle applications and requests without delay.

Development Fees. One often cited constraint is the high cost of development fees and permits. These include fees for sewer and water hookup and park dedication. Fees for a recently approved Dublin townhouse development totalled almost $5,000 per unit. Development fees raise housing cost, diminishing the pool of possible buyers for any given project.

Though high fees act to reduce the rate of residential development, they are essential as means of funding necessary services for new development. Given the choice made by Californians in 1978 when Proposition 13 passed, Dublin (like other jurisdictions) has no practical alternative resources with which to fund basic improvements to serve new residences.

3.7.2 NON-GOVERNMENTAL CONSTRAINTS

The inventory of non-governmental constraints can be separated into two groups: those factors that reduce or slow down housing development, and those that increase housing cost to the consumer. In the first category are possible lack of infrastructural capacity; limited land availability; and competition of different uses for undeveloped land. In the second category fall high and unpredictable interest rates; high land prices; and community opposition to high density housing. There is overlap between categories, as, for example, community opposition to medium and high density housing results in extended delay in development, and eventual resolution of the problem of sewage capacity will doubtless result in increased sewer hookup fees.

Possible Lack of Infrastructural Capacity. The most prominent public facilities issue faced by Dublin and other Tri-Valley cities is limited sewer capacity. Sewage collection and treatment and effluent disposal are provided to Dublin residents and businesses by the Dublin San Ramon Services District (DSRSD), a member of the Livermore Amador Valley Waste Water Management Agency (LAVWMA). DSRSD owns and operates its own sewage treatment plant, while LAVWMA owns an effluent pipeline used by member jurisdictions, DSRSD and the cities of Pleasanton and Livermore.

DSRSD's treatment plant can be expanded to four times its present size, but the LAVWMA pipeline that carries treated effluent through Dublin Canyon to the Bay is nearing capacity. Development of additional LAVWMA capacity in the form of another pipeline in the Valley would require Valley-wide voter approval.

Sewage capacity is allocated by DSRSD through issuance of connection permits. As of Summer 1983, there were approximately 580 outstanding residential permits in Dublin; i.e., permits that have been issued for dwelling units not yet hooked up to the system. At that time an additional 1,700 residential permits remained to be issued to users throughout the District on a first come, first served basis.

With remaining residential development capacity in Dublin alone allowing approximately 3,100 additional units that do not hold permits, it seems probable that pipeline capacity will be reached before Dublin is built out, and that growth will be curtailed, at least temporarily, within 2 to 5 years if additional effluent disposal capacity is not

available. Although a major new system would take 5 to 7 years to construct, minor capacity increases could be implemented soon after authorization, possibly alleviating development constraints during pipeline expansion.

Limited Land Availability. As noted in Section 1, only 167 acres of undeveloped land remain in Dublin outside of commercially zoned sites. Given the strength of the housing market in Dublin, it is likely that more land would be developed were it available in an area served by public facilities and services. With small lots, very few units over twenty years old, and a small number of units needing repair, it is unlikely that redevelopment resulting in more intensive use of presently developed land will occur within the five year time frame of the housing program.

Residential designations have been considered for several commercially zoned sites and rejected. Planning Commission and City Council members chose to retain commercial designations because of concerns regarding traffic and land use compatibility and in recognition of anticipated demand for commercial sites. Mixed commercial/residential uses are allowed in the Downtown Intensification Area.

Competition Among Uses. Closely related to the limited availability of land in Dublin is the tension between competing uses for what limited undeveloped land does exist. For example, in deciding on General Plan designations for the Fallon and Frederiksen school sites, the need for housing was weighed against growing need for recreation facilities as the city's population grows. The resulting plan continues devoting portions of each site to park while designating the remaining acreage for medium density residential development.

In the Extended Planning Area, landowners have already stated their desire for business park development north of I-580 in the vicinity of Tasajara Road. This relatively flat accessible area is unique in the extended planning area for a lack of the topographic constraints that will likely make housing units constructed elsewhere affordable only to households of above-moderate income. Though the Tassajara road area does have the potential for development of affordable housing, especially on County surplus land, the adverse effects of proximity to the new County jail and the freeway combined with the greater profitability of business park development weaken support for residential development.

Interest Rates. Rising interest rates in the 1970's and early 1980's have been a major contributor to high costs for both housing providers and consumers. The dramatic rise in monthly mortgage payments attributable to high interest rates is illustrated in Table 3-20, which compares payments on a $100,000 mortgage at different interest rates and varying terms. In Section 5, $67,400 was established as the maximum mortgage assumable by a moderate income Dublin household, based on a 13% 30 year loan. The $ 100,000 mortgage, however, is necessary for a large number of buyers of Dublin homes.

Lower interest rates increase the number and income range of households that can qualify for mortgages. High monthly payments associated with current interest rates explain why many who purchased homes before the interest rate rise of the 1970's are able to pay for homes that renting households of the same income cannot now afford to purchase. High interest rates are a major factor that makes it much easier to remain a homeowner than to become one for the first time.

TABLE 3-20
SINGLE FAMILY MORTGAGE PAYMENTS
$ 100,000 MORTGAGE

Interest Rate	Term Years	Monthly Payment Principal & Interest
0%	25	333.33
	30	277.78
	35	238.10
	40	208.33
8%	25	771.82
	30	733.77
	35	710.27
	40	695.32
12%	25	1,053.23
	30	1,028.62
	35	1,015.55
	40	1,008.50
16%	25	1,358.89
	30	1,344.76
	35	1,338.47
	40	1,335.65
20%	25	1,678.46
	30	1,671.02
	35	1,668.28
	40	1,667.27

Source: The California Housing Plan 1982, Volume 2, California Department of Housing and Community Development, p.c-26.

Community Opposition to Medium and High Density Housing. Two multi-family residential projects recently proposed in Dublin have been delayed and are finally near approval at reduced density as a consequence of opposition of nearby residents to multi-family dwellings at high densities. Community concerns that have been raised center on noise and traffic impacts, aesthetics and neighborhood character.

Opposition of some Dublin residents to higher density housing has impeded development of a wider variety of housing types than the city has had in the past. Approvals contingent on redesign have meant projects with fewer and larger, more costly units than initially proposed by the developers. Despite density reductions resulting from community sentiment, medium-high density development has been approved in Dublin in 1983.

The General Plan process is intended to set densities that are consistent with accepted design standards and community policies and will not be subject to negotiations when future project designs are submitted.

3.8 HOUSING PROGRAM

3.8.1 SUMMARY OF HOUSING PROGRAM

The housing strategies that together compose Dublin's housing program will result in production of more units and greater variety in unit types than would be acheived if current policies were continued. This increased production is clearly warranted given the significant growth in planned employment in the Tri-Valley within the five-year time frame of the housing program.

Several of the strategies in process of implementation will be accomplished through adoption of the General Plan and a Zoning Ordinance consistent with General Plan policies and designations as required by law. Implementation of other strategies will require City actions in addition to Plan adoption. Still others assume ongoing City efforts based on existing programs. The Housing Element text presents housing strategies in three groups consistent with these distinctions relating to implementation.

Table 3-21 summarizes the housing program strategies and relates them to required program components and City goals. Taken together the strategies increase residentially zoned land in the city and raise permitted residential densities. Higher densities are expected to result in smaller units and lower land cost per unit, so the new designations should expand the housing stock to better fit Dublin's population, recognizing both decreasing household size and increased difficulty in affording single family detached homes.

Quantification of the objectives of the housing program is difficult in some areas and simple in others. Build-out of the City is expected to occur within ten years - perhaps considerably sooner. Approvals have been granted for 1,600 units and a conservative estimate projects construction of half of the City's remaining dwelling units, 950 units, during the next five years. Over 70% of these will be multi-family units.

Given the extremely limited availability of public funds for housing subsidies, the housing program consists of actions feasible for the City (generally without financial obligation) or for private interests. Should public monies become available for housing assistance the City will re-evaluate opportunities for production of affordable units.

The City's housing goals are presented in the next section, followed by housing strategies. Each of the housing strategies is associated with a particular policy objective. Quantified objectives for the individual strategies are included as appropriate.

3.8.2 CITY HOUSING GOALS

The following goals direct the City's housing program. Policy objectives which implement City goals are presented with individual housing strategies.

1. Provide housing of varied types, sizes and prices to meet current and future housing needs of all Dublin residents.

2. Preserve Dublin's existing housing stock in sound condition.

TABLE 3-21
SUMMARY OF HOUSING PROGRAM STRATEGIES RELATED TO CITY GOALS AND HOUSING PROGRAM REQUIREMENTS

Housing program strategies requiring adoption of General Plan and consistent Zoning Ordinance amendments for implementation:

Increase residential densities (C,1)

Designate additional land for residential use (A, C, 1)

Designate land not previously zoned for residential use at higher densities than surrounding neighborhoods (A, 1)

Treat one-bedroom and studio units as equivalent to 75 percent of a housing unit when computing allowable density.

Allow residential development in Downtown Intensification Area (A, C, 1)

Support semi-public institutions in efforts to add affordable housing on their sites (B, 1)

Require a percentage of units in large multi-family projects be rented for a specified period of time (B, 1)

Housing program strategies requiring additional City action for implementation:

Encourage development of second units in existing single family homes (B, 1)

Cooperate with non-profit housing provider to develop below-market rate units (B, 1)

Work with Pleasanton toward establishing a joint housing authority (B, 1, 4)

Encourage development of additional units on Housing Authority land in Dublin (B, 1)

Require evidence of developer effort to receive public financial assistance for the purpose of including below market rate units in proposed projects; assist developers in obtaining information on available programs (B, 1)

Housing program strategies requiring ongoing City effort using existing programs:

Grant 25 percent density bonuses for provision of 25 percent affordable units as required by state law (B, 1)

Promote equal housing opportunity for all Dublin residents and others seeking housing in Dublin (E, 4)

Continue City code enforcement program; aid low income households in obtaining financial assistance for housing rehabilitation (D, 2)

Statutory Housing Program Requirements

The program must:

A. Identify adequate sites for the development of a variety of types of housing for all income levels

B. Assist in the development of adequate housing to meet the needs of low- and moderate-income households

C. Address and, where possible, remove governmental constraints to the maintenance, improvement, and development of housing

D. Conserve and improve the condition of the existing affordable housing stock

E. Promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, or color.

City Housing Goals:

1. Provide housing of varied types, sizes and prices in Dublin in order to satisfy current and future housing needs of all Dublin residents.

2. Preserve Dublin's existing housing stock in sound condition.

3. Ensure that housing in Dublin will have adequate public services and will be fully served by public facilities and accessible to public facilities and employment and commercial centers.

4. Work for equal housing opportunity and access for all persons regardless of any arbitrary factors.

3. Ensure that housing in Dublin will have adequate public services and will be accessible to public facilities and employment and commercial centers.

4. Work for equal housing opportunity and access for all persons regardless of race, religion, national origin, sex, marital/family status or other arbitrary factors.

3.8.3 HOUSING PROGRAM STRATEGIES REQUIRING ADOPTION OF GENERAL PLAN AND CONSISTENT ZONING ORDINANCE AMENDMENTS FOR IMPLEMENTATION

Increase Residential Densities. Under Alameda County policies, most of Dublin's residential land was zoned for single family detached houses. There are no circulation system or public service constraints that dictate low density for remaining undeveloped land. Higher densities will increase the variety in type and price of units available in the City. The General Plan increases the densities from single family on sites # 1 and # 4 (shown on Figure 3-1). Site #4, the south side of Betlen Drive west of Prow Way, is designated as Medium Density. Site #1, the 79 acres east of the Dougherty Hills and north of Amador Valley Boulevard, is designated as medium density/required mixed dwelling types.

The Land Use Element defines General Plan residential designations as follow:

Residential: Single Family. (0.9 to 6.0 units per acre). This category includes single family detached and zero lot line development.

Residential: Medium Density/Required Mixed Dwelling Types. (6.1 to 14.0 units per acre). Except where required mixed dwelling types are designated, unit types and densities may be similar or varied at the developer's discretion. Where mixed dwelling types are required, site-specific policies would designate the location, number, and maximum density of lower density development and densities up to 20 units per acre could be combined to reach the 14.0 average.

Residential: Medium-High Density. (14.1 to 25.0 units per acre.) Examples of medium-high density developments include the Springs (17.8) and Greenwood Apartments (19.8).

Policy Objective:	Allow construction at higher densities to increase number of units constructed and lower land price per unit
Quantified Objective:	Additional 340 units within five years; at buildout 680 units above number that would be produced under current policies
Action Undertaken:	Sites designated medium density residential or medium density residential/required mixed dwelling type on General Plan
Actions Needed:	Adoption of General Plan and Zoning Ordinance amendment(s) consistent with Plan policies and designations
Financing:	No cost to City

Implementation Responsibility:	Dublin Planning Commission and City Council
Time Frame:	1984; Amendments to Zoning Ordinance within six months of General Plan adoption

Designate Additional Land for Residential Use. The inventory of sites available for residential use (Section 6) shows several sites appropriate for housing where residential uses are not currently permitted. These include three school sites, and a portion of the small commercially-zoned parcel at the corner of Dougherty Road and Amador Valley Boulevard. All four sites are designated for multi-family residential use by the General Plan.

Site 11, the Dolan school site, is given the medium density/required mixed dwelling type designation. The desired development pattern on the site is single family homes on the perimeter to achieve compatibility with existing surrounding single family development, with density throughout the site averaging 14 units per acre.

The Fallon and Frederiksen school sites are both designated partly for neighborhood parks and partly for medium density residential. Two acres of the Dougherty Road/Amador Valley Boulevard site are designated as medium-high density.

Policy Objective:	Increase total number of units produced in Dublin by providing additional sites for residential development
Quantified Objective:	523 units total; 260 over next five years
Action Undertaken:	Residential designation on General Plan
Actions Needed:	Adoption of General Plan and Zoning Ordinance amendments consistent with Plan policies and designations.
Financing:	No cost to City
Implementation Responsibility:	Dublin Planning Commission and City Council
Time Frame:	1984; Amendments to Zoning Ordinance within six months of General Plan adoption

Designate Land not Previously Zoned for Residential Use at Higher Densities than Surrounding Neighborhoods. The neighborhoods surrounding the Fallon and Frederiksen schools are older Dublin neighborhoods and include some of the homes built by Volk-McLain in the 1960's. The Dolan site is in a newer area, characterized by single family homes on larger lots. All three sites are designated for medium density residential use by the General Plan, with a mix of housing types required on the Dolan site.

Policy Objective:	Increase total number of units in city; reduce housing cost by reducing per unit land cost, allowing smaller units.

Quantified Objective:	Construction of 355 more units than would be built if sites were designated for development at same densities as surrounding neighborhoods. Approximately half of total units are likely to be produced within five years.
Action Undertaken:	Medium and medium-high residential density General Plan designation given to sites.
Actions Needed:	Adoption of General Plan and Zoning Ordinance amendment(s) consistent with Plan policies and designations.
Financing:	No cost to City
Implementation Responsibility:	Dublin Planning Commission and City Council
Time Frame:	1984; Amendments to Zoning Ordinance within six months of General Plan adoption

Treat One-bedroom and Studio Units as Equivalent to 75 Percent of a Housing Unit When Computing Allowable Density, Provided that the Maximum Number of Units Permitted on a Site Shall not be Increased by More Than 25 Percent. Attached and multi-family housing units may vary in size from studios to three bedroom units as large as many single family detached houses. If density policies treat all sizes identically, regulating density solely on the basis of units per acre, all units on a given site carry the same land cost, regardless of size. As a result, developers tend to build the largest units they can sell or rent to allow the greatest profit margin.

Small units, defined as having one or no bedroom, are on average equivalent to no more than 75 percent of a large unit, defined as having two or more bedrooms, as measured by household size, vehicle trip generation, and floor area. To incorporate this concept in the General Plan definitions, base densities are set assuming all units will be large units. Substitution of small units would allow the total number of units to increase up to one-third. To avoid encouraging projects with only small units, the General Plan limits the increase above base density to 25 percent.

Policy Objective:	Avoid unintentional incentive to build large units; increase profitability of small, lower cost units
Action Undertaken:	Flexible definition included in General Plan
Actions Needed:	Adoption of General Plan and Zoning Ordinance amendments consistent with Plan policies and designations
Financing:	No cost to City
Implementation Responsibility:	Dublin Planning Commission and City Council

Time Frame:	1984; Amendments to Zoning Ordinance within six months of General Plan adoption

Allow Residential Development in Downtown Intensification Area. The Land Use element establishes a "Downtown Intensification Area," where mid-rise buildings will be permitted along with a range of land uses. Mixed commercial/residential use will be allowed in the area, and is most likely to occur in the vicinity of the proposed BART station between I-580 and Dublin Boulevard. While it is difficult to project the number of dwelling units that will be built downtown, 200 is a reasonable assumption - whether or not this potential will be realized depends on market factors affecting the profitability of residential vs. commercial development, other intensification plans for the area, and an increased acceptance of mixed use projects in general.

Mixed-use, mid-rise housing would cost more than the current market will pay, and is unlikely in a five year housing program. However, second and third floor residential space over ground floor commercial recently has been successful elsewhere in the Bay Area. Such space is virtually "free" of land cost except for parking if the developers' alternative is a one-story retail store .

Policy Objective:	Increase units produced in Dublin; increase sites appropriate for affordable housing and accessible to downtown
Action Undertaken:	General Plan designation of Downtown Intensification Area
Actions Needed:	Adoption of General Plan and Zoning Ordinance amendments consistent with Plan policies and designations.
Financing:	No cost to City
Implementation Responsibility:	Dublin Planning Commission and City Council
Time Frame:	1984; Amendments to Zoning Ordinance within six months of General Plan adoption

Support Semi-Public Institutions in Efforts to Add Affordable Housing on Their Sites. With public funding for the development of affordable housing extremely limited, the City will support efforts by semi-public institutions to provide housing. The Valley Christian Center, for example, is considering construction of senior housing on a portion of its property at the west end of Dublin Boulevard. To facilitate the center or any other land-owning institution in developing affordable housing on an appropriate site, the definition of the General Plan's "semi-public" designation makes provision for residential uses. The definition reads: "Development of housing on a site designated on the General Plan as semi-public shall be considered consistent with the General Plan. Determination as to whether housing should be permitted on a specific semi-public site and the acceptable density and design will be through review of a Planned Unit Development under the Zoning Ordinance."

Policy Objective:	Encourage development of affordable housing by private organizations not primarily engaged in housing construction or management
Action Undertaken:	Inclusion of "Semi-public use" definition that allows approval of housing as an accessory use in General Plan
Actions Needed:	Adoption of General Plan and Zoning Ordinance amendments consistent with Plan policies and designations
Financing:	No cost to City
Implementation Responsibility:	Dublin Planning Commission and City Council
Time Frame:	1984; Amendments to Zoning Ordinance within six months of General Plan adoption

Require a Percentage of Units in Large Multi-family Projects be Rented for a Specified Period of Time. The difficulties of first-time homebuying make rental units the only affordable housing for many moderate income households that do not have the assets to make a down-payment on a home. Other households may choose to rent for other than financial reasons. While the General Plan designates most available sites for multi-family housing there is no assurance of production of additional rental units in the city

Some developers choose initial rental followed by sale in expectations of tax advantage and price appreciation. If rentals are scarce, and the choice is no rental unit additions or short-term rental additions, the City will enforce a type of "advance condominium conversion" limitation by requiring that a percentage of the units in large multi-family projects be offered as rental for a specified period of time. If average household income is expected to increase, allowing renters to buy their units, or if rental units are expected to be added continually to the market, this approach meets needs well in the long term.

Policy Objective:	Insure availability of rental units in the city.
Action Undertaken:	Inclusion of strategy in Housing Element
Actions Needed:	Adoption of General Plan
Financing:	No Cost to City
Implementation Responsibility:	Planning Staff, Dublin Planning Commission and City Council
Time Frame:	1984

3.8.4 HOUSING PROGRAM STRATEGIES REQUIRING ADDITIONAL CITY ACTION FOR IMPLEMENTATION

Encourage Development of Second Units in Existing Single Family Homes. A 1982 survey conducted by the State Department of Housing and Community Development found that approximately 15 percent of the state's single-family homes are underutilized[7]. Given decreasing household size and the increasing cost of housing, second units added to or converted from single-family homes may be a way to use this housing resource to provide needed new housing at minimal financial and environmental costs.

Objections to second units have centered around a few major concerns—character of single-family neighborhoods, adequacy of water supply and sewage disposal, traffic and parking problems—all related to population density. It is important to realize that second units represent a way for homes and services to be used to the capacity they were designed for by accommodating more households in a given number of housing units as household size decreases. Overall density and trip generation would be lower than previous peak levels.

Recent legislation requires local jurisdictions to provide for second units. Section 65852.2 of the Government Code gives cities two options with regard to second units: they may adopt ordinances to establish zones in which second units are allowed, establishing criteria and standards relating to parking, service, and unit design. If no ordinance is adopted the jurisdiction must grant conditional use permits for all second units complying with criteria established by law. A locality can adopt an ordinance that totally precludes second units only if specified findings are made.

Dublin's planning staff is currently drafting an ordinance which will set forth design criteria and parking standards for second units. While it is difficult to anticipate how many second units will be built in Dublin, a target goal if the City actively promotes the development of second units would be 350 units, representing one-tenth of all units in the City with three or more bedrooms.

For such an ambitious goal to be achieved the City would need to develop a public awareness plan about second units, publicizing relevant regulations, benefits to the homeowner, and information on how to create a second unit - from getting necessary permits to hiring a reputable contractor to deciding how much rent to charge when the unit is complete.

Predictions of the effect of second unit conversions on the City's housing stock are by necessity speculative. Results of the second unit program will be monitored to determine whether or not additions of second units are resulting in a depletion of the City's supply of single family units which has an overall negative effect on the housing market.

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[7] Underutilized means one or two people occupying a three or more bedroom home; three people occupying a four or more bedroom home; or four people occupying a five or more bedroom home.

Policy Objective:	Encourage efficient use of existing housing stock; promote development of small units at low cost.
Quantified Objective:	Development of 350 second units in Dublin
Action Undertaken:	Drafting of ordinance relating to second units.
Actions Needed:	Adoption of General Plan and Zoning Ordinance amendment; implementation of program to promote second unit development
Implementation Responsibility:	Dublin Planning Commission and City Council, City Staff
Time Frame:	Adoption of ordinance in 1984; five years for meeting quantitative objective

Cooperate with Non-Profit Housing Provider to Develop Below-Market Rate Units. Private non-profit housing organizations often have advantages in securing funds for development of housing as well as in reducing housing cost to the consumer. In the Tri-Valley area and the Bay Plain, Eden Housing have been active in developing affordable housing , and has worked with the cities of Livermore, Hayward, Union City and Pleasanton and Alameda County. Other non-profit developers have also been active in the area, and might be interested in working in Dublin.

Eden Housing has experience in joint ventures, in use of surplus school sites, and in acting in a consulting capacity as well as in developing housing. For example, a recent 250 unit project on a surplus school site in Union City involved cooperation with a private developer. Tax-exempt mortgage revenue bonds financed the project, which will be maintained as rental for 20 years, with 20 percent of the units affordable to low income renters.

Section 39363.5 of the Education Code requires public agencies to offer surplus lands to potential recreation agencies and charitable corporations before offering to the general public. Eden Housing has indicated to the Murray School District Board of Trustees its interest in purchasing or leasing a portion of the Fallon school site. In a letter to the mayor and City Council of Dublin, Eden's Executive Director offered to work with the City to purchase a portion of the site in order to develop affordable housing. While it is unclear what the precise nature of the development would be, it is virtually certain that only a portion of the units developed would be below-market rate units. The City intends to cooperate with Eden, though the nature of such cooperation is undetermined at this time.

If development of affordable housing on Fallon (or another surplus school site) does not occur, the City will consider contracting with Eden or another organization to assist in investigating possibilities for the production of affordable housing on a consulting basis.

Policy Objective:	Promote development of affordable housing in Dublin

Actions to be Undertaken:	Cooperate with Eden Housing in developing surplus school site or contract with Eden or another agency for assistance in investigating ways to provide affordable housing.
Financing:	No financing necessary. Assistance to the development of affordable housing might include providing a short-term low interest loan to the housing developer.
Implementation Responsibility:	City Staff, Planning Commission and City Council
Time Frame:	Plan for Fallon Site by mid-1985; 1984 if possible.

Work With Pleasanton Toward Establishing a Joint Housing Authority. Dublin's only public housing project, Arroyo Vista, is owned and operated by the Pleasanton Housing Authority. Though Arroyo Vista is physically in Dublin, the City is represented on the decision-making body which manages the complex only by chance - one of the tenant commissioners appointed by the Pleasanton City Council lives at Arroyo Vista. Participation with Pleasanton in the Housing Authority would demonstrate Dublin's commitment to working for housing opportunities for all income groups and to providing a range of housing services, and will give Dublin a voice in future decisions regarding use of Housing Authority land.

Both Dublin and Pleasanton would need to take legislative action in order to expand the Housing Authority. This obviously ambitious task would have to begin with a positive dialogue initiated by Dublin regarding broadening the Housing Authority's domain to include both cities. Another possibility is a Livermore-Amador Valley Authority governed jointly by Livermore, Pleasanton and Dublin and serving an area that clearly is part of a single housing market.

Policy Objective:	Share control of Housing Authority activities in Dublin; support housing information and referral services.
Actions to be Undertaken:	Dialogue with Pleasanton City staff and City Council; passage of resolution.
Financing:	No Cost to City
Implementation Responsibility:	City Council
Time Frame:	Initiate discussions with Pleasanton in 1984

Encourage Development of Additional Units on Housing Authority Land in Dublin. The Arroyo Vista site includes three to four acres of undeveloped land suitable for additional development. Pleasanton Housing Authority staff has indicated interest in possible future development of senior housing on the site.

Policy Objective:	Promote development of below market-rate units affordable to low income households
Actions to be Undertaken:	Work towards forming joint housing authority, provide assistance as requested by Housing Authority staff
Financing:	None required
Implementation Responsibility:	Dublin City Council, Housing Authority Board
Time Frame:	Five years

Monitor Availability of Rental Housing. If Deemed Necessary, Consider Enactment of Condominium Conversion Ordinance. Though condominium conversions have not yet occurred in Dublin, there are indications that they may be a concern in the not-too distant future. Several apartment buildings in San Ramon have converted to condos, probably resulting in increased demand for rental units in Dublin. One Dublin apartment received permission for conversion from Alameda County prior to incorporation but has remained as rental.

A program which monitors the availability of rental housing would insure that a condominium conversion ordinance would only be passed if necessary to satisfy rental demand in the City. Conversion regulations typically limit the number or percentage of rental units to be converted annually or use a minimum rental vacancy rate as a trigger for conversion permission. Near zero rental vacancies are likely to continue, so a vacancy requirement might prevent conversions.

Policy Objective:	Assist in maintaining rental stock as housing affordable to moderate income Dublin households
Actions to be Undertaken:	Establishment of monitoring program; passage of condominium conversion ordinance if necessary
Financing:	Minor administrative cost
Implementation Responsibility:	City staff, Dublin Planning Commission and City Council
Time Frame:	Monitoring program in place in mid-1984, ordinance as needed

Require Evidence of Developer Effort to Receive Public Financial Assistance for the Purpose of Including Below Market Rate Units in Proposed Projects; Assist Developers in Obtaining Information on Available Programs. The range of available state and federal programs designed to increase housing affordability varies constantly. To insure that developers are participating in appropriate programs when possible, the City will require evidence that developers of multi-family housing have investigated

program availability and are using available funding assistance whenever possible. To reduce the burden on developers created by this requirement, the City should prepare and regularly update a packet of information on available programs, including a list of agency contact persons responsible for program implementation. This information should be given to developers as early as possible in the project approval process.

This requirement shall apply only to developers of project that will contain 75 or more multi-family units.

Policy Objective:	Promote use of available funds and funding mechanisms in private sector housing development
Actions to be Undertaken:	Assign staff time, print standard information for developers, develop review process for implementation
Financing:	Cost of staff time equivalent to five percent of the time of a full time staff person; from planning budget or through use of Block Grant funds
Implementation Responsibility:	City planning staff, Dublin Planning Commission and City Council
Time Frame:	Program in place by 1985

3.8.5 STRATEGIES REQUIRING ONGOING CITY EFFORT USING EXISTING PROGRAMS

Grant 25 Percent Density Bonuses for Provision of 25 Percent Affordable Units as Required by State Law. The State's first density bonus law was enacted in 1979 and clarified in 1982. Together, the two laws (Government Code section 65915) require that developers of housing that agree to construct at least 25 percent of the total units of a development for low or moderate income households, or ten percent for low income households, must be granted a density bonus of at least 25 percent or other incentives of equivalent financial value. The law contains additional clarifying language regarding the procedures and definitions relevant to granting density bonuses.

Little use of the required density bonus provision is anticipated. For the bonus incentive to result in construction of a significant number of affordable units the incentives would have to be increased. Some jurisdictions offer additional density incentives. Rather than develop a complex density bonus system, this housing program incorporates the concept of higher-than-base densities through adopting a flexible density definition. This approach provides incentives for the production of more small units priced at full market value,, rather than providing incentives for the development of lesser numbers of below market rate units.

Policy Objective:	Provision of incentives for providing affordable units; compliance with State law

Actions to be Undertaken:	Granting of density bonuses as mandated in Government Code 65915
Financing:	Minor administrative cost to City
Implementation Responsibility:	Planning Staff
Time Frame:	Immediate

Promote Equal Housing Opportunity for All Dublin Residents and Others Seeking Housing in Dublin. Federal and state programs guarantee equal housing opportunity. The Rumford Fair Housing Act prohibits arbitrary discrimination on any basis, including race, color, religion, sex, marital status, national origin or ancestry, in the rental, lease, sale or financing of any residential dwelling other than an individual room in an owner's house.

The Unruh Civil Rights Act prohibits discrimination on the basis of a person's race, color, sex, national origin, religion, or ancestry in the provision of goods and services by all business entities. A business entity includes landlords, real estate brokers acting as agents in the sale of real property and financial institutions.

The State Fair Employment and Housing Commission receives complaints of housing discrimination and takes necessary actions to relieve discrimination. In the Tri-Valley, Eden Council for Hope and Opportunity (ECHO) provides services to victims of housing discrimination. While the City of Dublin does not contribute to ECHO, services are provided to City residents through the organization's Livermore office. City staff will refer cases to ECHO, other housing organizations and to the State as appropriate, and make available to all persons information regarding anti-discrimination laws and enforcement agencies.

Policy Objective:	Support services and programs which fight housing discrimination; direct persons towards agencies which provide assistance to victims of discrimination as needed.
Actions to be Undertaken:	Development of information on housing discrimination for public distribution.
Financing:	Minor administrative cost
Implementation Responsibility:	City Staff
Time Frame:	Mid-1984 for information development, ongoing implementation

Continue City Code Enforcement Program; Aid Low Income Households in Obtaining Financial Assistance for Housing Rehabilitation. For a year following its incorporation, Dublin contracted with Alameda County for building inspection services. Now Dublin has its own inspection program conducted by two part-time staff members responsible for plan checking and zoning and building code enforcement. Code enforcement is conducted only in response to complaints.

Both County and City staff responsible for building inspection have reported only minor code violations in the City, attributed to the newness of the housing stock. Additionally, where market conditions result in steadily increasing property values, homeowners have a strong incentive to maintain their property. Even so, as buildings age the incidence of deterioration and code violations will almost certainly increase. When the Housing Element is revised the City should consider implementing an active rehabilitation program suiting the age of most of the City's units.

Currently, low income households may obtain low interest loans for required rehabilitation through a program operated by Alameda County Department of Housing and Community Development. To qualify, units must have at least one code violation; funds may be used for general property improvements as long as violations are corrected as well. City inspectors will inform households living in units found to have code violations of possible eligibility for the loan program.

Policy Objective:	Enforce building and zoning codes in Dublin.
Action Undertaken:	Expansion of City staff to include building inspector(s)
Actions to be Undertaken:	Continue enforcement program; provide information on appropriate loan programs
Financing:	City Funds
Implementation Responsibility:	City staff
Time Frame:	Ongoing

3.8.6 OPPORTUNITIES FOR ENERGY CONSERVATION

The State of California sets energy conservation standards for new residential construction. The City can promote energy conservation in project design through a variety of measures. It should be recognized that since all parcels in Dublin available for residential development are infill sites they are inherently energy conserving, locating new residents near employment and commercial centers. Designating sites for multi-family densities, a major change resulting from the City's first Housing Element and General Plan, will result in the construction of units which are energy efficient due to minimal exterior walls.

It is in approving site plans that the City can assure new developments will have energy efficient design. Prior to project approval, the City should require developers

(or their designers) to demonstrate that solar orientation has been a consideration in site design.

Several state and federal programs are available to assist homeowners in improving the energy-efficiency of their units. These include Federal Residential Conservation Tax Credits, which provide for a 15 percent tax reduction for qualified energy source expenditures up to $300, and a credit of 40 percent of the first $10,000 invested in solar, wind or geothermal systems. In California, investor-owned utilities are required to offer financing for energy conservation measures that are found to be cost-effective through a zero interest program (ZIP). The State also requires all major utilities to offer residential customers free energy audits.

SECTION 4
ENVIRONMENTAL RESOURCES MANAGEMENT

4.1 CONSERVATION ELEMENT

Air quality and wastewater disposal have been the Tri-Valley's most difficult conservation issues, even with construction of the Livermore Amador Valley Wastewater Management Association (LAVWMA) pipeline, and significantly improved air quality. The extent of planned and anticipated development now draws greater attention to other conservation issues — conversion of agricultural land to other uses; loss of open space; hazards posed by development in steep and landslide-prone areas; increased runoff, erosion and stream siltation; etc. Additionally the prospect of renewed or intensified air quality and sewage disposal problems accompanies plans approved or under consideration that would result in up to 200,000 jobs in the Tri-Valley.

Open space resources are discussed in the open space element; the seismic safety and safety elements consider natural hazards. This section and its counterpart in the Plan Policies Report consider hydrology, habitats, agricultural open space, air, soil resources, and archaeologic and historic resources.

The planning area includes three sections that are distinct in terms of topography, vegetation, and soils. The urban area within the city's borders and the undeveloped area just north of I-580 east of Tassajara Road form part of the flat valley floor. The land east of Parks RFTA and Santa Rita and south of the county line consists of grassy rolling hills with occasional steep slopes, and the westernmost part of the planning area is composed of ridgelands covered primarily by grasslands with oak and woodlands on steep slopes and in winding canyons. (These areas are referred to below as the valley, eastern hills, and western hills of the planning area, respectively.)

The western hills form part of the ridgelands extending from Contra Costa to Santa Clara counties and established as an area of regional significance by a 1980 National Parks Service study (U.S. Department of the Interior New Area Feasibility Study 1980, pp. 97-103). The ridgelands have been the subject of many preservation efforts over the years, and have been protected through organizational and agency efforts as well as by the difficulty of development on the steep slopes and ridges. The ridgelands of the western hills are characterized by good quality woodland and forest habitats with high natural resource values. Perhaps most important, the western hills form part of a greenbelt that rings the Bay Plain, preventing continuous urban spread.

The eastern hills are not as valuable as the western hills in terms of habitat, but do contain grazing and hay-growing land of unusually high quality. Throughout the extended planning area most of the land is under Williamson Act contract, which prohibits its development for a minimum of ten years while providing tax advantages to landowners.

4.1.1 HYDROLOGY

Surface Water

The planning area is in the Livermore drainage unit of the Alameda Creek watershed, which includes 405,000 acres, or 633 square miles in eastern Alameda County and northeastern Santa Clara County. Principal streams in the Livermore drainage unit are Arroyo del Valle, Arroyo Las Positas, Arroyo Mocho, Alamo Creek, San Ramon Creek, and Tassajara Creek. Of these, Alamo Creek flows through the city, while Tassajara Creek is within the extended planning area. All streams converge on the valley floor, first joining Arroyo de la Laguna and then Alameda Creek in the Sunol drainage unit outside of the valley. Ultimately the valley's streams flow west through Niles Canyon and into San Francisco Bay.

Except during years of exceptionally heavy rainfall, most of the valley's streams carry no natural flow during the dry periods of the year. Some are replenished from artificial sources including controlled reservoir releases and discharges of wastewater treatment plants. Functions of the valley's surface waters have included groundwater recharge, wastewater assimilation, and runoff catchment and conveyance. The Del Valle Reservoir collects and holds runoff waters from the Alameda Creek watershed.

Groundwater

The Livermore-Amador Valley's major sources of groundwater are the alluvial deposits that compose the Valley floor and the Livermore Formation, which underlies and is adjacent to the Valley floor. The groundwater hydrology of the area consists of multi-layered systems composed of an unconfined aquifer over a sequence of leaky or semi-confined aquifers. These aquifers yield relatively small amounts of water, with the largest quantities stored by the fill materials in the central and western areas of the Livermore Valley.

The quality of groundwater in the Livermore Amador Valley is generally poor. Groundwater has not been used as part of the public water supply in the area since 1979, when Zone 7 began distributing water from the South Bay Aqueduct (SBA) exclusively. This change occurred because of the hardness of the water and the high level of total dissolved solids in the valley's groundwaters. Hardness, reflecting the concentration of calcium and magnesium in the water supply, was measured as high as 34,000 parts per million (ppm) in the late 1970's, as compared with 90-100 ppm in water from the South Bay Aqueduct (SBA). (There is no standard for hardness as it causes only functional water quality problems and does not pose a hazard to human health.) Total dissolved solid (TDS) content in water drawn from Dublin area wells reached as high as 500-600 ppm, while SBA water generally contains 200-250 ppm TDS (Vince Wong, ACFCWCD Zone 7, personal communication).

The groundwater supply is replenished through percolation, or recharge, of precipitation, streamflow and applied water. Groundwater quality depends on the quality of water recharged and the mineral composition of subsurface sediments. Though the practice is not currently employed by Zone 7, when necessary, poor quality groundwater can be mixed with water from other sources to achieve acceptable quality. The possibility of future use of groundwater makes it important to protect the quality of water recharged now.

Groundwater pollution is generated by point and non-point sources. Point sources are discrete generators of pollution, such as factories with outfall pipes that discharge water with illegal concentrations of pollutants; or gas stations that do not handle oil and gas appropriately. The limited general industrial activity in Dublin minimizes point source pollution. The major non-point source is runoff, precipitation which flows as a surface water film because it can not percolate into the ground due to the presence of inpenetrable substances or saturation of soil. Runoff from urban areas generally includes automobile gas and fluids, pet waste, and a variety of hazardous substances in common use. Runoff from agricultural areas generally contains fertilizer, pesticides, and animal wastes, all of which pollute groundwater and surface water supplies.

With increased urbanization, the amount of undeveloped land through which pure water is recharged decreases, and the concentration of pollutants in the groundwater increases. As more and more impervious surfaces (e.g., roads and roofs) are created, runoff increases as does the content of pollutants from non-point sources in the groundwater. In addition to carrying pollutants, runoff causes soil erosion and eventually stream sedimentation and siltation, resulting in stream turbidity, clogging of streams and reduced reservoir capacity.

Flood Hazards and Control

Flooding in Dublin is caused by winter storms with heavy rainfall, steep topography, and constricted stream flows. Concentration of storm runoff is rapid in areas of steep slope. Many watercourses are seasonal and cannot accommodate higher flows. Bridges or culverts may also constrict heavy flows, resulting in flooding.

Zone 7 of the Alameda County Water Conservation and Flood Control District is responsible for flood protection in the planning area. A special program is now in effect for drainage channel improvements throughout Zone 7 as development occurs. These improvements, funded with development fees, have not been major in Dublin. Future improvements to Alamo Creek may be necessary with development of the large parcel east of the Dougherty Hills and north of Amador Valley Boulevard. While Alamo Creek now has sufficient capacity, bank erosion caused by development of the site may create a need for additional improvements.

Although Zone 7 representatives believe that there are no serious flood hazards in Dublin, during January of 1983 flooding did occur west of San Ramon Road in the Silvergate area. Brief, intense rains carried debris down from the hills where it blocked pipes and creeks, causing flooding of backyards and several homes. These incidents of flooding are believed to have been caused by unintentional obstruction of watercourses by nearby residents.

The Federal Emergency Management Agency (FEMA) has prepared a Flood Insurance rate map (August, 1983) showing a 100-year flood that inundates portions of the city, generally in the vicinity of Dougherty Road at I-580, Amador Valley Boulevard west of I-680, and the west side of San Ramon Road.

4.1.2 HABITATS

Three major types of natural habitat are found in the planning area, in addition to the urban environment created by development in and immediately surrounding the city. The eastern area is predominantly grassland, while the western portion supports a community of woodland and grassland species. Associated with the significant watercourses throughout the area are occasional riparian woodlands. Table 4-1 lists common species in the various biotic communities of the planning area.

The Urban Environment

The developed portion of the planning area has been dramatically altered from its natural state and contains largely introduced and highly managed plant species. Present are disturbance-tolerant animals such as rabbits, rodents, skunks, and bats—species that are, for the most part, considered as pests.

Grasslands

While the eastern grasslands also contain many introduced species, these are in association with native flora and provide a habitat for a variety of wildlife. Grasses include blue bunch grass, California oat grass, foothill sedge, brome grass, and wild oats. The hills of Doolan and Collier canyons in the eastern part of the planning area are considered excellent examples of this vegetative community. Common grassland wildlife include rodents and reptiles such as rabbits, skunks, and bats.

Woodlands

The ridgelands of the western hills contain scattered woodlands, particularly characteristic of moist, sheltered, and shaded habitats. Woodlands also cover most of the north- and east-facing slopes of the larger ridges, which are shielded from direct afternoon sunlight. Oak species dominate the woodlands. These include coast live oak, valley oak, and blue oak. Other common tree species are California laurel, Bigleaf maple, and California buckeye. A characteristic shrubby understory is dominated by poison oak and coffeeberry. There is evidence that oak woodlands are not expanding or reestablishing in California, so the current supply may be all that will ever exist.

A National Parks Service study conducted in 1980 concludes that the ridgelands "play an extremely important role in terms of providing regional open space for the San Francisco Bay Area" (U.S. Department of the Interior, p. 2). A 1977 multi-jurisdictional ridgelands study recommends that Alameda, Contra Costa, and Santa Clara counties and affected cities continue to designate the ridgelands area as open space in adopted General Plans, and that urban development be confined within and adjacent to existing urban areas and outside of the ridgelands (Ridgelands. A Multijurisdictional Open Space Study, 1977, pp. 54-56). The Pleasanton General Plan considers the "extensive undisturbed area along the ridges . . . (as) a major native California botanical resource."

TABLE 4-1

BIOTIC COMMUNITIES OF THE LIVERMORE AMADOR VALLEY

Urban	Cities, towns, subdivisions, parks, etc.	Introduced trees and shrubs; House Finch, English Sparrow, Norway Rate, House Mouse, Cockroach.
Rural	Cultivated croplands and pasture.	Various truck and row crops; Barn Owl, Sparrow hawk, Brewers' Blackbird, Gopher, Vole, Gopher Snake, Alfalfa, Cabbage Butterfly.
Riparian Woodland	In wooded canyons along stream courses. (Various stages depending on rainfall runoff patterns)	Western Sycamore, Fremont Cottonwood, Red Willow, Arroyo Willow, Big Leaf Maple; appendix for faunal indicator species.
Grassland	Non-cultivated areas in Valley and adjacent hills.	Blue Bunch Grass, California Oak Grass, Foothill Sedge, brome grass, wild oats.
Oak Woodland	Inner coastal ranges from 400 to 3000 feet; rolling hills along north and south edge of Livermore Valley lowlands	At lower elevations, Valley Oak, Coast Live Oak; Blue Oak; Digger Pine, at higher elevations. Throughout: Holly-leaf Cherry, California Coffee Berry, California Buckeye, Poison Oak.

Source: Conservation Element of the Alameda County General Plan.

Riparian Woodlands

Riparian areas have vegetation dependent on proximity of a natural watercourse and are an important natural resource in the relatively dry climate. The riparian environment serves an important role in protecting watercourse integrity. Riparian zones reduce stream sediment load by reducing erosion while also acting as sediment buffers, protecting water quality by filtering sediment and debris contained in surface runoff. Another function of the vegetation along stream banks is to protect the plant and animal habitat created by the stream.

The plant species in riparian woodlands are similar to associations common in the cool moist areas of the ridgelands. Basin-wide, vegetation reduces the total volume of streamflow as well as making the flow more constant and regular. During the dry season, the riparian vegetation provides shelter to many animals not usually found in

it, and throughout the year birds and mammals find food, water, and cover in riparian woodlands along their migration and movement routes.

Riparian woodlands have become scarce in the region due to urbanization and consequent flood control improvements. As riparian areas are disrupted as a consequence of changes in land use, total basin runoff and peak streamflow increases, water quality becomes more susceptible to change, and a valuable aesthetic and recreational resource is lost.

Streamcourses within the primary planning area are designated as open space/stream corridors. The densest riparian vegetation in the city is along Clark and Martin Creeks. Alamo Creek east of the Dougherty Hills is also bordered by riparian vegetation.

Rare and Endangered Species

Information on California's threatened, endangered, rare or otherwise sensitive species and communities is maintained by the Natural Diversity Data Base of the State Department of Fish and Game. The Data Base documents the location of environmental elements, defined as natural features (species, habitats, etc.) of particular interest because they are exemplary, unique, threatened, or endangered on a statewide or national basis. The Department has conducted a records search for elements of concern within the Dublin, Hayward, Livermore and Tassajara 7 1/2' quadrangles which include the entire planning area.

This survey of recorded occurrences revealed no record of sensitive species and communities within the planning area, but did reveal the following elements of concern in the vicinity. The presence of these plant species and communities in the vicinity indicates that the elements listed could could be present within the planning area. No records of occurrences of sensitive animal species exist for the area.

Natural Communities

1. Upland Native Bunchgrass (northeast of the planning area in Contra Costa County)

Plants

1. Plagiobothrys glaber (Hairless Allocarya) CNPS list 2 (west of the planning area, in the Hayward area)

2. Cordylanthus palmatus (Palmate Bracted Birdsbeak) CNPS list 2 (east of the planning area, in the vicinity of Las Positas)

3. Hesperolinon breweri (Brewer's Drawf Flax) CNPS list 2 (north east of the planning area in Contra Costa County)

4. Arctostaphylos auriculata (Mount Diablo Manzanita) CNPS list 2 (north of the planning area, in Contra Costa County)

4.1.3 AIR QUALITY

Air quality has long been a problem in the Tri-Valley area. In the late 1960s and early 1970s, air quality recorded at the Livermore monitoring station was the worst in the Bay Area in respect to photochemical oxidants, or ozone (smog). Table 4-2 presents 1982 data for ozone and for other contaminants, recorded for all stations in the Bay Area by the Bay Area Air Quality Management District.

Air quality in the Dubin area is a function of location, topography, and pollutant-generating activities both in and out of the Tri-Valley. Sunshine and warm temperatures, valued by many Bay Area residents, contribute to air quality problems in association with other characteristics of the planning area, making it difficult to attain air quality standards designed to protect the public health.

The topography of the Valley favors the creation of temperature inversions, a condition in which warm air traps a layer of cooler air beneath it, thus preventing vertical mixing and resulting in the concentration of pollutants close to the ground. Temperature inversions occur as low as 2,500 feet in the Dublin area. Surface winds are generally channeled through the passes into the Valley, creating predominant westerly, southwesterly, northwesterly, and northeasterly winds, and carrying pollutants from the San Francisco and Bay Plain areas.

Due to the sheltering effect of the mountains, wind speeds are low in the Valley. Additionally, the shape of the Valley itself limits horizontal movement and mixture of air, further inhibiting the dispersion of pollutants.

Since 1967, all major air pollutants except hydrocarbons have been continually monitored in the Valley. Air quality problems in the area have been almost exclusively related to one pollutant, photochemical oxidants, the primary component of which is ozone. Photochemical oxidants and ozone are secondary pollutants created from the interaction of hydrocarbons and oxides of nitrogen in the presence of sunlight. Since sunlight is an ingredient in the ozone-producing process, oxidants are a seasonal problem, occurring principally between the months of April and October.

Ozone has negative health effects as well as adverse economic impacts caused by damage to crops and materials. Standards for ozone have been designed to prevent eye irritation and respiratory difficulties. Certain high-risk groups, most notably infants and the elderly, are particularly susceptible to health problems created by high levels of ozone and other pollutants.

Although the Tri-Valley had the highest regional ozone levels 15 years ago, air quality has improved in recent years, and the Bay Area's worst ozone problems have shifted southward to the Los Gatos area. In 1969 when ozone reached its highest levels in the Bay Area, the federal standard was exceeded in the Livermore area on 53 days. By contrast, standards were violated two days per year in 1980 and 1981 and only one day in 1982. This record can be compared with data from the Fremont monitoring station, where ozone standards were exceeded on 6 days in 1980, and 3 days each in 1981 and 1982. Part of this seemingly dramatic change is due to a significant lowering of the standard, but there is general agreement that significant absolute improvement has taken place as a result of the regulation of oxidant-generating emissions from both stationary and mobile sources (industry and cars).

TABLE 4-2

AIR POLLUTION IN THE BAY AREA BY STATION AND CONTAMINANT: 1982

For ozone (0_3) and for nitrogen dioxide (NO_2), "max" is the highest hourly average value in parts per hundred million. For carbon monoxide (CO), "max" is highest 8-hour average value in parts per million. (The one-hour standard for CO was never exceeded during the year.) For sulfur dioxide (SO_2), "max" is highest 24-hour average value expressed in parts per billion. For total suspended particulates (TSP), "mean" is annual geometric mean in micrograms per cubic meter. "Days" columns give number of days per year an air quality standard was exceeded: Federal for 0_3 and CO, State for NO_2 and SO_2, both for TSP. For TSP, Days > S refers to State 100 $\mu g/m^3$ standard, Days > F refers to Federal 150 $\mu g/m^3$ secondary standard. The 3-year average for ozone, adjusted for instrument down-time, is the governing Federal standard (called Expected Annual Exceedance). Monitoring for 0_3, CO and NO_2 is continuous: monitoring for TSP is on the Federal systematic 6-day schedule; monitoring for SO_2 includes both time scales. Note: > = greater than, < = less than.

Stations	OZONE			CO		NO_2		SO_2		TSP		
	Max.	Days	3-Yr. Avg.	Max.	Days	Max.	Days	Max.	Days	Mean	Days > S	Days > F
San Francisco	8	0	0.0	9.1*	1	13	0	12	0	57	3	0
San Rafael	10	0	0.0	5.6	0	11	0	5	0	50	3	0
Richmond	9	0	0.0	3.9	0	11	0	6	0	50	2	0
Pittsburg	10	0	0.3	4.9	0	9	0	7	0	53	6	0
Concord	13	1	2.4	6.4	0	10	0	10	0	41	2	0
Oakland	7	0	0.0	7.5	0	—	—	—	—	—	—	—
San Leandro	15	1	2.4	—	—	—	—	—	—	—	—	—
Hayward	10	0	2.0	—	—	—	—	—	—	—	—	—
Fremont	14	3	4.1	4.5	0	12	0	4	0	46	2	0
Livermore	14	1	1.8	4.8	0	10	0	1	0	42	0	0
Alum Rock, S.J.	15	3	5.2	—	—	—	—	—	—	—	—	—
San Jose	12	0	1.3	12.4	9	16	0	3	0	66	9	1
Moorpark, S.J.	—	—	—	—	—	—	—	—	—	45	1	0
Gilroy	11	0	3.8	3.6	0	—	—	—	—	—	—	—
Los Gatos	12	0	6.7	—	—	—	—	—	—	—	—	—
Mountain View	11	0	0.8	—	—	—	—	—	—	—	—	—
Redwood City	10	0	1.0	6.0	0	8	0	2	0	42	0	0
Santa Rosa	9	0	0.0	5.8	0	9	0	< 1	0	36	0	0
Sonoma	9	0	0.0	—	—	—	—	—	—	—	—	—
Napa	9	0	0.0	6.7	0	9	0	2	0	50	2	0
Vallejo	10	0	0.3	10.9	6	10	0	6	0	48	2	0
Fairfield	11	0	0.0	—	—	—	—	—	—	—	—	—

*Concurrent 14.5 ppm at Ellis Street micro-scale siting for street-level CO maximums.

Source: Bay Area Air Quality Management District

Federal standards for carbon monoxide (CO), nitrogen dioxide, and sulfur dioxide have never been exceeded at the Livermore monitoring station. As monitoring is done in Livermore, it is difficult to assess the effect of the I-580/I-680 interchange on CO levels in Downtown Dublin. As Valley growth causes increased traffic volumes, CO may emerge as a problem pollutant in the Valley.

The volume of total suspended particulates (TSP) has been a source of concern in the Livermore area. While standards were not exceeded in 1981 or 1982, in 1980 California TSP standards were exceeded on 9 days. In Fremont, state TSP standards were exceeded 8 days in 1980 (1 day exceeded the lower federal standard), no days in 1981, and 2 days in 1982. Throughout the Bay Area, about 23 percent of particulate matter is produced by automobiles. As the Tri-Valley has few sources of industrial pollution, the high levels of particulates could also be due to pollen and dust generated from construction, agricultural, and gravel extraction operations.

Air quality standards have been set by the Federal Government since the passage of the 1970 amendments to the Clean Air Act. Two levels of standards exist: primary standards designed to protect human health, and more stringent secondary standards that protect property and aesthetics. Attainment and exceedance is in relation to the primary standards. All standards are figures that reflect a concentration of a particular pollutant in the air.

Under the 1977 Clean Air Act amendments, the Bay Area is a Nonattainment Area for ozone, required to submit an air quality implementation plan to the Environmental Protection Agency (EPA). The State of California has designated the entire San Francisco Bay Area Air Basin as an Air Quality Maintenance Area in accordance with EPA requirements. Three agencies share the responsibility for air quality maintenance and planning in the Bay Area: the California Air Resources Board, the Bay Area Air Quality Management District (BAAQMD), and the Metropolitan Transportation Commission (MTC). BAAQMD is empowered to control air pollution from stationary sources throughout the San Francisco Bay Area. The California Air Resources Board sets motor vehicle emissions standards, and the Metropolitan Transportation Commission (MTC) is the lead agency for transportation improvements.

Given the regional nature of air pollution problems, and the character of the agencies addressing them, individual localities have relatively small roles to play in addressing air quality issues. The primary responsibilities of local government officials are to inform themselves on air quality issues and to consider air quality in the environmental review process. Additionally, jurisdictions should be aware of any local impacts of air quality maintenance plan policies.

The 1982 Bay Area Air Quality Plan, part of the State Implementation Plan for California and the San Francisco Bay Area Environmental Management Plan, describes air quality problems in the Bay Area and formulates programs to improve air quality. The goal of the plan is achievement of ambient air quality standards in the Bay Area by 1987. The 1982 plan is an update of the 1979 Bay Area Air Quality Plan, which contained four major program elements as follows: use of available control technology on existing stationary sources; new source review; motor vehicle inspection and maintenance; and transportation system improvements. Three factors prompted the revision of the 1979 plan: 1) the fact that the State Legislature has not authorized the motor vehicle inspection and maintenance program adopted in the 1979 plan; 2) the

expectation that regulations and programs will be less effective than assumed in the 1979 plan; and 3) the improvement of data base and models used to forecast future air quality.

The Air Quality Plan is directed at controlling two pollutants—ozone and carbon monoxide. Area ozone levels can most efficiently be reduced by reducing hydrocarbon emissions. The fact that there is no single major source of hydrocarbon emission becomes increasingly clear as the automobile fleet gets cleaner and hydrocarbons persist in the atmosphere. Smaller sources, both stationary and mobile, are being addressed by the current plan, now that emissions from cars and major industrial activity have been reduced. The plan acknowledges that the most efficient and cost-effective pollution control measures are already in effect in the Bay Area, and that as a result subsequent measures will be implemented at greater cost and with lesser results than previous efforts.

The hydrocarbon emission reduction programs initiated by the 1979 plan were: use of available control technology on existing stationary sources; new source review (e.g. industry); motor vehicle inspection and maintenance; and transportation system improvements. The major control programs recommended by the updated plan are motor vehicle inspection and maintenance; transportation system improvements; and stationary source control measures consisting of 22 new regulations. The range of proposed stationary source control measures includes regulations that will affect the use or production of pesticides, plastics, natural gas and crude oil, and aerosol propellants.

As pollution control programs reduce emissions, the number of individual sources continues to rise. Over the past decade, air quality has improved despite increasing population and industrial activity in the Bay Area. However, projected growth in the Tri-Valley and elsewhere may reverse the trend toward cleaner air. Large-scale development such as that approved for North Pleasanton is likely to provoke community concern as well as the scrutiny of agencies charged with protection of air quality. Funding for projects such as freeway improvments or additional wastewater disposal capacity could be withheld.

4.1.4 SOILS

Three soil associations predominate in the planning area, corresponding to the varying slope and topography of the Valley bottom and uplands. Soil types, interacting with other environmental factors, determine erosion potential and other constraints on development, as well as fertility and predominant vegetation type. All of the soils found in the city's extended planning area present high or severe erosion hazards at greater than 30 percent slopes. Another area of high erosion potential is streamcourses, where vegetation normally acts to inhibit erosion and reduce sedimentation. If streamcourses are cleared in the course of development, these natural functions will be lost and erosion potential will increase.

Typical ridgeland vegetation also serves to prevent hillside erosion and more serious debris flows. The Hayward Hill Area Study, which examined the environmental resources of the hill area south of I-580, describes the woodland now covering the steeper slopes as serving to greatly enhance slope stability. The study notes that few debris flows exist in the wooded areas while identical adjacent land shows extensive

sliding, suggesting that a significant increase in debris flows would follow clearing of the woodland vegetation, presenting yet another obstacle to development of the area (Hayward Planning Department, 1976, p. 26).

Western Hills

Three predominant soil series, Los Gatos, Los Osos and Milsholm, are found in the ridgelands. These three soil types are generally very shallow to moderately deep, with many areas moderately eroded. Drainage is good to somewhat excessive. Fertility is low to moderate, primarily due to limited water holding capacity. The Los Osos soils, which predominate in the area just south of I-580, are subject to frequent shallow landsliding. Runoff is rapid and cultivation difficult on these steep slopes. All are used principally for pasture and range land.

Eastern Hills

The uplands east of the incorporated area are almost exclusively Diablo clays and Linne clay loams. Parent material is the soft sedimentary rocks of the Tassajara and Orinda formations, known for their slope stability problems. The Diablo series consists of deep to moderately deep, well-drained, clayey soils on rolling to very steep uplands. Linne clay loams are well-drained soils formed from soft, interbedded shale and fine-grained sandstone. Some areas are severely eroded, and the hazard of erosion in areas of over 30 percent slope is severe, as in the areas of Diablo clays. Soils are moderately fine to fine textures, with clayey and very hard surface soils. Drainage is typically good with occasional excessive drainage and poor drainage in small valleys. Fertility is moderate to high.

The area just north of I-580 and east of Santa Rita, can be considered as a transitional zone from Valley floor to uplands in terms of soil type as well as slope. The area contains soils of the Diablo and Linne series, but also clear lake clays, rincon clay loams, and fine-textured alluvium, more typical of the Valley floor. Gentler terrain means greatly reduced erosion hazard.

Valley

The soils of the city principally belong to the Clear Lake-Sunnyvale Association, characterized by well to imperfectly drained soils with generally high fertility, and formed from unconsolidated recent alluvial sediment. Surface soils are clay to clay loam with very deep heavy clay subsoils. The western edge of the city has soils characteristic of the uplands and similar to those found east of Camp Parks and Santa Rita, principally Diablo clays and Linne clay loams.

4.1.5 MINERALS

No mineral extraction takes place within the planning area. Between Pleasanton and Livermore are major sand and gravel deposits, which are the Valley's major mineral resources. Petroleum, chromite, coal, manganese, and silver have also been extracted at different times.

4.1.6 ARCHAEOLOGIC RESOURCES

The California Archaeological Inventory of the Northwest Information Center at Sonoma State University has conducted an archaeological records search for known archaeological sites within the planning area. While numberous sites have been identified in the Livermore Valley and surrounding hills in environments similar to that of the planning area, only one prehistoric site has been identified in the planning area. The great majority of the planning area has not been subject to archaeological investigation.

4.1.7 HISTORIC RESOURCES

The Dublin area was explored in the early 1770s. Ranching began in the 1830's, with large-scale settlement in the area about twenty years later. No sites in the planning area are listed in the National Register of Historic Places (1979-1983), but several are listed in the California Historic Resources Inventory (1976) as follows:

The Alviso Adobe (p. 123)
The Amador Adobe (p. 146)
The Green Home (p. 86)[1]
The Green Store (p. 86)[1]
The Murray House (p. 146)
Palomares School (p. 213)
St. Raymond's Church (p. 199), also listed in the California Historical Landmarks (1979; 2).[1]

Old St. Raymond's Church, constructed in 1859, was moved from its original location with the construction of I-580, and is now located in Dublin's Heritage Park. The church is in the ownership of the Amador-Livermore Valley Historical Society. On the grounds of the Heritage Park also stands the schoolhouse which was constructed in Dublin in 1856. Green's store (1861), around the corner from the Heritage Park on Dublin Boulevard, has been recently rennovated for use as a restaurant. Dublin has an active historical preservation association.

[1]Sites in the City of Dublin

4.2 SEISMIC SAFETY AND SAFETY ELEMENTS

4.2.1 GEOMORPHOLOGY

The Dublin planning area is located east of San Francisco Bay within the Diablo Range, a mountainous area extending from the northwest to the southeast, and a part of the California Coast Range Geomorphic Province. The range is discontinuous, being broken by erosional and structural valleys. The City of Dublin is located within a flat alluvial valley within the Diablo Range. The hills to the west are steep: the hills to the east are subdued and are approximately 1,200 feet maximum elevation. The highest point within the western portion of the extended planning area is 1,600 feet above sea level; the Dougherty Hills within Dublin are 600 feet and most of the city is approximately 400 feet.

4.2.2 GEOLOGY

The Dublin valley site is underlain by unconsolidated Quaternary (less than 2,000,000 to 3,000,000 years old) deposits. These deposits are primarily alluvial and estuarine in origin, and are composed of coarsely bedded, interfingering deposits of clay, silt, sand, and gravel. These sediments are underlain by a much thicker accumulation of older, consolidated sedimentary rocks. A major discontinuity, the Calaveras Fault, separates the valley lowlands from the hill area to the west. Figure 4-1 shows the geology in the primary planning area.

The hill areas east and west of Dublin are underlain by various types of sedimentary bedrock. These rocks are well portrayed by Dibblee (1980a, b, c). Sedimentary rocks in the planning area are commonly inclined at angles of 40 to 70 degrees from the horizontal, and are deformed into a series of sub-parallel folds, generally trending west-northwest. The major drainages cut, at an angle, across this structure.

The hills are mantled by soil and weathered bedrock, varying in thickness from a few inches to many feet. Common thicknesses are 3 to 10 feet. Numerous shallow and deep landslides occur within the hill areas. Some of these are pre-historic ("Quaternary"), i.e., they have not moved in historic times. Others are currently active.

4.2.3 TECTONICS

Introduction

Tectonics are the processes that cause deformation of the earth's crust. The most significant manifestations of tectonic processes are earthquakes, which result from the release of stored energy within the earth's crust along faults, or planes of weakness between two large masses of the earth's crust. Numerous faults exist in the San Francisco Bay Area. Several are considered to be active or potentially active, and are close enough to Dublin to cause damaging earthquakes.

The most widely held theory of the cause of earthquakes is the elastic rebound theory. The theory holds that masses within the earth's crust, held together by friction, slowly move past each other along faults. As the masses continue to move, strain builds up along the faults. Eventually, the strain becomes too great for the friction to withstand, failure occurs along the fault, energy is released, and an earthquake occurs. If the resisting friction is relatively limited, only small amounts of strain will build, and the resulting earthquake will be small. If, on the other hand, a large amount of strain develops, the earthquake that results when failure occurs will be large.

Several terms are important to an understanding of earthquakes. Fault trace is the line where a fault plane intersects the earth's surface. Fault planes can be vertical or inclined.

Different types of relative movement are shown in Figure 4-2. The focus is the point within the earth where maximum energy is released. The epicenter is the point on the earth's surface directly above the focus.

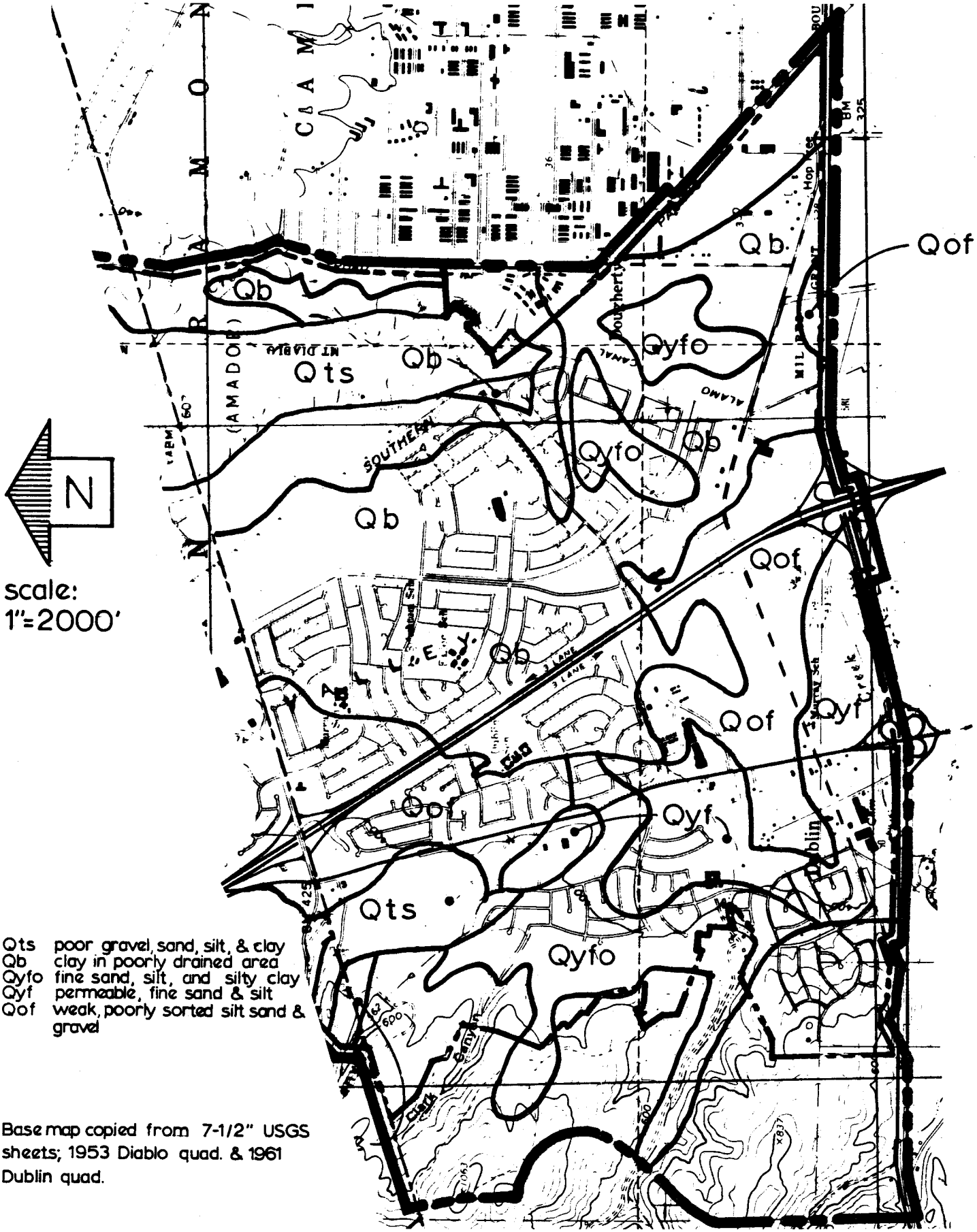
Earthquakes are measured in several ways. Magnitude is an indirect measurement of energy release. It is the measurement of the response of a seismometer to an earthquake. Various relationships are used to relate the measured seismograph response to a specific "base" seismograph. Magnitude measurements, named for Charles F. Richter, who developed the concept, are logarithmic. Each Richter magnitude increase of one unit corresponds to a measured wave amplitude of ten times greater and an energy release approximately 31.5 times greater than the lower number. Thus, a magnitude 8 earthquake releases 31.5 times more energy than a magnitude 7 quake, and 992 times more energy than a magnitude 6 quake.

There are several non-instrumental measurements of earthquakes. These intensity scales measure the effects rather than the energy release of an earthquake, and are based on reports of ground and building damage at different locations within an earthquake-affected area. The most commonly utilized scale is the Modified Mercalli (MM) scale, which categorizes damage on a Roman numeral scale of I (least) to XII (greatest) (Table 4-3). Intensity and magnitude measure different parameters, but can be compared for near-epicentral locations. Table 4-4 makes such a comparison.

Regional Tectonics

The San Francisco Bay Area is located within a seismically active region. About 12 damaging earthquakes have occurred within historic times (approximately 200 years). Numerous studies indicate that a major earthquake, comparable to the 1906 San Francisco Earthquake, should be expected once every 60 to 100 years (Oakeshott, 1969). This is an indication of expected frequency, not a prediction of a specific event.

Five earthquakes have caused major damage (or would cause major damage if they occurred today) within the San Francisco Bay Area. These and other significant temblors are shown in Figure 4-3; Table 4-5 describes seven significant quakes. Damaging earthquakes since 1950 are listed in Table 4-6. The five major earthquakes and several smaller quakes caused, or were capable of causing, damage to the Dublin area.



Source: DSRSD Parks and Recreation Master Plan

Figure 4-1: GEOLOGIC MAP - WITHIN CITY

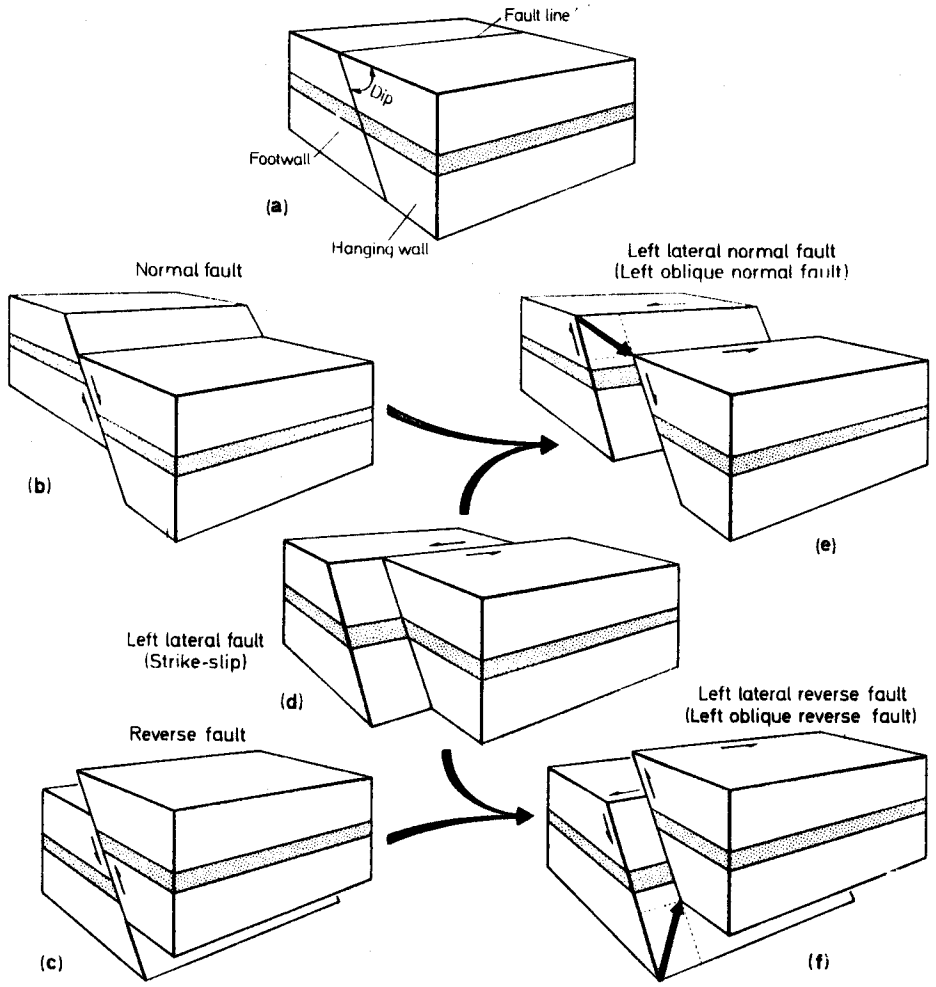
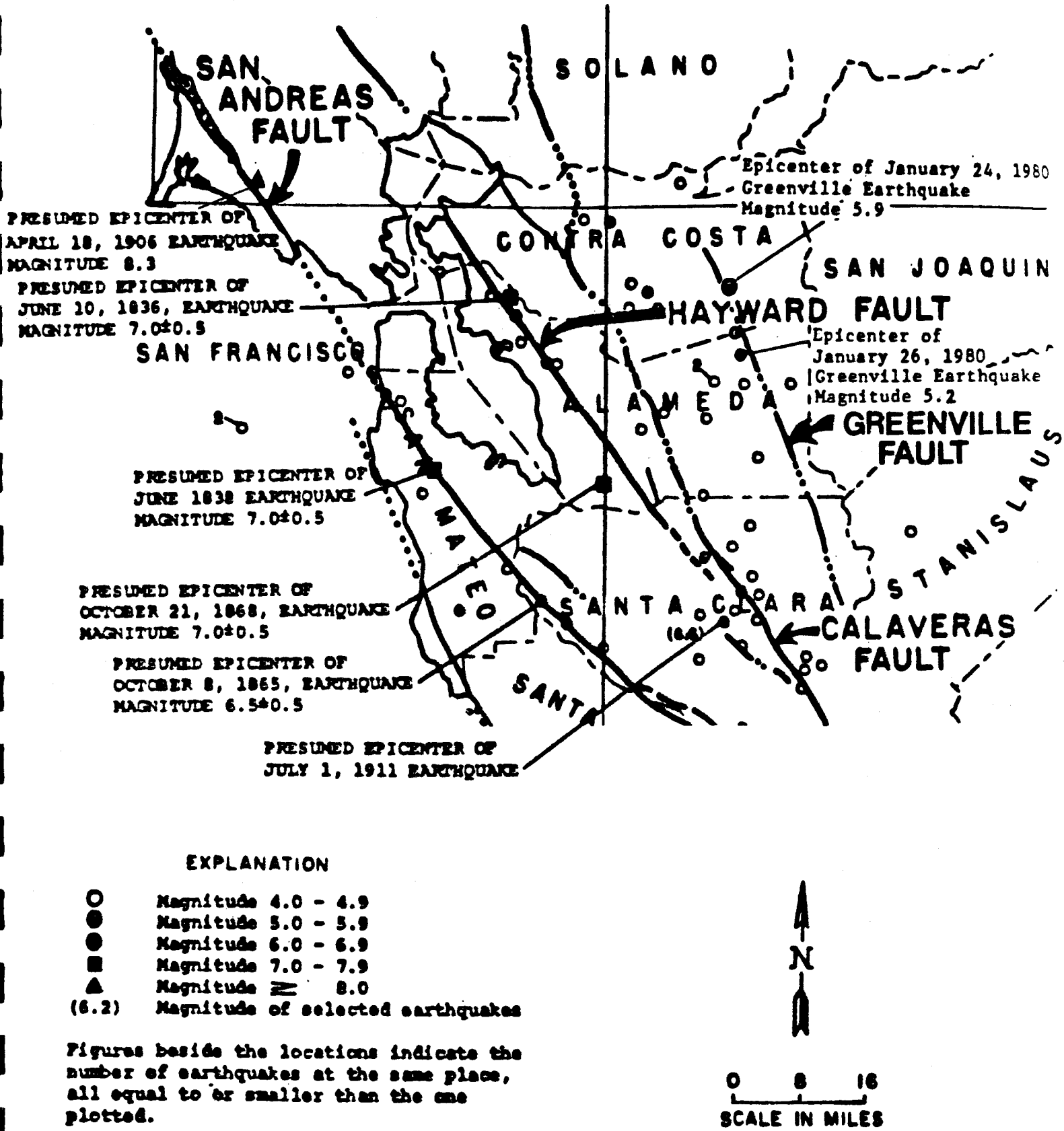


Fig. 1.7a–f. Diagrammatic sketches of fault types (a) names of components, (b) normal fault, (c) reverse fault, (d) left-lateral strike-slip fault, (e) left-lateral normal fault, (f) left-lateral reverse fault. (After California Geology, November 1971)

Source: Bolt et al, 1975

Figure 4-2: TYPES OF FAULT MOVEMENT



Source: Alameda County Planning Commission, 1982, Modified from Rodgers and Williams, 1974, Plate 2.

Figure 4-3: ACTIVE FAULTS AND EARTHQUAKE EPICENTERS IN THE SAN FRANCISCO BAY AREA

TABLE 4-3

Modified Mercalli Intensity Scale of 1931[1], (1956 version)[2]

Masonry A, B, C, D. To avoid ambiguity of language, the quality of masonry, brick or otherwise, is specified by the following lettering.

Masonry A. Good workmanship, mortar, and design; reinforced, especially laterally, and bound together by using steel, concrete, etc.; designed to resist lateral forces.

Masonry B. Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces.

Masonry C. Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.

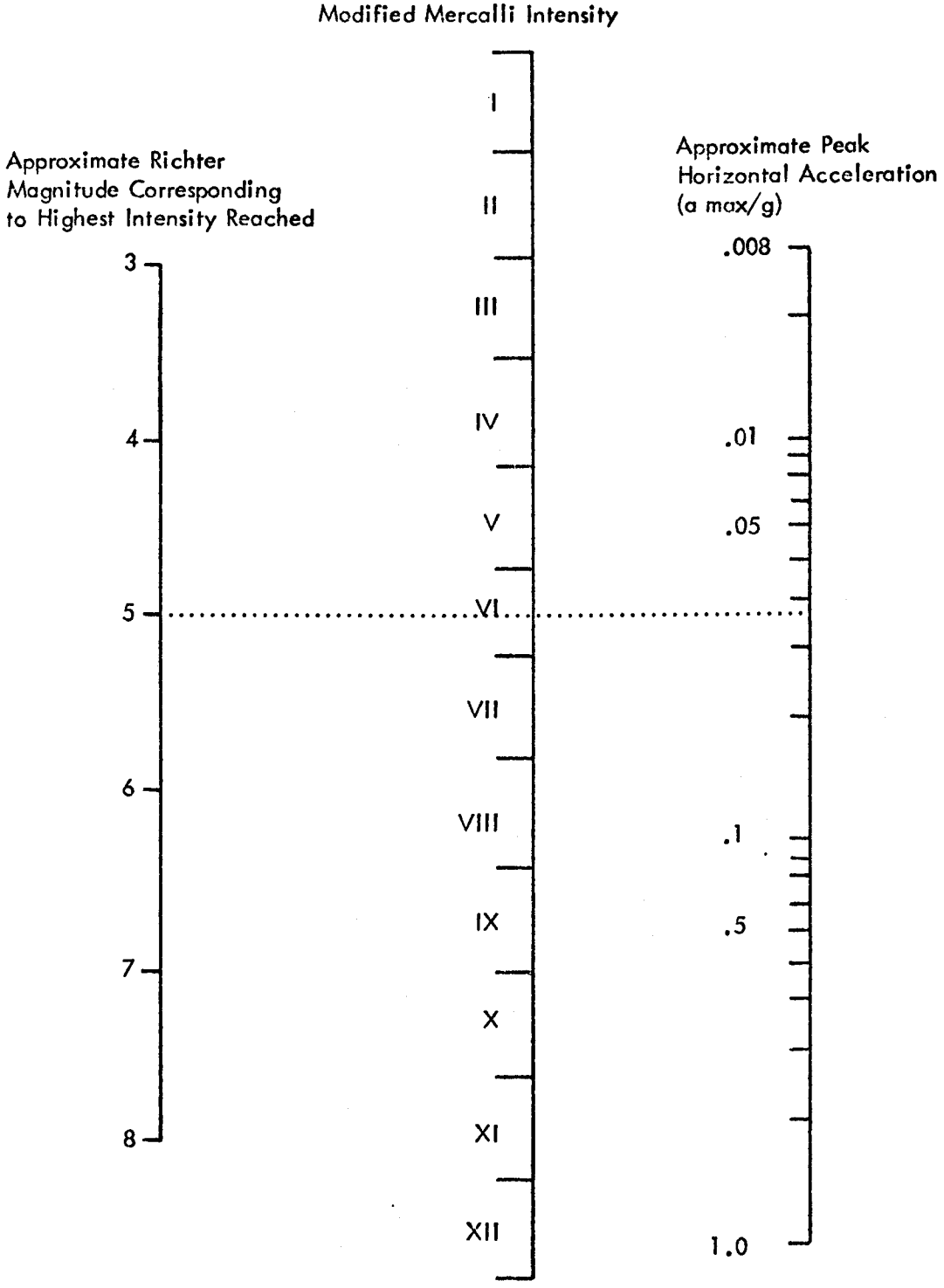
Masonry D. Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.

I.	Not felt. Marginal and long-period effects of large earthquakes.
II.	Felt by persons at rest, on upper floors, or favorably placed.
III.	Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.
IV.	Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV wooden walls and frame creak.
V.	Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.
VI.	Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry D cracked. Small bells ring (church, school). Trees, bushes shaken visibly, or heard to rustle.
VII.	Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices also unbraced parapets and architectural ornaments. Some cracks in masonry C. Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.
VIII.	Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.
IX.	General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. General damage to foundations. Frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluviated areas sand and mud ejected, earthquake fountains, sand craters.
X.	Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.
XI.	Rails bent greatly. Underground pipelines completely out of service.
XII.	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.

[1]Original 1931 version in Wood, H. O., and Neumann, F., 1931, Modified Mercalli intensity scale of 1931: *Seismological Society of America Bulletin*, v. 53, no. 5, p. 979-987.

[2]1956 version prepared by Charles F. Richter, *in Elementary Seismology*, 1958, p. 137-138, W. H. Freeman & Co.

TABLE 4-4



RELATIONSHIP BETWEEN MAGNITUDE, INTENSITY AND PEAK GROUND ACCELERATION

TABLE 4-5

MAJOR HISTORIC SAN FRANCISCO BAY AREA EARTHQUAKES

Date	Fault	Rupture Length (km)	Richter Magnitude
June 10, 1836	Hayward	Unknown	6.5-7.0
Late June 1838	San Andreas	Unknown	7.0
July 4, 1861	Calaveras-Sunol	Unknown	5.3
October 8, 1868	San Andreas	Unknown	6+
October 21, 1868	Hayward	30	6.7
April 24, 1890	San Andreas	10(?)	5.9
April 18, 1906	San Andreas	430	8.2

Source: Las Positas DEIR; Shedlock, et al., 1980.

TABLE 4-6

RECENT SAN FRANCISCO BAY AREA EARTHQUAKES OF MAGNITUDES GREATER THAN 5.0 SINCE 1950

Date	Fault	Location	Rupture Length (km)	Richter Magnitude
April 25, 1954	—	Watsonville	—	5.3
September 4, 1955	—	San Jose	—	5.8
October 24, 1955	Concord	Walnut Creek	—	5.4
March 22, 1957	San Andreas	Daly City	—	5.3
April 8, 1961	—	So. of Hollister	—	5.6
September 14, 1963	—	Chittenden	—	5.4
October 1, 1969	—	Santa Rosa	—	5.7
February 24, 1972	—	Hollister	—	5.1
November 28, 1974	—	Hollister	—	5.2
August 6, 1979	Calaveras	Gilroy	14.4-21.0	5.8
January 24, 1980	Greenville	Livermore	4.6-6.2	5.5-5.9
January 27, 1980	Greenville	Livermore	1.1	5.2-5.9

Source: Alameda County Planning Commission, 1982; Shedlock, et al., 1980.

Potential for Earthquakes, Ground Shaking and Surface Rupture

Two types of damaging earthquakes are anticipated for the Dublin area. The first is a major quake on a fault at some distance from Dublin, such as the San Andreas, Hayward, or southern Calaveras faults. The major earthquakes described in Table 4-5 are examples of such events. The second type is from a local source, such as the northern Calaveras, Pleasanton, or Greenville faults. Although the magnitude of quakes from these closer sources would probably be smaller, the intensity could be as great as the larger, more distant quakes.

Descriptions of historic earthquake damage to the Dublin area are limited, attributable to the sparse population of the area for many years. The 1906 earthquake caused the breaking of chimneys and the throwing of objects from shelves and counters. Several water tanks were damaged, and levee failure and structural damage occurred in nearby Santa Rita and San Ramon (Lawson, 1908). Modified Mercalli intensity was greater than VII. Landslide and lateral spreading activity were precipitated in the hills surrounding the City. The 1861 event initiated fissures and springs in the San Ramon Valley (Youd and Hoose, 1978).

Considerably greater damage, due to increased population density, would occur if these earthquakes were to be repeated in the future. The 1969 Santa Rosa earthquake caused the collapse of open trenches in Pleasanton. Continued local seismicity is indicated by the 1980 Livermore earthquake.

Several faults within the Tri-Valley area are classified as active or potentially active. These include the Calaveras and Pleasanton Faults, with traces passing through Dublin and Parks RFTA, respectively. The presence of two active or potentially active faults within the city indicates the potential for surface fault rupture. The Greenville and Las Positas Faults are located within the Livermore Valley to the east and south of the planning area.

The Calaveras and Pleasanton faults, both primarily right lateral strike slip, have been located on 7 1/2 minute (one inch equals 2000 feet) U.S. Geological Survey topographic maps by the California Division of Mines and Geology, as part of the Alquist-Priolo Special Studies Zones delineation program (see Geologic Hazards and Constraints map, Plan Policies Report). The fault locations were originally established in 1973 (Slossen, J.E.) as a preliminary determination. Several traces of each fault and a wide zone of study along the faults were delineated on the basis of published work. The faults were then re-evaluated in detail (California Division of Mines and Geology, FER-109, 1981 and FER-108, 1980 Strict criteria that a fault be "sufficiently active and well-defined with systematic offset" were applied in this re-evaluation. Several traces that may be fault-related but failed to meet this criteria were eliminated from the Special Studies Zone (Earl Hart, 1983, personal communication). The revised fault locations have been used primarily for this study, although the preliminary maps should be examined for studies of major structures.

The major active fault with rupture potential in the planning area is the Calaveras Fault, which transects Dublin parallel to and west of I-680. Several short branches of the fault are also mapped. The fault trace extends from Hollister, on the south, through Sunol and Dublin to San Ramon, where it is poorly defined. In the Dublin area there is evidence of recent (Holocene, less than 11,000 years) rupture of the fault

(California Division of Mines and Geology, 1981). Seismic slip (creep) along the fault has been noted between Hollister and Sunol, although not in Dublin (Page, 1982).

The Pleasanton Fault in eastern Dublin is more difficult to locate. Several traces were identified by Slossen (1973) on the basis of offsets in trenches, groundwater barriers, geophysical anomalies, and minor scarps. However, there are no systematic fault zones or indications of Holocene movement. If Holocene faulting has occurred, it is minor, discontinuous and distributive (California Division of Mines and Geology, FER-109, 1981), and thus impossible to predict. The remaining traces through Parks RFTA are inferred and might be eliminated by detailed site evaluations. The fault must thus be classified as "potentially active."

Surface rupture occurs during some earthquakes. The Special Studies Zones (Davis, 1982) for the Dublin Quadrangle delineate likely rupture locations; others may exist, but are not predictable. Surface rupture generally occurs along lines of previous rupture. Slight deviations, especially in alluvium, may occur. In addition, multiple traces may exist, and the fault trace may be only approximately located. For these reasons, the Special Studies Zone maps delineate a zone parallel to the mapped fault trace in which detailed site investigations for fault rupture hazards are required.

The maximum credible earthquake determined for the Dublin area is on the Calaveras Fault. This is a magnitude of 7.5 (Greensfelder, 1974). Site-specific ground motion parameters have not been determined, but should be resolved for all proposed major projects within Dublin. Surface rupture is also a potential hazard along the Calaveras and Pleasanton Faults. Dublin is subject to a severe shaking from more distant faults (e.g., San Andreas Fault), as well as the Calaveras and Pleasanton Faults. The flat-lying, alluvial parts of the area are more likely to be subjected to severe shaking than the hill areas.

Ground shaking is a complex earthquake phenomenon. The potential damage caused by an earthquake is related to magnitude, duration, and depth of the earthquake, soil and rock conditions at the site and along the seismic wave path, type of fault movement, slope/topography conditions, and distance to the causitive fault. Table 4-4 relates magnitude, intensity and peak ground accelerations, without accounting for ground conditions.

Earthquake waves change in velocity and period as they move through the ground. As they leave solid rock and enter less-dense alluvial and water-saturated materials, the waves tend to become reduced in velocity, increased in amplitude, and accelerations become greater. Ground motions are amplified and last longer. Structures situated on such materials often suffer greater damage than those situated on more solid rocks. Ground motion tends to increase with the depth of alluvium (Alameda County Planning Commission, 1982). Of particular significance is the site vibration period. The vibration period increases as the alluvial thickness becomes greater. All structures vibrate at a particular period. If this period is the same as the site period, ground motions are amplified in the structure. Particular care must be taken in Dublin in siting and designing any structure over two stories.

4.2.4 DOWNSLOPE MOVEMENT

Several forms of downslope movement affect Dublin and the adjacent hill areas. These include landslides, rock falls, debris flows, and soil creep. The first three phenomena occur under both static and seismic conditions.

Factors affecting downslope movement are groundwater conditions, rock and soil type, slope angle, proximity to erosion, seismic conditions, vegetation and alterations to the landscape by human activity, as follows:

- Increased groundwater levels generally decrease slope stability, both by adding weight to the soil mass and by reducing shearing resistance to sliding.

- Certain soil and rock types, such as soft sediments or surficial deposits, are more prone to sliding than other, more consolidated materials.

- Steeper slopes generally increase downslope movement.

- Undercutting of slopes by streams removes support, increasing susceptibility to sliding.

- Earthquakes can trigger downslope movement, especially if water levels are high. Earthquake-induced downslope movement has been documented in the San Francisco Bay Area.

- Deep rooted vegetation increases slope stability.

- Grading for development can decrease slope stability by removing support at cuts and surcharging slopes with fills or conversely, can increase slope stability by buttressing the lower parts of slopes.

Downslope movement in the Dublin area varies in nature. Major, deep slides occur mainly to the west, in the steeper, higher hills. These slides cover much of the east facing escarpment west of I-680, in places covering and in turn being broken by the Calaveras Fault. At some locations, especially in the newly developed areas of western Dublin, confusion exists as to whether certain discontinuities are fault or landslide related. Active deep and shallow landslides occur both east and west of Dublin. Their activity generally increases during wetter than average winters. Debris flows also occur on both sides of Dublin, although they are more common within the lower, but less resistant hills east of Parks RFTA.

Landslide and debris flow occurrence has been mapped by Nilsen and other investigators. Stereophotographic methods were employed, with a minimum of ground checking. Figure 4-4 shows landslide and debris flow distribution. It must be noted that this map gives only an indication of downslope movement. Some indicated areas may be free of significant movement; at other locations, movement may be missed due to heavy forest cover, movement more recent than the photographic coverage, or other reasons. Thus, it is not a definitive interpretation, and should not be utilized for site-specific studies, except as an indication of general conditions surrounding the site.

Downslope movement commonly occurs in hillside areas subject to human activity. Examples of human-induced failure are evident along highway cuts on I-580 west of

Dublin, and at the crest of Old Ranch Road north of Dublin, where it crosses the Dougherty Hills.

The potential for movement at or adjacent to a site must be evaluated during the feasibility stage of planning. Although most potential downslope movement may be mitigated, the expense and environmental and/or aesthetic damage may be prohibitive. Several landslide occurrences and mitigative measures are shown in Figures 4-5 and 4-6. The presence of active or potential downslope movement does not preclude development, but must be a major design factor.

The various types of downslope movement may be discussed as one group. Landslides are a potential hazard under both static and seismic conditions. In planning development of hillside areas, the worst case, i.e., saturated soil and a "design" earthquake, must be considered.

Soil Creep

Soil creep commonly occurs on hillsides in the Dublin area. The mechanism of creep is only partially understood. It is a slow process, and generally is non-catastrophic. However, because it is nearly ubiquitous in the Dublin area, and because it can slowly bend and destroy fences, retaining walls and structures with insufficient foundations, it should be an important consideration in development planning.

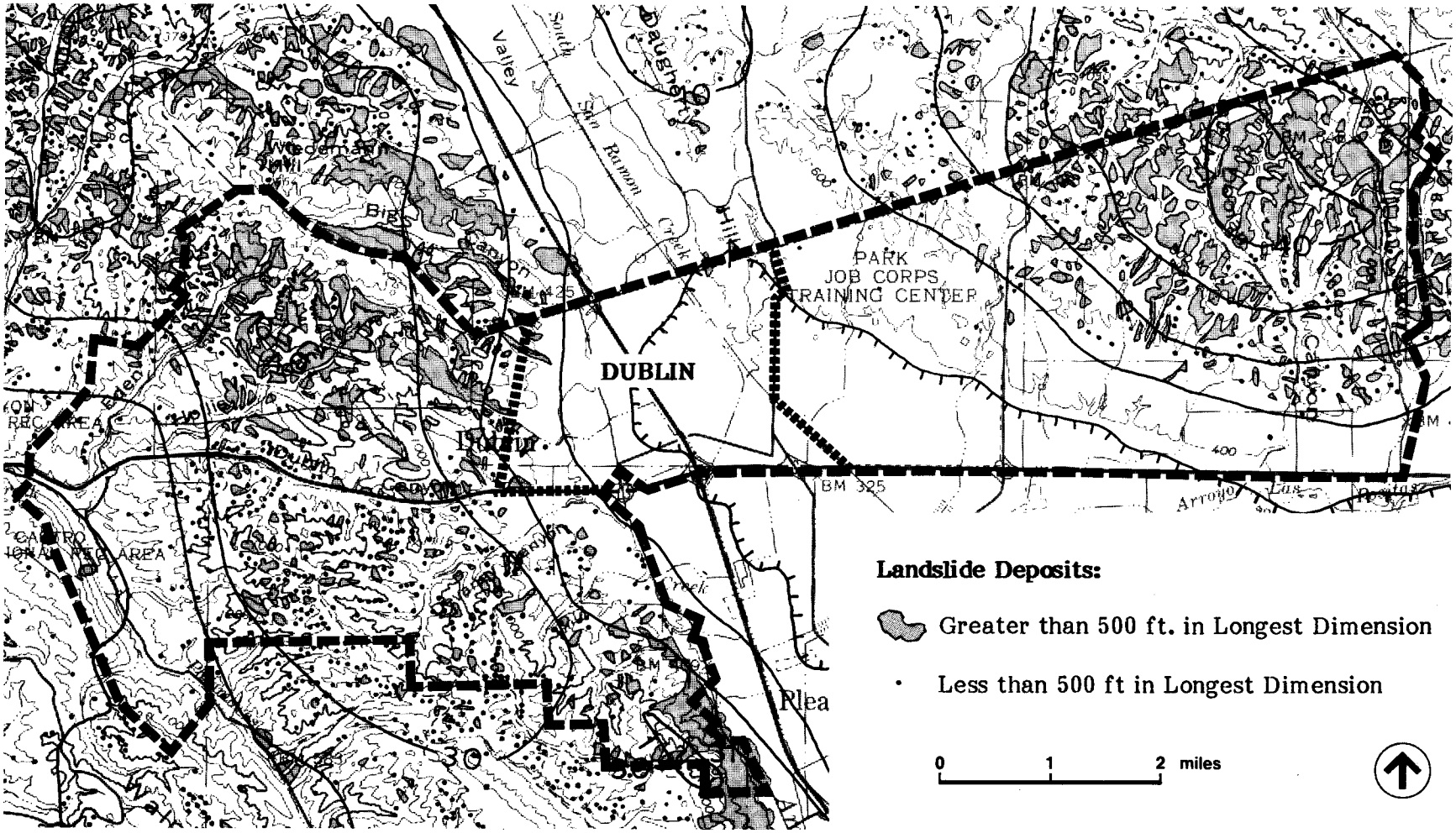
Landslides

A landslide (Figure 4-7) is the downslope movement of a coherent mass of soil or rock. Movement rates are commonly a few inches to feet per day. Landslides cover a significant portion of the Dublin area hills, between 20 and 50 percent of the land surface in some areas. The slides occur on the steepest hills to the west, as well as the Dougherty Hills and the hills east of Parks RFTA.

Three types of landslides are common. The first are very large, "ancient" Quaternary age slides. Some of these slides are up to 300 feet deep, are of the "rotational" type, and cover areas of several acres to square miles. These are common west and especially southwest of Dublin. Some geologists consider these slides stable. Others believe that abnormally wet weather, producing high water tables combined with a strong earthquake, could trigger movement on at least some of these slide masses. Movement of the Calaveras Fault, at the base of some of these slides, is especially likely to trigger renewed slide activity.

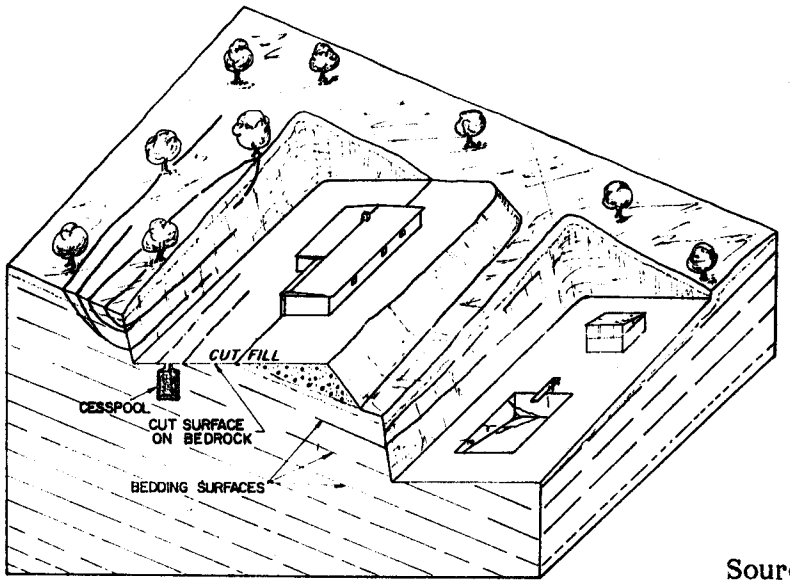
Other landslides are actively moving. These slides range from a few to many hundreds of feet in extent. Depth of these slides is normally on the order of several tens of feet. These slides can be individual bodies or masses of coalescing, smaller features.

The third type of landslide common to the Dublin areas is a shallow slip of less than 100 feet in extent and 10 feet in thickness. These occur in isolated areas, although they often coalesce in larger masses.



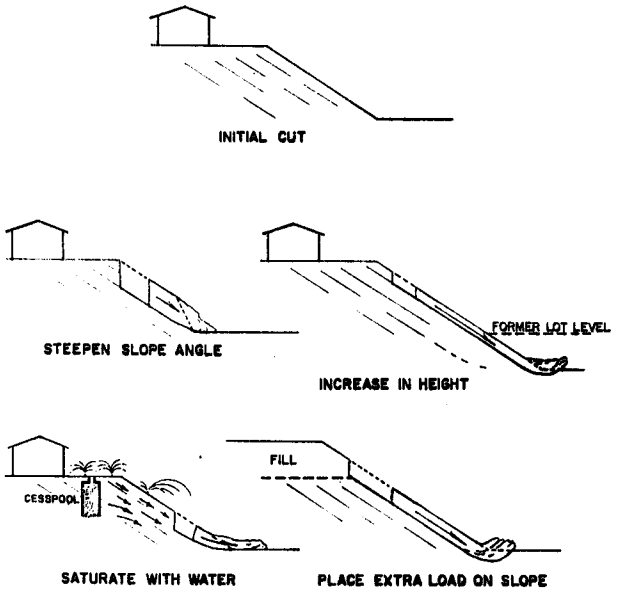
Source: Isopleth Map of Landslide Deposits, Southern San Francisco Bay Region, Wright and Nilsen, 1974

Figure 4-4: STUDY AREA LANDSLIDE DEPOSITS



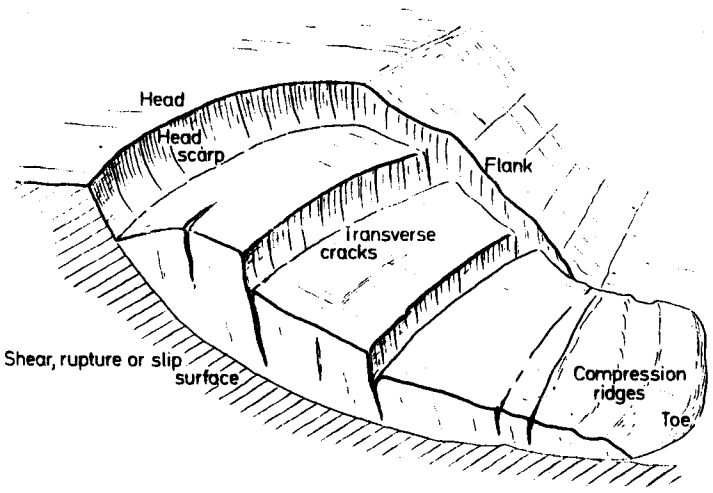
Source: Leighton, 1969

Figure 4-5: DEVELOPMENT OF MAN-MADE BEDROCK LANDSLIDES: A Naturally Stable "Dip-Slope" Has Been Made Unstable By Removing The Support From Bedding Planes

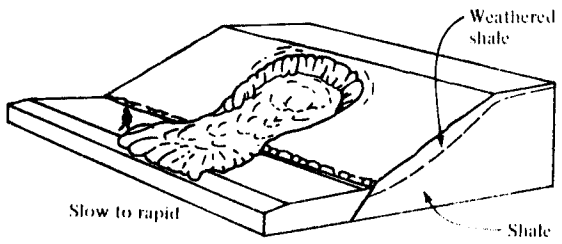


Source: Leighton, 1969

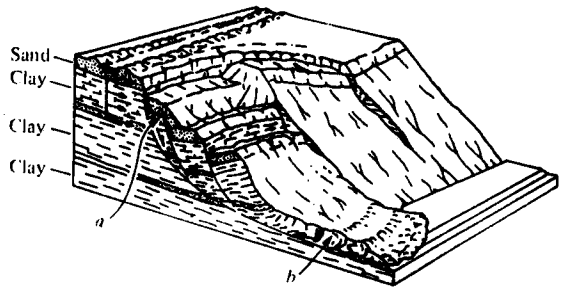
Figure 4-6: FOUR WAYS TO MAKE A STABLE CUT SLOPE UNSTABLE



A. Cross-sectional view of idealised landslide



B. Block diagram of flow (slow earthflow). Figure at left of foot of flow is author, drawn for scale. (*Modified from Varnes,* 1958.)



C. Block diagram of complex movement. (*a*) Slump; (*b*) earthflow. (*Modified from Varnes,* 1958.)

Sources: A. Bolt, 1975; B. and C. Pestrong, 1974

Figure 4-7: SCHEMATIC LANDSLIDE DIAGRAMS

Debris Flows

Debris or mud flows (Figure 4-7) occur under essentially the same conditions as landslides. However, they differ in that the material involved behaves as a viscous liquid, and commonly moves with greater rapidity than landslides. Debris flows are generally relatively thin, and can move significant distances from the slopes on which they originate to the adjacent stream flatlands. Some debris flows develop from highly fluid landslides; others occur directly from rainfall on a steep slope.

4.2.5 LIQUEFACTION

Liquefaction is a hazard in saturated loose granular material, generally when the water table is near the ground surface. It occurs when earthquake vibrations cause pore pressures within the material to increase. The water flows, and the material loses its strength, and thus its ability to support structures. Light, buried structures may float to the surface. Heavy structures on the surface may sink or rotate.

Liquefaction is a potential problem in alluvial valleys. Youd, et al, (1975) classify the liquefaction potential of Holocene alluvium in the San Francisco Bay Area with the depth of water less than 10 feet as moderate. This applies to part of the Dublin lowlands. High potential zones probably also exist.

Mitigative measures must be taken where geotechnical studies identify high or moderate liquefaction potential. In most cases, properly designed foundations will be sufficient. In some cases, a project might be unfeasible or uneconomic due to liquefaction potential.

4.2.6 SHRINK-SWELL POTENTIAL

Expansive soils are common within the Dublin area. These soils expand when wet, and contract as they dry. Shrink-swell potential is a minor problem throughout much of the planning area, and a significant problem in localized areas. Required preliminary geotechnical investigations will indicate a warning of shrink-swell conditions, and soil investigations will provide site-specific information on shrink-swell potential.

Expansive soils can damage certain types of buildings, especially those which are of slab-on-grade construction. Roads, driveways, and sidewalks are also damaged by cracking caused by expansive soils, causing potential injury to pedestrians and necessitating early replacement. Such conditions are thus an economic burden to the city and should be mitigated by proper sub-grade preparation and structural design.

4.2.7 LURCH CRACKING AND LATERAL SPREADING

Lurch cracking is commonly related to liquefaction; thus, it occurs mainly in alluvium. It has been observed in most earthquakes of magnitude greater than 6. It can also occur in weathered rock or soil, especially on slopes. The banks of streams are especially vulnerable.

The precise location of potential lurch cracking damage is difficult to predict; planning and design in relation to landslides and liquefaction should be sufficient to mitigate this phenomenon.

A related phenomenon is lateral spreading. When liquefaction occurs under a slope and adjacent to an open, unsupported face, the soil mass can move toward that exposed area. Streams, excavated channels and deep cuts in unconsolidated materials are the most likely locations for lateral spreading. Structures in these areas should be designed accordingly. Critical structures should not be located in potential lateral spreading areas.

4.2.8 DIFFERENTIAL SETTLEMENT

Differential settlement of poorly or incompletely compacted sediments or fill commonly occurs as a result of earthquake vibrations or of gradual settlement through time by consolidation due to weight of the fill mass. This process is especially common in areas subject to liquefaction.

Differential settlement must be considered in the design of any structure. Proper geotechnical studies will identify areas of potential settlement. Fills and liquefiable settlements are especially prone to this phenomenon. Structures which are situated astride two soil masses, such as fill and natural soil of a different density, and those structures which contain more than one structural element, are especially prone to this problem.

4.2.9 SEICHE AND TSUNAMI

A seiche is an oscillation in a body of water caused by earthquake motion or by the sudden filling of a water body by a soil mass. Seiches can overtop dams, resulting in the inundation of downstream areas. Seiche potential must be considered in the design of dams, water tanks and related structures. Structures located downstream from facilities subject to seiche damage should be designed with this potential in mind. It would be prudent to avoid locating major emergency or high occupancy structures at such locations.

Tsunami are seismically-induced sea waves that occur along coastal areas. Dublin is too far inland to be subject to tsunami.

4.2.10 SUBSIDENCE

Subsidence occurs in two ways. Regional subsidence may occur due to tectonic forces. There is little evidence for significant regional subsidence in the Dublin area. Movement along a fault during an earthquake may cause one side of the fault to move down relative to the other side. Although vertical movements have occurred in the past during earthquakes in the Bay Area, movement is primarily horizontal.

Subsidence also occurs due to groundwater pumping when the amount of water withdrawn is substantially greater than that recharged to the ground. This type of subsidence has not occurred historically in the Dublin area, as groundwater pumping has

been limited. If groundwater utilization increases significantly in the future, subsidence could occur.

4.2.11 HIGH WATER TABLE

Groundwater levels are at or above the ground surface in several areas, especially the lower hills west of downtown Dublin. This condition can generally be recognized by the presence of springs, and by high water levels in test borings and in trenches. A high water table is not a hazard. However, it does impact development by flooding utility trenches, invading basements, weakening foundations and roads, and infiltrating water and sewer pipes. A high water table also exacerbates landslide conditions.

4.2.12 FIRE PROTECTION

The Dublin San Ramon Services District provides fire protection with a sworn staff of 35 plus 12 volunteers. Full-time manning is six firefighters at Fire Station #1 on Donohue Drive at Amador Valley Boulevard and three at Fire Station #2 on Fircrest Lane at Alcosta Boulevard in San Ramon. The District enjoys an excellent #3 rating from the Insurance Service Office (ISO), the best rating reasonably achievable.

The present city is adequately protected with current staff and equipment, and an improvement fee of $550 per dwelling unit or per 2,000 square feet of commercial floor area is collected and set aside for equipment replacement.

The western foothills constitute a high fire hazard because of the large quantity of brush, steep slopes, and difficult access. If the DSRSD fire department were to assume primary responsiblity for protection in the eastern or western hills of the extended planning area, additional firefighters and equipment would be needed. DSRSD now sends one truck to fires in the western hills under a mutual aid agreement. The California Department of Forestry in Sunol has primary responsibility, but response time is about 20 minutes. If DSRSD were to add this area to the district, Chief Phillips would request that all homes more than 5 minutes from a station have automatic sprinklers. It would not be feasible to maintain a three-firefighter company in the foothills, although a station manned by volunteers might be practical if there were sufficient interest. Homes should have an available water supply of 10,000 gallons or more and the department would need a tanker truck, two pieces of grass fire equipment, and additional temporary staff during the summer fire season.

Service to the area east of Santa Rita would require one or two additional fire stations and a proportional staff increase.

4.3 NOISE ELEMENT

Noise level measurements for the General Plan were taken by Charles M. Salter Associates in May, 1983 at 10 locations throughout Dublin, including eight spot measurements and two 24-hour continous measurements. Both peak hour and off-peak spot measurements were taken, and in two cases nighttime levels were recorded. Results of the measurements are shown in Table 4-7. The following Community Noise Equivalent Level (CNEL)[1] values were tabulated based on the data from the two 24-hour samples and the various spot measurements. Unless otherwise noted, measurement points are 50 feet from the centerline of the outer moving lane of the street listed.

TABLE 4-7
CNEL VALUES

Site	No.	CNEL
Amarillo Court at edge of development on western hillside	1	50
San Ramon Road and Shannon Avenue	2	64
Cronin Park	3	60
Kolb Park	4	61
Village Parkway	5	61
Amador Valley Blvd. near Brighton Drive	6	68
In Sports Grounds midway between I-580 and Dublin Blvd.	7	67
Amador Valley Road at Amador Plaza Road	8	70
Elgin Lane opposite I-680	9	65
Padre Way at edge of development on western hillside	10	58

Traffic is the major noise source in Dublin and I-680 and I-580 are the predominnat noise sources, with Amador Valley Road, San Ramon Road, and Village Parkway Road also being major contributors. It is important to note that the noise levels vary significantly with the proximity to these noise sources; the residences closest to the freeways and the major roads are exposed to higher levels. Many communities have adopted a 60 CNEL as the maximum acceptable outdoor noise level in residential areas. Additionally, the State of California requires that all new multi-family housing projects exposed to a CNEl of 60 dB or higher are required to have an acoustical consultant assess mitigation procedures to reduce the indoor CNEL to 45 dB. It can be seen from the data that new residential developments along Amador Valley Road, San Ramon Road, Village Parkway, and those close to I-680 or I-580 could be considered unacceptable without proper mitigation.

Table 4-9 provides a means of comparing noise levels from different sources.

[1]Community Noise Equivalent Level (CNEL) is a descriptor for the 24-hour average noise level measured in decibels (dB) that accounts for the increased sensitivity of people during the evening and nighttime hours. Sound levels during the hours from 7 p.m. to 10 p.m. are penalized 5 dB; sound levels during the hours from 10 p.m. to 7 a.m. are penalized 10 dB. The dB scale is logarithmic; a 3 dB difference normally is discernable and a 10 dB increase is subjectively heard as a doubling in loudness.

TABLE 4-8 RESULTS OF NOISE MEASUREMENTS

Site No.	Location	Day ant Time of Measurement	L_{eq}*	L_{10}**	L_{50}	L_{90}	Comments
1	End of Amarillo Ct. 4 ft. from curb in front of 11606 Amarillo Ct. on sidewalk	5/17/83 3:11 pm	45	49	40	37	Sparse traffic on Amarillo Dr.; none on Amarillo Ct.
1	" "	5/17/83 5:12 pm	45	48	42	40	4 cars in 15 minutes
2	Corner of San Ramon and Shannon, 50 ft. from center of near lane of Shannon, 100 ft. from center of left turn lane of San Ramon	5/17/83 3:44 pm	62	65	62	55	Typical car passbys: 62-65 dBA; 350 cars in 15 minutes
2	" "	5/17/83 4:32 pm	63	66	62	56	7 trucks in 10 minutes; 395 cars in 15 minutes
3	50 ft. from center of near lane of York-Penn in playground on grass	5/17/83 5:41 pm	58	60	52	50	42 cars in 15 minutes
3	50 ft. from center of near lane of York-Penn in playground on grass	5/17/83 10:00 pm	54	57	50	46	Average car passbys: 61 dBA; 9 cars in 15 minutes
3	" "	5/19/83 1:30 pm	50	54	45	43	20 cars in 15 minutes
4	50 ft. from center of near lane of Brighton upon grassy slope next to tree. Directly across from 7377 Brighton	5/17/83 10:30 pm	55	58	52	49	Typical car passbys: 66 dBA; 21 cars in 15 minutes
4	" "	5/19/83 8:14 am	57	61	54	51	36 cars in 15 minutes
4	" "	5/19/83 12:38 pm	58	61	52	48	30 cars in 15 minutes

*The L_{eq} is the equivalent steady-state sound level that, in a stated period of time, would contain the same acoustic energy as the time-varying sound level during the same time period.
**The sound level in dBA that was equaled or exceeded 10 percent of the time; L_{50} and L_{90} are the levels equaled or exceeded 50 and 90 percent of the time, respectively.

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TABLE 4-8 (continued)

Site No.	Location	Day and Time of Measurement	L_{eq}*	L_{10}**	L_{50}	L_{90}	Comments
5	Village Parkway Rd. at Dublin Community Swim Center 50 ft. from center of near lane	5/19/83 8:40 am	63	65	60	55	165 cars in 15 minutes; typical passby: 63 dBA
5	" "	5/19/83 9:15 am	61	64	60	55	150 cars in 15 minutes
6	Amador Valley Rd. 15 ft. from center of near lane on sidewalk at 6849 Amador Valley Rd.	5/19/83 2:00 pm	64	69	58	48	Cars go about 30-35 mph 67 cars in 15 minutes
6	" "	5/20/83 8:03 am	64	69	60	53	Traffic turning left or to Brighton; 112 cars in 15 minutes
7	In Big Park between I-580 and Dublin Blvd. 650 ft. from right-of-way fence of I-580, same to center of near lane of Dublin Blvd.	5/19/83 3:20 pm	61	63	60	58	Approx. 750 cars in 15 minutes (westbround only) on I-580
7	" "	5/19/83 4:00 pm	61	63	60	58	" "
8	Amador Valley Rd. west of I-680	5/20/83 8:30 am	66	69	65	61	135 cars near lane; 90 cars far lane; 1 truck far lane in 15 minutes

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PLANNING ISSUES

1. Appropriate uses in areas of high noise exposure.

2. Acceptability of noise mitigation measures that reduce indoor noise to prescribed levels, but subject residents to excessive noise when windows are open.

3. Feasibility and likelihood of construction of noise barriers on freeways.

4. Visual character of noise walls along major arterial streets.

Existing and Projected Noise Exposure

Noise contour maps in the Plan Policies report show current areas subject to CNEL of 60 or more by 5 dB increments. Standards of land use compatibility are listed and implementation policies are proposed to reduce noise nuisances.

Section 65302 (g) of the Government Code requires that "a part of the noise element shall also include the preparation of a community noise exposure inventory, current and projected, which identifies the number of persons exposed to serious levels of noise throughout the community." Table 4-10 was compiled from the noise contours and an existing land use map.

TABLE 4-9

TYPICAL SOUND LEVELS

	Decibels, A-Weighted	
CIVIL DEFENSE SIREN (100')	140	
JET TAKEOFF (200')	130	
RIVETING MACHINE	110	ROCK MUSIC BAND
DC-10 FLYOVER (700')	100	PILE DRIVER (50')
TEXTILE WEAVING PLANT SUBWAY TRAIN (20') JACKHAMMER (50')	90	BOILER ROOM PRINTING PRESS PLANT
BULLDOZER (50')	80	GARBAGE DISPOSAL IN HOME (3') INSIDE SPORT CAR, 50 MPH
	75	PORTABLE LEAF BLOWER (50')
VACUUM CLEANER (10') SPEECH (1')	70	
	60	AUTO TRAFFIC NEAR FREEWAY LARGE STORE ACCOUNTING OFFICE
LARGE TRANSFORMER (200')	50	PRIVATE BUSINESS OFFICE LIGHT TRAFFIC (100') AVERAGE RESIDENCE
	35	MINIMUM LEVELS - RESIDENTIAL AREAS AT NIGHT
SOFT WHISPER (5')	30	
RUSTLING LEAVES	20	RECORDING STUDIO
	10	
THRESHOLD OF HEARING IN YOUTHS (1000-4000 Hz)	0	

NOTE: The distance (in feet) between the source and listener is shown in parentheses.

Source: Charles M. Salter Associates, Inc. from General Radio Company, 1972, and other data.

TABLE 4-10

1983 AND PROJECTED 2005 NOISE EXPOSURE

Noise Level (CNEL)	Persons Exposed			
	1983 Total	1983 I-680 Corridor	2005 Total	2005 I-680 Corridor
60-65	7,500	—	7,300	—
65-70	1,400	900	2,600	1,300
70-75	400	300	1,100	1,100
75-80	-0-	-0-	300	300
TOTALS	9,300	1,200	11,300	2,700

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CITY OF DUBLIN GENERAL PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

SCH # 84011002

February 8, 1984

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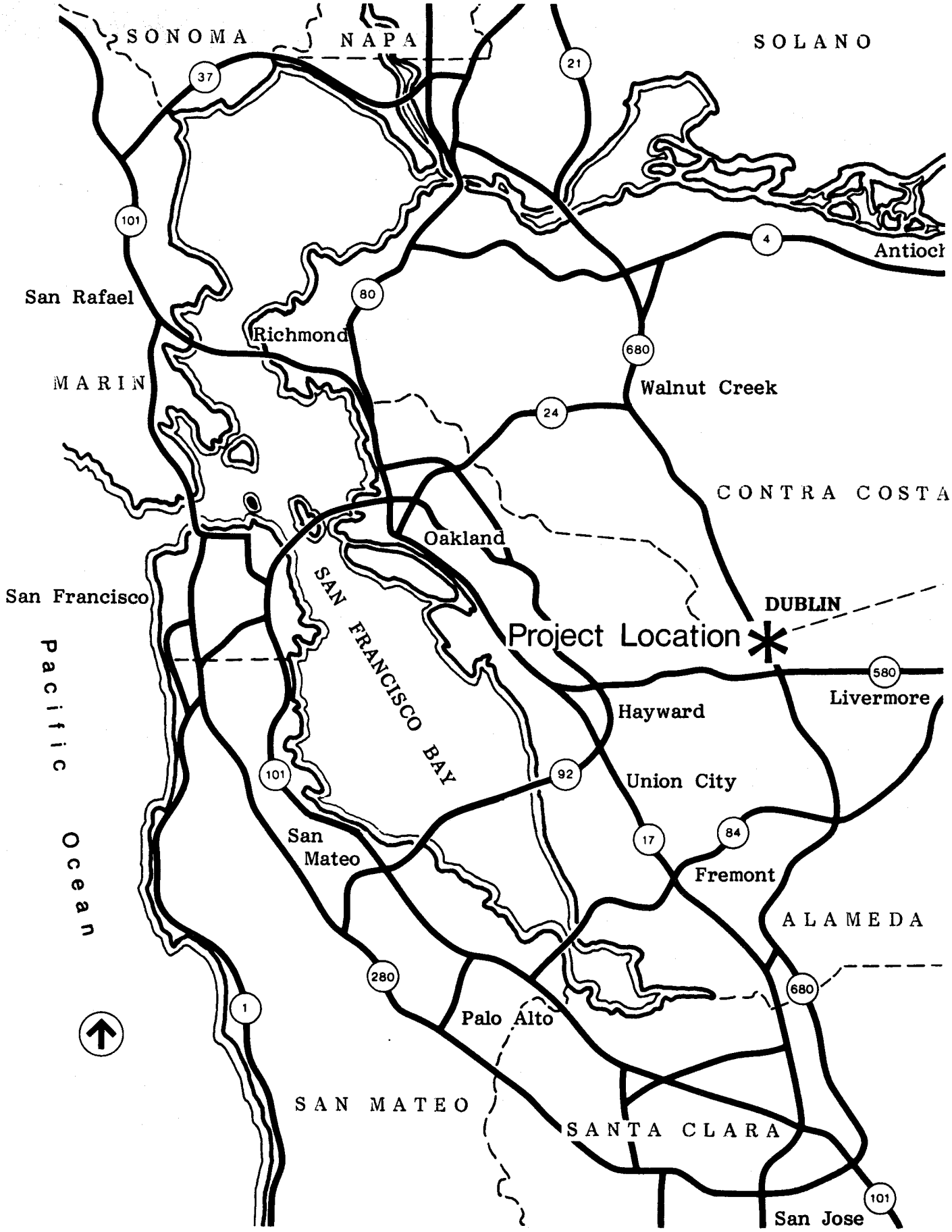

REGIONAL LOCATION

1.0 SUMMARY OF SIGNIFICANT ADVERSE IMPACTS AND MITIGATION MEASURES

This Environmental Impact Report (EIR) identifies the impacts of buildout of the City of Dublin's planning area as envisioned by the city's draft General Plan. Mitigation measures are discussed in the Analysis of Impacts section of the EIR, and are incorporated into the project as policies of the General Plan (Volume 1, Plan Policies Report). For purposes of this impact analysis, it is assumed that all mitigation measures (policies and programs included in the Plan) will be implemented.

The Summary outlines the significant adverse impacts and options for mitigation. It does not include full discussion of impacts nor discussion of all areas of impact. Reading of the Summary does not substitute for reading of the full environmental document and General Plan volumes.

Except for traffic, development within the primary planning area is not judged to result in environmental changes at the scale the EIR authors believe is significant for the purpose of analysis under CEQA.

1.1 INCREASED TRAFFIC

Build-out under the Plan policies will result in unacceptable levels of service at two Dublin intersections, and increased traffic volumes throughout the city. No mitigation is available at the affected intersections, as unacceptable levels of service are anticipated even after feasible improvements are complete.

Planned development in Tri-Valley communities other than Dublin will result in minimally acceptable (LOS D) or unacceptable service levels (LOS F) on both I-580 and I-680 regardless of Dublin's development policies, although the projected 21,000 jobs resulting from development in the extended planning area would make a significant contribution to the congestion. Mitigation measures are transit systems that would attract more than 10-15 percent of all trips includingBART, local transit, and a transportation corridor along the Southern Pacific railroad San Ramon Branch Line. Neither impact nor mitigation is within the independent discretion of the City of Dublin, and the success of mitigation efforts is predictable only within a broad range.

1.2 DESIGNATION OF AIR QUALITY

Anticipated traffic volumes over 20,000 vehicles per day would result in carbon monoxide "hot spots" and violation of applicable standards at times during the year when calm weather and peak traffic congestion occur at several locations in Dublin. An air quality monitoring station in Dublin would provide necessary data to implement specific mitigation techniques as warranted.

As individual projects are proposed for both the primary and extended planning areas the environmental review process will ensure consideration of air quality impacts and implementation of appropriate mitigation measures.

1.3 LOSS OF AGRICULTURAL AND GRAZING LAND

Urban development as proposed by the Plan would, in the long term, result in discontinuation of viable agricultural operations in most of the planning area. In the short term, urban expansion in accord with the Plan would have unavoidable adverse impacts on adjoining agricultural operations adjoining urban development including:

- Creation of incentives to plan for conversion to urban use.
- Potential complaints about odor, conflicts in road use, and vandalism.
- Disruption of lifestyle of owners who live on agricultural properties.

The Plan Policies Report includes measures intended to prevent premature urbanization of agricultural lands. In the long term, however, no mitigation is available for the loss of agricultural and grazing land envisioned by the Plan.

1.4 LOSS OF OPEN SPACE

The loss of open space that would result from buildout under General Plan policies is a significant impact on a visual and aesthetic resource that defines the City of Dublin. Mitigation measures include policies to prohibit development on prominent ridgelines and to retain woodlands and limit mass grading.

Even with these measures, the visual quality of open space around Dublin will be significantly affected.

1.5 IMPACTS NOT FOUND TO BE SIGNIFICANT

Hydrology and ground water quality, wildlife habitats, schools, public lands and utilities would be affected by development, but these changes are not judged to be significant. Residents' exposure to freeway noise and geologic hazards are not specifically affected by the Plan's proposals.

1.6 ALTERNATIVES

Two alternatives, No Project and High Density, are discussed in Section 4. Buildout under the Draft Plan would result in densities between the two alternatives.

2.0 INTRODUCTION

2.1 EIR APPROACH

This Environmental Impact Report (EIR) evaluates the probable environmental effects of the City of Dublin's General Plan as required by the California Environmental Quality Act (CEQA) and State EIR Guidelines. The General Plan consists of two documents, Volume 1, the Plan Policies Report, and Volume 2, the Technical Supplement/EIR. Both volumes constitute portions of the EIR and are incorporated by reference into this document. This approach reduces needless repetition.

Impacts associated with a General Plan cannot be predicted with the samed degree of accuracy as impacts associated with a specific development project, so analyses of impacts are necessarily general. This document assumes that all General Plan policies will be implemented and that all projected development will occur by 2005. Two alternatives to the proposed project are considered in Section 4.0 (No Project and High Density).

2.2 PROJECT DESCRIPTION

The Dublin General Plan includes the four square miles of the incorporated city and a small adjoining area to the west (primary planning area), and a 33 square mile area extending to the east, west and southwest (extended planning area). General Plan policies, constituting the full project description, are included in the "Plan Policies Report," with supporting information and discussion included in the "Technical Supplement." For purposes of analysis, the "project" is the level of development envisioned by the General Plan at city build-out as compared to current conditions.

The plan distinguishes between the primary and extended planning areas. At this time the land use plan for the extended planning area is schematic in nature. Due to the limited amount of remaining undeveloped land in the city, the General Plan for the primary planning area is in many cases site-specific. This EIR is not a substitute for project EIRs, but it provides information that can reduce the number of projects requiring EIRs and can allow project EIRs to be more narrowly focused.

The primary objective of the General Plan is to provide a policy guide for decisions on future physical development. Additional functions of the plan are discussed in Section 1.3 of the Plan Policies Report. The "guiding policies" presented in each section of the Plan Policies Report present the objectives for the individual elements of the plan. The plan is also written to satisfy state planning law requirements. The EIR will be used as a tool in the General Plan review and approval process.

The principal components of the project as defined by CEQA include, for the primary planning area, development of vacant land at medium and medium-high residential densities; intensification of land uses in downtown Dublin; conversion of school sites to residential use; creation of a transportation corridor on the Southern Pacific Railroad right-of-way and other improvements to the circulation system.

Principal components of the plan in the extended planning area are residential development at single family densities and commercial/industrial development on land

currently in an agriculatural preserve. Development in the extended planning area would require provision of public services and facilities currently unavailable. By contrast, in the primary planning area, sites identified for development or intensification are mainly infill sites that can be efficiently served.

2.3 ENVIRONMENTAL SETTING

Both volumes of the General Plan document the environmental, social and economic conditions of the planning area. In Volume 1, Section 1.2, Development History, and Section 1.7, Subregional Development Trends, establish the framework in which choices regarding Dublin's future development are made. In Volume 2, Section 4.2, Seismic Safety and Safety, Section 2.2, Open Space, and Section 4.1, Conservation, describe the physical environment of the planning area. The Housing Element, Section 3 includes an inventory of housing resources and analysis of housing needs as required by state law.

2.4 POPULATION, HOUSING, AND EMPLOYMENT

With only 167 acres of undeveloped land available for residential development in Dublin, housing and population increases will result in few significant changes in the city's environment. As can be seen from Table 2-1 in the Land Use Element, 76 percent of the city's projected housing units are existing or approved. The table in the Analysis of Alternatives section of the EIR illustrates that the greatest difference in projected population increase resulting from the project and its alternatives is less than fifteen percent.

Under the proposed Plan, the City's housing stock would increase by 1,930 units, representing 31 percent of existing and approved units. The mix of unit types would change, with the multi-family units share rising from 9 percent in 1983 to 37 percent at build-out. Anticipated population increase is 64 percent above the 1983 estimate of 13,700.

Population and housing projections for the extended planning area are presented in the Land Use Element. These are rough estimates based on amount of land under 30 percent slope and may change as a result of detailed site studies and availability of public services. Employment figures in the extended area could vary significantly from the projected figures because businesses attracted may employ 5 to 50 employees per acre.

Another major variable in the projections of commercial/industrial development in the extended planning area is the disposition by Alameda County of land which is now part of the Santa Rita prison grounds. With plans for the rebuilding of the prison underway, County officials expect that some of the freeway frontage will be declared surplus and sold or leased by the County. The Plan assumes that approximately 180 acres will become available; the actual figure may be considerably higher or lower.

Several sections of the General Plan discuss the issue of jobs/housing balance, i.e. the ratio between jobs and employed and residents in a given area. Valley-wide jobs/housing balance is a major subregional problem because planned employment, if attained, would result in a net in-commute. In this EIR jobs/housing balance is not

discussed as an environmental impact. Rather, the effects of lack of jobs/housing balance are considered directly. For example, jobs/housing imbalance is expected to increase total traffic, so the EIR will consider traffic, air quality and noise and, as appropriate, note the relationship of these factors to the imbalance of Valley-wide jobs and housing.

3.0 ANALYSIS OF IMPACTS

3.1 AIR QUALITY

The air quality impacts of the project would result almost exclusively from increased automobile travel. Section 7.4 of the Technical Supplement discusses the natural factors affecting air quality in the Tri-Valley, regulation of air pollutants, and the history of air quality in the Dublin area.

Air quality standards are set by the Federal Government and the State of California. The Bay Area Air Quality Management District regulates air pollution form stationary sources; the California Air Resources Board sets motor vehicle emissions standards, and the Metropolitan Transportation Commission is the principal agency involved in development and improvement of transportation. Given this established network of agencies working to maintain and improve air quality, the City of Dublin does not have a major role in air quality regulation. The significance of the plan's impact on air quality stems from the effect of designated land uses on activities that generate air pollutants, most notably automobile travel.

Historically, photochemical oxidant, also known as ozone, or, more commonly, smog, has been the Valley's most serious air quality problem. Ozone levels can be most efficiently reduced through the control of hydrocarbon emissions. The fact that there is no one major source of hydrocarbons released into the atmosphere makes their control particularly difficult. Automobile emissions are a major source, despite increasingly strict emissions controls. With increased automobile travel air quality deteriorates incrementally. The overall effect of regional employment growth at the scale anticipated in the Tri-Valley without corresponding housing increase will be in increased travel and decreased air quality. In addition to the historic smog problem, increased traffic may create localized carbon monoxide problems.

Within the City limits, increased traffic resulting in unacceptable Levels of Service at two Dublin Boulevard intersections and traffic volumes over 20,000 may result in localized carbon monoxide "hot spots." The severity of these impacts will vary depending on the nature and proximity of adjacent land uses and on the weather. Carbon monoxide (CO) problems will be localized, with greatest air quality problems where traffic flows are high, levels of service are low, and the air is calm.

Mitigation

Localized carbon monoxide problems should lessen with time as the automobile fleet turns over and new, cleaner cars come into use, and as the CO standards are inforced and the Motor Vehicle Implementation and Maintenance program is implemented. In order to make available information about carbon monoxide generation, the city should request that the Bay Area Air Quality Management District establish a monitoring station in downtown Dublin, as the project's greatest air quality impacts are within the city and air quality data is currently available only from the Livermore station.

The impact on air quality of specific projects in both the primary and extended planning areas will be considered through the environmental review process.

3.2 HYDROLOGY

Like air quality, water quality is protected by federal, state and regional agencies. Section 7.2 of the Technical Supplement discusses the hydrology of the planning area.

Given the limited amount of vacant land in the city, development in the primary planning area consistent with the proposed Plan would not significantly affect surface or groundwater quality if mitigation measures regarding erosion and siltation control are implemented. The location where stream bank erosion is most likely to become a problem is along the banks of Alamo creek, east of the Dougherty hills.

In the extended planning area, water quality will be affected by the dramatic changes in land use envisioned by the Plan. The increase in impervious surfaces will cause increased runoff, and commercial and industrial activities may lead to infiltration of the groundwater supply by industrial pollutants. Residential land use results in the release of many harmful substances in everyday use, such as fertilizers and pesticides, solvents and oils. Any urbanization establishes the presence of these pollutants where previously rainwater percolated directly into the groundwater supply or flowed into streams.

As groundwater is not currently part of the potable water supply, potential pollutants would not have an immediate impact on the population. However, contaminants in groundwater disperse slowly, and the potential future demand for groundwater is just one reason for continued protection of the water supply.

Mitigation

Several mitigation measures are included in the Plan Policies report, Section 7.2. These include enactment and enforcement of ordinances requiring control of erosion and sedimentation, as well as on-site runoff control.

3.3 OPEN SPACE

The proposed General Plan would have significant effects on agricultural open space which occupies more than 90 percent of the private land in the extended planning area. Full development of the business park and single family residential areas indicated on the plan would occupy 2,600 acres or 12 percent of the extended planning area. Before the designated sites are fully developed, applications for amendments to the General Plan to expand the urban area would be likely. Urban development as proposed by the plan would have unavoidable adverse impacts on adjoining agricultural operations including:

- Creation of incentives to plan for conversion to urban use.
- Potential complaints about odor, conflicts in road use, and vandalism.
- Disruption of lifestyle of owners who live on agricultural properties.

Business park development on the north frontage of I-580 east of Tassajara Road would significantly affect the area's visual character by converting agricultural land to urban use. Approved business park development west of Collier Canyon Road in

Livermore, similar development south of I-580 adjoining the Livermore Airport, and Pleasanton General Plan designations to the west would create a continuous urban area along both sides of the freeway except for an agricultural clear zone to be maintained adjoining the Livermore Airport.

Visual impacts resulting from residential development in the east and west hills of the extended planning area would vary greatly depending on the specific site. Three-quarters or more of the residential land designated is on low ridges or knolls, or in canyons where development would not be seen by freeway travelers. Where development on exposed slopes is proposed, it would significantly alter existing views of natural hillsides.

Mitigation

No mitigation for the loss of agricultural open space is available. Plan policies would require denial or mitigation of urban development proposals that would have "significant adverse effects on adjoining lands remaining under (Williamson) contract," and would regulate the location of development to lessen visual impacts.

Were development of agricultural open space prohibited in the Dublin planning area, the cumulative effects would be somewhat increased pressure for development of similar land at the edges of the Tri-Valley or for development of prime agricultural land in western San Joaquin County. With less Tri-Valley land available, homes would cost more and new employers would find the area slightly less attractive.

3.4 HABITATS

The biotic habitats of the planning area are discussed in Section 7.3 of the Technical Supplement. The most unusual and valuable habitat in the planning area is the area to the west of the City which forms part of the ridgelands stretching from Santa Clara to Contra Costa counties. Development in this area is envisioned by the plan, with use of mitigation measures relating to protection of riparian vegetation and watercourses, and oak woodlands. Other policies are intended to protect the scenic quality of the ridgelands by prohibiting development on visible ridgelines and limiting mass grading.

No endangered species or rare habitats have been identified in the planning area. Impacts on the scenic quality of the ridgelands is mitigated to some extent by the policies of the General Plan while individual environmental factors would not be significantly affected by development in the ridgelands, residential development at single family densities would have a significant impact because of the combined function of the ridgeland as a natural habitat, and scenic and open space resource.

The grasslands of the eastern planning area, while considered of unusually high value as grazing lands, are less distinctive habitats, and the impacts of development would not be significant in relation to habitat value.

Mitigation

Policies for the protection of riparian areas and oak woodlands are included in Sections 7.1 and 7.3 of the Plan Policies report.

3.5 SEISMIC AND GEOLOGIC HAZARDS

Geology and seismic safety are discussed in Section 7.0 of the Plan Policies Report and Section 4.2 of the Technical Supplement.

New development can create seismic and geologic hazards in one of two ways: either by increasing the potential for occurence of seismic or geologic events as a result of inadequate design, or by locating a project so as to expose people to hazards. The first type of hazard is frequently created by inappropriate site planning or construction techniques, as illustrated in figure 4-6, Technical Supplement. The second type is created by designating areas with recognized geologic hazards for human occupancy.

Few locations in the Bay Area are without natural hazard. While the natural constraints and hazards posed by some sites in the planning area must be recognized and taken into account in planning efforts, it is important to note that the result of development in the extended area is more likely to be movement of people from one hazardous area to another than into an area of hazards from an area with none.

While specific sites designated for development on the General Plan may be discovered, through detailed geotechnical investigation, to be unsuitable for development, the project does not have a significant impact relating to exposure to seismic and geologic hazards.

Mitigation

The mitigation measures which form the implementation policies section of the Seismic Safety and Safety elements establish regulations for siting of structures and required geotechnical studies, and are intended to prevent creation of hazards through human action as well as to reduce exposure to natural hazards.

3.6 TRAFFIC

If development in Tri-Valley communities other than Dublin occurs as planned, it will result in minimally acceptable or unacceptable service levels on both I-580 and I-680 regardless of Dublin's development policies, although the projected 21,000 jobs resulting from development in the extended planning area would make a significant contribution to the total. Section 5.0 of the Plan Policies Report and Section 2.4 of the Technical Supplement discuss traffic.

Except for eastward extension of Dublin Boulevard, the proposed plan does not add new routes. San Ramon Road will continue to carry through traffic and Dougherty Road north of Dublin Boulevard will serve primarily trips to and from Contra Costa County.

Freeway congestion or congestion at intersections that provide access to any interchange will cause drivers to seek alternative routes. As employment in Pleasanton and San Ramon increases, drivers wishing to avoid a congested freeway or interchange may use Dublin Boulevard, Amador Valley Boulevard, or Alcosta Boulevard, and would increase their use of San Ramon Road and Dougherty Road. Construction of the downtown I-680 interchange, as proposed by the General Plan, would attract trips with a Dublin trip end away from congested intersections on Dublin Boulevard, but also

would attract some through trips if other interchanges (San Ramon Road, Dougherty, or Hacienda Drive) are congested. A Dublin Boulevard extension would connect downtown Dublin and the proposed business park east of Parks RFTA. If I-580 is congested, it also would attract through trips to Contra Costa County or trips that otherwise would use the Alcosta interchange to reach northern Dublin.

The Dublin Boulevard Traffic Study (TJKM, 1984) projects a volume/capacity (v/c) ratio of 1.24 at the Dublin Boulevard-San Ramon Road intersection, indicating an unacceptable future level of service (LOS F). No further mitigation is available; LOS F is expected when Dublin is fully developed and improvements to Dublin Boulevard are complete.

An unacceptable level of service is also probable at the Dublin Boulevard-Dougherty Road intersection. Continuation of present conditions would likely result in LOS D (.87 v/c ratio), the lowest acceptable level of service. With the planned construction of an eastward extension of Dublin Boulevard from Dougherty and assumption of additional development in Contra Costa County (Gumpert Ranch) the level of service at the intersection would decrease.

The model used for analysis of the Dublin trafficways network assumes continued use of most direct routes and did not assign excess capacity to alternative routes. It is possible that the new I-680 downtown interchange would provide relief for congested intersections.

Although modeling assumptions relating to intensity of development or travel habits may include significant errors, it is highly likely that both of these intersections will operate at LOS F. The results will be lengthening of the peak hours of travel, shift of travel modes, and diversion of trips to the proposed downtown and Alcosta I-680 interchanges and the Hacienda I-580 interchange to the extent that greater capacity remains available at those locations.

Mitigation

Residential densities for remaining uncommitted land in Dublin could be reduced, but this would not ensure better intersection service levels because trips between Contra Costa County residential and employment areas and Pleasanton employment and residential areas likely would increase to absorb available capacity as drivers avoid congestion elsewhere.

The proposed plan includes BART, local transit, and the SP Transportation Corridor (potential light rail, bus, or trafficway) as traffic mitigations. The plan rejects reduction of residential density in the primary planning area as a mitigation because regional travel would be increased and Housing Element goals would be compromised without sufficient assurance that traffic congestion would be mitigated. The proposed plan also rejects elimination of proposed business park development east of Parks RFTA because this site is as well suited to the proposed use as other sites on which development has been proposed or commenced. If reductions in planned employment

are necessary to ensure a workable transportation system in the Tri-Valley, the Dublin extended planning area should be entitled to a proportional share of available capacity.

The effective mitigation measures would be major expansion and reconstruction of transportation facilities, including freeways, or substantial reduction in planned business park and residential development in the Tri-Valley. The first mitigation is infeasible and the second is beyond the control of the City of Dublin. It should be noted that F service levels are common during peak periods at points in many Bay Area commute corridors.

3.7 NOISE

Noise is discussed in Section 8.3 of the Plan Policies Report and Section 4.3 of the Technical Supplement. Noise impacts are defined by the 1983 and 2005 Noise Exposure Contours Maps in the Noise Element. The addition of 2,700 persons residing in areas subject to at least marginally unacceptable noise environment by 2005 is not significantly affected by the plans proposals, but is the result of development decisions outside the planning area that increase freeway volumes.

Mitigation

The General Plan proposes mitigation by constructing noise barriers where they would be effective.

3.8 SCHOOLS, PUBLIC LANDS AND UTILITIES

Section 4.0 of the Plan Policies Report and Section 2.3 of the Technical Supplement discuss schools, public lands and utilities. Proposals for schools and utilities serving the extended planning area are not offered in the General Plan, and will not be considered in this EIR.

Schools

As can be seen from Table 2-4 in the Technical Supplement, Murray School District built capacity will continue to exceed enrollment under the draft Plan or any of the alternatives considered by this EIR. However, K-6 enrollment may exceed planned capacity slightly in the eastern part of the city and more substantially in the western part of the city.

The School District has flexibility in accommodating anticipated enrollment. West of I-680 the Dublin school, now leased to a private school, may be needed. As long as the District maintains the facility it will have the option of re-opening it to serve anticipated new development. In the eastern part of the city, where planned capacity is for approximately 200 students than anticipated at city buildout, portable classrooms or shifted attendance areas could provide capacity as needed on existing sites.

Public Lands

The city's planning area includes three major public holdings: Parks RFTA, Tassajara Creek Regional Park, and Santa Rita Prison. The Plan does not envision major changes in the operations of any of these areas, and does not have a significant impact on them.

Utilities

Sewage treatment and disposal and water supply are the two utilities issues of greatest concern in the planning area.

Additional wastewater disposal capacity is necessary before many of the Valley's proposed projects are completed. While a moratorium on development may be necessary if a new disposal system is not developed promptly, lack of disposal capacity is unlikely to act as a permanent constraint on development in the Valley. Given the extent of planned development outside of Dublin's planning area the project itself does not have a significant impact on the sewage disposal capacity.

Additional development envisioned by the draft plan may tax the capacity of the water supply system.

Mitigation

No mitigation is necessary for impacts on schools and public lands. Dublin is participating in a wastewater disposal study in an attempt to meet the sewage disposal demands of development valleywide. While the General Plan has significant effects on water and sewage disposal systems, these effects are commensurante with development capability of the site and have been anticipated. The appropriate mitigation is financial participation in expansion of the systems.

4.0 DESCRIPTION AND ANALYSIS OF ALTERNATIVES

The planning process leading to the draft General Plan for Dublin used an analysis of options approach to explore issues and alternatives for the city's future development. Working Paper #3, Analysis of Alternative Sketch Plans, discusses three alternatives in detail. The draft plan combines features of two of the three sketch plans considered earlier in the planning process. For CEQA purposes a "high density" alternative and a "no project" (current zoning) alternative are compared with the draft plan.

Several components of the alternative plans remained as constants throughout the planning process. These included acquisition of a five acre neighborhood park on the east side of the Dougherty Hills, as well as several implementing policies regarding conservation: prohibition of development in slide-prone areas, preservation of oak woodlands and riparian vegetation, and designation of steep slopes (generally over 30 percent) as permanent open space.

All of the alternatives plans assume improved I-680 freeway access to Dublin achieved through the construction of a new interchange between Dublin and Amador Valley boulevards. Additionally, all designate a road connecting Amador Plaza Road and Regional Street, improving access to the area between Dublin Boulevard and I-580, and distribution traffic from the proposed BART station to three Dublin Boulevard intersections.

In the extended planning area all of the alternatives envision commercial/industrial development on the relatively flat land in the eastern part of the planning area, but extent and intensity vary. Measurements of developable acreage in the hill areas are very rough because the true cutoff point for development on steep lands can be determined only during site planning and because access to some otherwise developable land may be difficult.

Some of the Plan policies could be implemented under any of the alternatives or the draft plan, as they call for programs or regulations rather than decisions on the use of specific parcels. These include housing program strategies, safety and seismic safety policies, and other programs and regulatory policies presented throughout the Plan.

Description of Alternatives

The alternatives to the draft Plan have identical circulation systems, but differ in their land use proposals with the main difference being residential density.

No Project. The "no project" alternative is assumed to be build-out of the Primary Planning area under Alameda County zoning adopted by the City following incorporation. In analyzing this alternative, zoning consistent with densities approved on adjacent parcels was assumed for sites in the primary planning area but outside of the incorporated area.

The No Project alternative minimizes park acquisition by developing a portion of the Shannon Commmunity Center as a neighborhood park and by assuming that five acres of the Murray School site could function as a park by formal or informal agreement

with the Murray School District. Kolb Park and the rest of the Fallon School site would be subdivided for single family homes, thereby limiting access to a neighborhood park for residents of the central part of the city.

Buildout based on the No Project alternative would not include intensification of the downtown or significant employment growth in the City. In the extended planning area, the current agricultural designation and the 100 acre minimum parcel size would apply, except on Santa Rita surplus land where 180 acres is assumed to generate 5,400 jobs.

High Density Alternative. Under this alternative, allowable residential densities would be increased to an average of 20 units per acre on all residential sites available for development and parks would be added to maintain the current ratio of park area per 1,000 residents. A community park of 15 acres would be located on the Dolan school site, with the remaining 12 acres designated for medium-high density residential development. Medium-high residential densities would also be allowed east of the Dougherty Hills, with a five acre neighborhood park. The Fallon and Frederiksen school sites have neighborhood parks and medium-high density residential development.

The Downtown Intensification Area concept presented in the Draft Plan is also included in this alternative.

In the extended planning area, this alternative would allow development similar to the draft Plan with commercial/industrial use on Santa Rita surplus land and on flat or gently sloping freeway east of Tassajara Road (generally under 10 percent). In the remainder of the extended area, single family residential densities (2.0 per acre) on slopes 20 to 30 percent or under would be allowed, with clustering of multi-family units on suitable sites.

Analysis of Alternatives

Due to the limited amount of available land in Dublin, the three alternatives (no project, high density, and draft Plan) are similar in many areas of impact relating to the primary planning area. While present residents may have very different responses to the various proposals, their measurable environmental impacts are not substantially different.

In the primary planning area, the difference among the alternatives is in potential for achievement of the housing goals as presented in the Housing Element, and the resulting effects on traffic and neighborhood character. The two alternatives to the draft Plan represent opposite ends of a reasonable density range, with the draft plan falling in the middle. The total number of housing units could vary by 30 percent, as illustrated by the table following this section.

The principal adverse impact of higher residential densities in Dublin would be increased traffic and associated noise, congestion, and localized air quality impacts. With lower density development, localized impacts would be mitigated, but the Valley-wide jobs/housing relationship would be in greater imbalance, resulting in a probable increase in total travel with consequent air quality impacts of greater magnitude than those generated by high density development within the City. Given anticipated

growth in Tri-Valley employment, development of infill sites at low densities would increase freeway congestion and increased urbanization outside of the planning area with resulting effects on the natural environment and the agricultural land supply.

Alternatives to the proposed General Plan would not signficantly affect traffic service levels. As compared with the proposed plan, the "no project" alternative would generate 16 percent fewer residential trips and the high density alternative would generate 9 percent more trips. Residential collector streets and Dublin arterial streets could accommodate the traffic from each alternative, but the trips added to the "no project" base would affect levels of service at the congested intersections unless it is assumed that if these trips were not made they would be replaced by through trips made by drivers avoiding freeway congestion. The 2,000 additional units in the high density alternative would generate about 1,260 more evening peak hour trips than the no project alternative—roughly two lanes worth of traffic capacity. The proposed plan would cause 470 more evening peak hour residential trips than the no project plan.

In the extended planning area the choices between alternatives are more clear-cut, with only the No Project alternative retaining agricultural use throughout.

The table at the end of this section, Comparison of Alternatives and Proposed Project Primary Planning Area, presents, for each of the alternatives, housing units at buildout; population at buildout; total multi-family units; and percent multi-family. It can be seen that in each of these categories the proposed project falls in between the no project and high density alternatives.

No Project Alternative. With a total of 6,700 units at buildout, the No Project alternative would introduce few major changes to the city. The cumulative proportion of multi-family units would rise from 9 percent in 1983 to 23 percent, with single family homes remaining dominant and relatively little housing choice available, contrary to the city's stated housing goals. With housing developed at low densities, opportunities for creation of affordable units are minimized, as many of the approaches described in the Housing Element are contingent on medium or medium-high densities for success.

In the extended area, the No Project alternative would retain the existing agricultural designation and uses. Established grazing operations would continue. Impacts associated with loss of open space, disruption of habitats, public facilities development and geologic hazards would not be present.

Under the No Project alternative, Dublin jobs/housing balance could be maintained, because new job creation would be minimal. There would be a favorable effect on the valley-wide jobs/housing balance only if it is assumed that jobs not created in the Dublin planning area would not exist elsewhere in the Tri-Valley.

High Density Alternative. The High Density alternative would result in construction of 3,700 units in addition to those already built or approved, all of which would be multi-family units. With nine percent more units than anticipated at buildout under the draft plan, this option would result in new multi-family projects at up to 25 units per acre adjoining single family development. The larger number of multi-family projects and of small units would present more opportunities for development of affordable housing than either the no project alternative or the draft plan.
The High Density alternative would have a higher ratio of park acreage per 1,000

residents, with parks more evenly distributed throughout the City than under the draft plan, but project open space would likely be reduced by higher densities. Generally, the High Density option would have a greater adverse impact on Dublin's neighborhoods resulting from noise and traffic increases. The traffic Level of Service F projected at San Ramon Road under the draft Plan would be worse under the high density alternative.

In the extended planning area impacts would be comparable to those expected under the proposed Plan.

COMPARISON OF ALTERNATIVES AND PROPOSED PROJECT PRIMARY PLANNING AREA

	Housing Units at Buildout[a]	Population at Buildout[b]	Total Multi-Family Units	Percent Multi-Family
No Project	6,900	19,500	1,600	23%
High Density	8,730	22,800	4,300	49%
Proposed Project	8,100	22,400	3,000	37%

[a] Assumes 14 units per acre on sites designated medium density; 20 units per acre on sites designated medium-high density.

[b] Assumes 3.2 persons per single family unit; 2.0 persons per multi-family unit.

5.0 IMPACT OVERVIEW

5.1 SHORT TERM USES VS. LONG TERM PRODUCTIVITY OF THE ENVIRONMENT

The cumulative long-term adverse effects of the proposed project are relative decline in air quality, disruption of the natural landscape, and loss of agricultural and grazing land. The City of Dublin (project sponsor) believes the project is justified now because the "no project" alternative would exacerbate a potential housing shortage in the Tri-Valley with resulting upward pressure on housing costs and additional vehicle miles of travel by Tri-Valley jobholders who would not be able to afford to live there or could not find suitable housing there.

Dublin believes additional business park space is justified because the proposed location is suited for the use and, if annexed to Dublin, would be expected to contribute municipal revenue exceeding service costs over the long term. The revenue is expected to be needed to maintain Dublin services at levels comparable with those provided by other Tri-Valley communities, thereby maintaining Dublin's desirability as a residential community.

5.2 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL CHANGES

Except for traffic, development within the primary planning area is not judged to result in environmental changes at the scale the EIR authors believe is significant for the purpose of analysis under CEQA. In the extended planning area, removal of grazing land from production and construction of homes in the hill areas would cause significant unmitigatible and irreversible changes. Assuming development in other Tri-Valley communities will proceed as planned, the balancing factor warranting acceptance of these effects in the Dublin planning area would be avoidance of them elsewhere. For example, conversion of grazing land in the Dublin Planning Area to urban use may preserve prime agricultural land in western San Joaquin County that otherwise would be developed as a residential support area for the Tri-Valley. However, the aesthetic value of the Tri-Valley open space loss would not be balanced.

5.3 IMPACTS FOUND NOT TO BE SIGNIFICANT

Through the General Plan and EIR preparation processes, the project has been found to not have significant impact in the following areas:

Hydrology
Habitats
Seismic and Geologic Hazards
Noise
Schools, Public Lands and Utilities
Soils
Historic and Archaeologic Resources
Scenic Highways

Soils, Historic and Archeological Resources and Scenic Highways are discussed in both volumes of the General Plan.

5.4 CUMULATIVE IMPACTS

Section 1.7 of the Plan Policies Report describes subregional development trends that will have significant adverse environmental impacts. These impacts include congested freeways and arterials and resulting effects on air quality, long journeys to work affecting energy consumption and air quality, and intense pressure to develop all buildable sites, thus causing loss of open space, grazing land, and wildlife habitat. The feasible mitigation would be development in accord with the Tri-Valley-wide plan that matches job and housing development to a determined environmental capacity and allocates shares to each jurisdiction.

5.5 GROWTH INDUCING IMPACTS

The draft Plan proposals for the primary planning area would serve committed and planned job growth in the Tri-Valley and are growth-inducing only in the sense that they would enable this growth to occur. The business park area allocated to the extended planning area would be growth-inducing, potentially creating additional housing demand and increased travel as well as pressure to convert additional agricultural land to urban uses.

APPENDIX A

LIST OF PERSONS AND ORGANIZATIONS CONSULTED

Laurence Tong, City of Dublin, Planning Director

Lee Thompson, Dublin City Engineer

Vic Taugher, Dublin Building Inspector

Chief Philips, Dublin San Ramon Services District, Fire Department

Emile Kattan, Dublin San Ramon Services District

Miles Ferris, Dublin San Ramon Services District

Jerry Wallace, Alameda County Planning Department

Betty Croly, Alameda County Planning Department

Vince Wong, Alameda County Flood Control and Water Conservation District, Zone 7

Jerry Killingstead, Alameda County Flood Control and Water Conservation District, Zone 7, Water Resources

Harris Teshema, Alameda County Flood Control and Water Conservation District, Zone 7, Water Supply

Bob Borek, Alameda County Assessor's Office

Gabrielle Swanson, Alameda County Assessor's Office

Harry Hecht, Alameda County Department of Public Works

Undersheriff Vole, Alameda County Sheriff's Office

Chief Cain, Alameda County Sheriff's Office

Patty MacNamee, Contra Costa County Department of Public Works

Bud Murphy, Contra Costa County Department of Public Works

Kevin Gailey, Contra Costa County Planning Department

Sally Freedman, Bay Area Air Quality Management District

Irwin Mussen, Bay Area Air Quality Management District

Richard Rago, Supervisor, Distribution Planning, East Bay Municipal Utilities District

Alex Maciejiewicz, U.S. Army, Presidio of San Francisco

Fran Roberts, U.S. Army, Presidio of San Francisco

Bill Beatty, U.S. Soil Conservation Service

Louanna Kiger, U.S. Soil Conservation Service

Paul Kelly, California Department of Fish and Game

Noreen Brown, California Department of Fish and Game, Natural Diversity Data Base

Susann Wall, California Department of Fish and Game, Natural Diversity Data Base

Eileen Allen, State Department of Conservation

California Archeaological Inventory

Elizabeth Kilham, Conservationist

Neil Havelick, East Bay Regional Parks District

Jim Walker, LAVWMA/Pleasanton

APPENDIX B

NOTICE OF PREPARATION

TO: _____ (Responsible Agency)

_____ (Address)

FROM: City of Dublin
Planning Department
6500 Dublin Blvd. Suite D
Dublin, CA 94568

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report

PROJECT TITLE: Dublin General Plan

PROJECT APPLICANT: City of Dublin

The City of Dublin 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 considering your permit or other approval for the project.

The project description, location, and probable environmental effects are contained in the attached materials.

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 me at the address shown above. We will need the name of a contact person in your agency.

CONTACT PERSON: _____

TELEPHONE: _____

SIGNATURE: Laurence L. Tong
Laurence L. Tong, Planning Director

TELEPHONE: (415) 829-4916

DATE: December 30, 1983

cc: State Clearinghouse

PROJECT DESCRIPTION: City of Dublin General Plan

LOCATION: See Exhibit "A" for Map of Dublin Planning Area

PROBABLE ENVIRONMENTAL EFFECTS:

Water: Sewage capacity studies are being prepared to address the effect of sewage disposal on water quality.

Air: The impact of additional traffic on air quality will need to be studied.

Earth: Detailed geologic investigations will be required for development in certain portions of the Planning Area to the east, west and south of the existing City.

Plants & Animals: It is unknown whether rare or endangered species are present in the outlying portions of the Planning Area.

Facilities & Services:

- Additional development may require reopening an existing school.
- Studies are being undertaken to determine sewage capacity and disposal needs.
- Water supply may become a problem in future if no new sources are brought into use.
- Certain portions of the City are within the Special Flood Hazard Area designated by FEMA.
- Additional fire protection services may be needed to serve development in the outlying portions of the Planning Area.

Transportation: The traffic demands on certain roads are or will be at capacity.

Noise: Certain residential areas of the City are exposed to adverse noise levels.

Historic & Cultural Resources: The location of archaeological resources within the Planning Area is unknown.

CITY OF DUBLIN

PA No. N.A.

ENVIRONMENTAL ASSESSMENT FORM, INTERIM

(Pursuant to Public Resources Code Section 21000 et sec.)

Based on the project information submitted in Section 1 General Data, the Planning Staff will use Section 3, Initial Study, to determine whether a Negative Declaration or an Environmental Impact Report is required.

SECTION 3. INITIAL STUDY - - - to be completed by the PLANNING STAFF

Name of Project or Applicant: Dublin General Plan

A. ENVIRONMENTAL SETTING - Description of project site before the project, including information on: topography; soil stability; plants and animals; historical, cultural, and scenic aspects; existing structures; and use of structures The planning area of the Dublin General Plan includes 1) the urban area 2) the eastern area and 3) the western area. The urban area is part of the flat floor of the Amador Valley. The eastern area has grassy rolling hills & occassional steep slopes. The western area has ridgelands, steep slopes, & winding canyons with some Description of surrounding properties, including information on: plants and animals; oak woodlands & historical, cultural, and scenic aspects; type and intensity of land use; and scale or grasslands. development. (See above for description of surrounding urban areas to the north and south, the eastern areas adjacent to the planning area, and the western areas adjacent to the planning area).

B. ENVIRONMENTAL IMPACTS - Factual explanations of all answers except "no" are re-. quired on attached sheets.

COMPONENT	IMPACTS	SCALE OF IMPACT						
		NO	QUALIFIED NO	YES				UNKNOWN
				MINOR	MODERATE	MAJOR	VIOLATION	
1.0 WATER								
1.1 Hydrologic Balance	Will construction of the project alter the hydrologic balance?	✓						
1.2 Ground Water	Will the project affect the quality or quantity of ground water supplies?	✓						
1.3 Depth to Water Table	Will the rate of water withdrawal change the depth or gradient of the water table?	✓						
1.4 Drainage and Channel Form	Will construction impede the natural drainage pattern or cause alteration of stream channel form?	✓						
1.5 Sedimentation	Will construction in an area result in major sediment influx into adjacent water bodies?	✓						
1.6 Flooding	Will there be risk of loss of life or property due to flooding?		✓					

COMPONENT	IMPACTS	SCALE OF IMPACT						
		NO	QUALIFIED NO	YES				UNKNOWN
				MINOR	MODERATE	MAJOR	VIOLATION	
1.7 Water Quality	Does drinking water supply fail to meet state and federal standards?	✓						
	Will sewage be inadequately accommodated and treated?							✓
	Will receiving waters fail to meet local, state and federal standards?	✓						
	Will ground water suffer contamination by surface seepage, intrusion of salt or polluted water from adjacent water bodies or from another contaminated aquifer?	✓						
2.0 AIR								
2.1 Air Pollution	Will there be generation and dispersion of pollutants by project related activities or in proximity to the project which will exceed state or national air quality standards?							✓
2.2 Wind Alteration	Will structure and terrain impede prevailing wind flow causing channeling along certain corridors or obstruction of wind movements?							✓
3.0 EARTH								
3.1 Slope Stability	Are there potential dangers related to slope failures?		✓					
3.2 Foundation Support	Will there be risk to life or property because of excessive deformation of materials?	✓						
3.3 Consolidation	Will there be risk to life or property because of excessive consolidation of foundation materials?		✓					
3.4 Subsidence	Is there risk of major ground subsidence associated with the project?		✓					
3.5 Seismic Activity	Is there risk of damage or loss resulting from earthquake activity?		✓					
3.6 Liquefaction	Will the project cause or be exposed to liquefaction of soils in slopes or under foundations?		✓					
3.7 Erodibility	Will there be substantial loss of soil due to construction practices?		✓					
3.8 Permeability	Will the permeability of soils associated with the project present adverse conditions relative to development of wells?	✓						
3.9 Unique Features	Will any unique geological features be damaged or destroyed by project activities?	✓						
3.10 Mineral Resources	Are there geologic deposits of potential commercial value close to the project?							✓
4.0 PLANTS AND ANIMALS								
4.1 Plant and Animal Species	Are there rare or endangered species present?							✓
	Are there species present which are particularly susceptible to impact from human activity?							✓
	Is there vegetation present, the loss of which will deny food or habitat to important wildlife species?							✓
	Are there nuisance species of plant or animals for which conditions will be improved by the project?	✓						
4.2 Vegetative Community Types	Are there any unusual populations of plants that may be of scientific interest?	✓						
	Are there vegetative community types which are particularly susceptible to impact from human activity?		✓					
	Are there major trees or major vegetation that will be adversely affected by the project?		✓					
	Are there vegetative community types present, the loss of which will deny food or habitat to important wildlife species, or to a substantial number of different animals?		✓					
4.3 Diversity	Is there substantial diversity in the natural community as reflected in the number and type of plant or animal species present or the three-dimensional arrangement of plant species present?							✓

COMPONENT	IMPACTS	SCALE OF IMPACT						
		NO	QUALIFIED NO	YES				UNKNOWN
				MINOR	MODERATE	MAJOR	VIOLATION	
5.0 FACILITIES AND SERVICES								
5.1 Educational Facilities	Will projected enrollments adversely affect the existing or proposed facilities in terms of spacing for all activities, including classrooms, recreational areas, and staffing needs?		✓					
	Will the project impact the pupil/teacher ratio so as to impede the learning process?		✓					
	Is the school located such that it presents a hardship for a portion of the enrollment in terms of travel time, distance, or safety hazards?		✓					
5.2 Commercial Facilities	Will there be an inadequate supply of and access to commercial facilities for the project?	✓						
5.3 Liquid Waste Disposal	Are provisions for sewage capacity inadequate for the needs of the project without exceeding quality standards?					✓		
	Will the project be exposed to nuisances and odors associated with wastewater treatment plants?	✓						
5.4 Solid Waste Disposal	Is there inadequate provision for disposal of solid wastes generated by the project?	✓						
5.5 Water Supply	Is there inadequate quantity or quality of water supply to meet the needs of the project?					✓		
5.6 Storm Water Drainage	Will storm water drainage be inadequate to prevent downstream flooding and to meet Federal State and local standards?				✓			
5.7 Police	Will the project's additional population, facilities, or other features generate an increase in police services or create a police hazard?	✓						
5.8 Fire	Will the project's additional population, facilities, or other features generate an increase in fire services or create a fire hazard?							✓
5.9 Recreation	Will the project have inadequate facilities to meet the recreational needs of the residents?	✓						
5.10 Cultural Facilities	Will cultural facilities be unavailable to the project residents?	✓						
6.0 TRANSPORTATION								
6.1 Transportation Facilities	Are the traffic demands on adjacent roads currently at or above capacity? If not, will the traffic generated by the project cause the adjacent roads to reach or exceed capacity?					✓		
	Are the other transportation facilities which serve the project inadequate to accommodate the project's travel demands?					✓		
6.2 Circulation Conflicts	Will design of the project or conditions in the surrounding area increase accidents due to circulation conflicts?	✓						
6.3 Road Safety and Design	Will project residents and users be exposed to increased accident risks due to roadway and street design or lack of traffic controls?	✓						
7.0 HEALTH		✓						
7.1 Odors	Will the project be exposed to or generate any intense odors?							
7.2 Crowding and Density	Will the residents and users be exposed to crowding or high density in their physical living environment?	✓						
7.3 Nuisances	Will the project be exposed to or generate factors that may be considered as nuisances?	✓						
7.4 Structural Safety	Will design and proposed construction techniques fail to meet state and local building codes?	✓						
8.0 NOISE								
8.1 Noise Levels	Will the project be exposed to or generate adverse noise levels?					✓		
8.2 Vibrations	Will the project be exposed to vibrations annoying to humans?	✓						

COMPONENT	IMPACTS	SCALE OF IMPACT						
		NO	QUALIFIED NO	YES				UNKNOWN
				MINOR	MODERATE	MAJOR	VIOLATION	
9.0 COMMUNITY CHARACTER								
9.1 Community Organization	Will the project disrupt an existing set of organizations or groups within the community?	✓						
9.2 Homogeneity and Diversity	Will the project change the character of the community in terms of distribution or concentration of income, ethnic, housing, or age group?	✓						
9.3 Community Stability and Physical Conditions	Will the project be exposed to or generate an area of poor stability and physical conditions?	✓						
10.0 VISUAL QUALITY								
10.1 Views	Will residents of the surrounding area be adversely affected by views of or from the project?	✓						
	Will the project residents be adversely affected by views of or from the surrounding area?	✓						
10.2 Shadows	Will the project be exposed to or generate excessive shadows?	✓						
11.0 HISTORIC AND CULTURAL RESOURCES								
11.1 Historic and Cultural Resources	Will the project involve the destruction or alteration of a historic resource?	✓						
	Will the project result in isolation of a historic resource from its surrounding environment?	✓						
	Will the project introduce physical, visual, audible or atmospheric elements that are not in character with a historic resource or its setting?	✓						
11.2 Archaeological Sites and Structures	Will the project involve the destruction or alteration of an archaeological resource?							✓
	Will the project result in isolation of an archaeological resource?							✓
	Will the project introduce physical, visual, audible or atmospheric elements that are not in character with an archaeological resource or its setting?							✓
12.0 ENERGY								
12.1 Energy Requirements	Are there potential problems with the supply of energy required for the project?	✓						
	Will the energy requirements exceed the capacity of the service utility company?	✓						
	Will there be a net increase in energy used for the project compared to the no project alternative?				✓			
12.2 Conservation Measures	Does the project planning and design fail to include available energy conservation measures?	✓						
13.0 LAND USE								
13.1 Site Hazards	Do conditions of the site, proposed site development, or surrounding area create potentially hazardous situations?	✓						
13.2 Physical Threat.	Will the project or the surrounding area create a feeling of insecurity and physical threat among the residents and users?	✓						
13.3 Sanitary Landfill	Will the project be exposed to structural damage, noise, air, or surface and ground water pollution or other nuisances associated with a sanitary landfill?	✓						
13.4 Waterways	Will the project affect an existing waterway through filling, dredging, draining, culverting, waste discharges, loss of visual quality or other land use practices?	✓						

COMPONENT	IMPACTS	SCALE OF IMPACT						
		NO	QUALIFIED NO	YES				UNKNOWN
				MINOR	MODERATE	MAJOR	VIOLATION	
Other Environmental Components:								

C. MANDATORY FINDINGS OF SIGNIFICANCE

	NO	QUALIFIED NO	YES	UNKNOWN
(1) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, 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 or California history or prehistory?				✓
(2) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	✓			
(3) Does the project have impacts which are individually limited but cumulateively 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.)			✓	
(4) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			✓	

D. MITIGATION MEASURES - Discussion of the ways to mitigate the significant effects identified, if any: _____

_____

_____

_____

E. DETERMINATION - On the basis of this initial evaluation:

☐ The City of Dublin finds that there will not be any significant effect. The particular characteristics of this project and the mitigation measures incorporated into the design of the project provide the factual basis for the finding. A NEGATIVE DECLARATION IS REQUIRED.

☑ The City of Dublin finds that the proposed project MAY have a significant effect on the environment. AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED**

Signature and date: Laurence L Tong December 30, 1983

Name and title: Laurence L. Tong, Planning Director

**NOTE: Where a project is revised in response to an Initial Study so that potential adverse effects are mitigated to a point where no significant environmental effects would occur, a revised Initial Study will be prepared and a Negative Declaration will be required instead of an EIR.

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