

## ALHAMBRA HILLS SPECIFIC PLAN

### PLAN AREA

The Specific Plan Area is shown in Fig. 31.30.

### 31.3 POLICIES

#### 31.31 LAND USE

F 31.31 Development Areas, remote homesites and land use designations are shown on Fig. 31.30. The Development Area shall consist of all Plan areas under 30% slope which shall be considered developable unless site constraints prevent development of that particular area (see Policies 31.321 and 31.322).

31.311 Development in the Plan Area shall be limited to single family residential use, except that professional offices may be allowed by Use Permit in the Development Areas adjoining the west side of Alhambra Avenue if the parcels meet the following criteria:

- A. Site depth is inadequate to buffer residential development from Alhambra Avenue noise.
- B. Office traffic would not significantly affect nearby existing uses or traffic on Alhambra Avenue.
- C. Office use of the site would be compatible with adjoining uses.

31.312 Development and grading shall comply with Site Development criteria (Section 31.34), and shall be limited to the Development Area except under the following circumstances:

- A. Development of designated Remote Homesites;
- B. Access roads and residences as allowed by Policy 31.314;

The overall number of units permitted on a property shall under no circumstances be increased.

31.313 No development on areas of 30% or greater slope shall be permitted except:

- A. Where no alternative exists, roads connecting Development Areas may pass over areas of 30% slope, subject to approval by the Planning Commission. Grading shall be limited to that necessary for the road or to the minimum amount which will create the most natural appearing contours. If such grading creates buildable areas (under 30% slope) residential development fronting the road may be permitted subject to approval by the Planning Commission.

- B. Small areas (10,000 sq. ft. or less) of 30% and over slope entirely surrounded by areas under 30% slope may be developed. Small infringements on areas of 30% slope may be permitted where the existing topography of the majority of the building area and area to be graded are under 30% slope.

31.314 Development outside of the Development Areas (homesites and access roads) shall comply with the following criteria:

- A. Soils stability shall be demonstrated prior to development approvals;
- B. Minimal visual impact shall result from development;
- C. Minimal grading or vegetation removal shall be required;
- D. Compliance with Site Development Policies (Section 31.34).

31.32 DEVELOPMENT DENSITY

31.321 The Alhambra Hills plateau including the Habitat property shall be rezoned R-10. Slope Density shall be applied to each parcel to determine the maximum number of units permitted on the site. In no case shall the number of units permitted exceed the maximum unit counts established below. The range listed below is the number of units which may be approved for proposals in minimal conformance with Specific Plan criteria up to the maximum permitted for exceptional projects. These numbers are based on slope density calculations performed on the upper portions of the sites and do not include possible development on the lower fringe of the hills, except for the Habitat unit count which is based on a slope density calculation for the entire site.

L & M - Habitat (parcels 164-150-021, 022) *	76-90 units
H, J & K - Waters Inc. (parcels 164-150-016, 164-010-002 and 019)	77-84 units
D & E - Trebino (parcels 366-010-006 and 366-060-001)	94-99 units
N - Kinney (parcel 164-010-007)	12-14 units
Q - Monteros (parcel 164-010-017)	22-26 units
C - Lawrence (parcel 366-102-020)	3-4 <u>units</u>
TOTAL	284-315 units

\* See map for property locations.

These unit counts are the maximums permitted for each property. If it is determined that a Development Area is actually larger than shown on the Land Use Map (Fig. 31.30) no additional units shall be added to the maximums listed above. It is not guaranteed that either the high or the low unit counts will be approved for any particular site. Each development proposal will be judged

on its merits and must demonstrate that the requested proposal and number of units are in compliance with all Specific Plan policies. Geotechnical, access, grading and visual constraints (among other criteria listed in this Specific Plan), and final Slope Density calculations for the site may reduce the number of units approved for any particular site from the range listed above and may limit the portion of the site that may be developed. Approval of the maximum permitted number of units on a site will require an exceptional project exceeding the development and design criteria of this plan. The following criteria shall be used to determine the appropriate density for individual development proposals.

- A. Soil Stability/Grading - Development density may be reduced below the density range specified in this section on sites requiring major geologic reconstruction work or requiring major grading to insure safe development.
- B. Visual Impacts - Density may be reduced below the density range specified in this section on sites where significant visual impacts will result or where extensive grading would be required to mitigate visual impacts.
- C. Tree Preservation/Landscaping - Proposals which preserve significant numbers of existing trees within the developed area may qualify for density at the upper end of the density range. Extensive planting of mature, native landscaping may to a limited degree compensate for removal of existing vegetation.
- D. Residential Design and Materials - Site plans designed to fit the topography and well designed structures may allow density at the upper end of the density range.
- E. Other Factors - Other factors specific to a project being reviewed, such as access, traffic impacts, impacts on nearby neighborhoods and the City, degree of compliance with general and specific plan policies, etc. may result in lower density than the density range specified in this section.

31.322 A preliminary soils report on each parcel shall be prepared and reviewed by the City's geotechnical consultant as part of each application for project approval by the Planning Commission. Soils report findings may affect project layout, density and total unit count.

31.323 Project densities shall not exceed, and housing type shall be compatible with, nearby existing development.

31.324 Compliance with Site Development and Building Design policies shall be considered in determining final project densities (see Sections 31.34 and 31.35 for policies).

31.325 Reliez Valley Road densities shall vary from .5 to 1.5 units per Developable Area acre and shall not exceed the density of nearby existing development.

31.326 Densities along Alhambra Avenue shall vary from 3 to 5 units/per Developable Area acre and shall not exceed the density of existing development.

31.327 Remote homesites shall have a minimum 1 Ac lot size, with the building area consisting of existing topography of at least 10,000 sq. ft. under 30% slope.

### 31.33 . CIRCULATION

The Circulation Plan for the Alhambra Hills is shown in Figure 31.30.

31.331 Access to the plateau shall be provided by public streets dedicated to the City connecting Wildcroft Drive and Horizon Drive (from its current terminus at A.P.154-150-029). A turnaround bulb shall be constructed near the existing end of Horizon Drive and at the lower end of the street from the plateau. These turnaround bulbs shall be connected by a 28 ft. wide two-way street with a stop sign at the lower turnaround bulb. The intent of this design is to limit the amount of traffic using Horizon Drive. If it is determined that these measures do not sufficiently limit traffic, the City Council may further limit the use of the 28 ft. street connecting the turnaround bulbs to one-way traffic or emergency use only. Streets shall conform to the design shown in Fig. 31.30. Emergency access roads shall be provided with development of properties farther than 600 ft. or 16 lots from the Wildcroft/Horizon connection. Recommended locations are at the north end of the plateau, at the east end of the Monteros development, and at the southeastern section of the Habitat development; see Figure 31.30.

31.332 Innovative grading techniques as discussed in the EIR Road Alignment Geotechnical Addendum (pgs. 4, 5, 8) shall be required for the construction of Wildcroft Drive and, if required by the Planning Commission, for other access and plateau roads. Mitigation measures required by the EIR on pages E-52, 53 and J-13, 14 shall also be required for all road construction.

31.333 Site planning of projects shall allow through access to other parcels as required.

31.334 Private roads for up to five residences shall be permitted for remote homesites and for parcels within the Development Areas where significant grading reductions result.

31.335 Direct access to Alhambra Avenue and Reliez Valley Road shall be minimized. Where possible, streets or driveways shall be shared by adjoining development.

31.336 Off-site street and intersection improvements listed as mitigation measures on pages E-50 - 52 of the EIR, and on pages 24 - 25 of the Traffic Study prepared by the Goodrich Group, shall be required with timing of installation to be determined by the City Engineer, except for off-site cumulative impact mitigation measures, which shall be funded by mitigation fees. On-site streets shall be constructed to standards listed in the EIR on pages E - 52, 53.

31.337 Costs for improvements within the Alhambra Hills which benefit more than one property in the Plan Area shall be distributed among the benefited parties within the Plan Area. Costs for improvements outside the Plan Area shall be covered by mitigation fees. The method of calculating and distributing costs shall be approved by City staff prior to issuance of any building or grading permits or approval of any subdivision Final Map. The City staff decision may be appealed to the Planning Commission by any property owner subject to cost allocation under this section. A fee-benefit area may be established by the City Council to implement this section.

31.338 No development shall be permitted on the plateau or the Habitat site (excepting Reliez Valley Road remote site prior to completion of Wildcroft Drive to the development site. No construction equipment shall be allowed to use Horizon Drive.

#### 31.34 SITE DEVELOPMENT

31.341 Planned Unit Developments which implement the design review criteria shall be required for all plateau sites and other sites averaging over 10% slope.

31.342 Site plans shall minimize the visual impacts of development where possible while maintaining the natural topography. Repair of slides, and other soil stability hazards shall be required for the protection of public safety and shall be reconstructed with a natural appearance.

31.343 Grading for the sole purpose of creating Development Area or buildable lots shall not be permitted (e.g. substantial cutting or filling of slopes over 30% to create lots shall not be permitted).

31.344 Grading shall comply with the following policies except as provided in Section 31.345 below.

- A. Street Grading - Sites shall be planned to preserve the natural topography. Street grading shall be limited to that amount necessary for safety and to achieve natural appearing finished contours.
- B. Lot Grading - Grading of individual lots with existing slope over 20% shall be limited to driveways and within the house foundation. Grading of lots under 20% slope shall resemble natural contours.
- C. If corrective grading outside these limits is necessary for geotechnical safety reasons, the finished grading shall closely resemble the pre-existing natural appearance of the topography.

All mitigation measures for grading alternative 1b (pages 3 - 8) in the Rogers/Pacific Grading Concepts Addendum shall be required for grading under this policy.

31.345 First priority shall be given to siting streets, residences and public facilities to avoid geologic hazards and instabilities, prevent the creation of drainage hazards which would threaten slope stability and to minimize visual impacts of plateau development. Where serious geologic or drainage conditions which threaten public safety, or where significant visual impacts which would result from development cannot be mitigated by locating development away from the hazards or by grading in compliance with Policies 31.342 and 31.343, additional grading may be permitted subject to approval by the Planning Commission after evaluating the proposed grading for compliance with the following requirements:

- A. The safety hazards or visual impacts cannot be mitigated by relocating development or by grading in compliance with Policies 31.342 and 31.343; and

- B. More extensive grading is required because of geotechnical constraints. Such constraints shall be defined as known unstable soils (Martinez formation) or areas of proven geologic failure (as shown by a soils report); and
- C. More extensive grading is required to mitigate significant visual impacts of residences around the periphery of the plateau. Areas of significant visual impacts shall be determined by review of Scenic Roads and Residential Neighborhoods Visual Sensitivity Maps and the Vegetation Map (maps prepared by Goodhue, Haisley and Barker, September 20, 1982). More extensive grading shall be permitted in those areas shown as: 1) Visually Sensitive, and 2) shown as not being screened from view by existing vegetation; i.e. if a Visually Sensitive Area is screened from view by existing vegetation more extensive grading in order to screen the view of residences shall not be permitted.
- D. More extensive grading of the site to eliminate safety hazards or to eliminate visual impacts will not create other unmitigable impacts. In other words, finished grading must have a natural appearance; "table topping" or "stair stepping" hillsides must be minimized.

In all cases it shall be the responsibility of the applicant to provide factual evidence supporting these findings. "Public safety" shall include private homes and roads, as well as all public facilities (streets, trails, utilities, etc.). The level of grading approved for each portion of a site or development area shall be consistent with the specific geotechnical conditions and visual impact constraints in that portion of the site.

31.346 In those instances where additional grading is approved for geotechnical reasons site grading shall comply with the following policies:

- A. Street Grading - Street grading shall be limited to that amount necessary for roads and to achieve front yard areas and driveways which drain toward the street.
- B. Lot Grading - All lot grading shall be limited to achieving front yard areas and driveways which drain toward the street. The remainder of the lot shall have natural appearing contours.

All mitigation measures for grading Alternative 2 (pages 3 - 8) in the Rogers/Pacific Grading Concepts Addendum shall be required for grading under this policy.

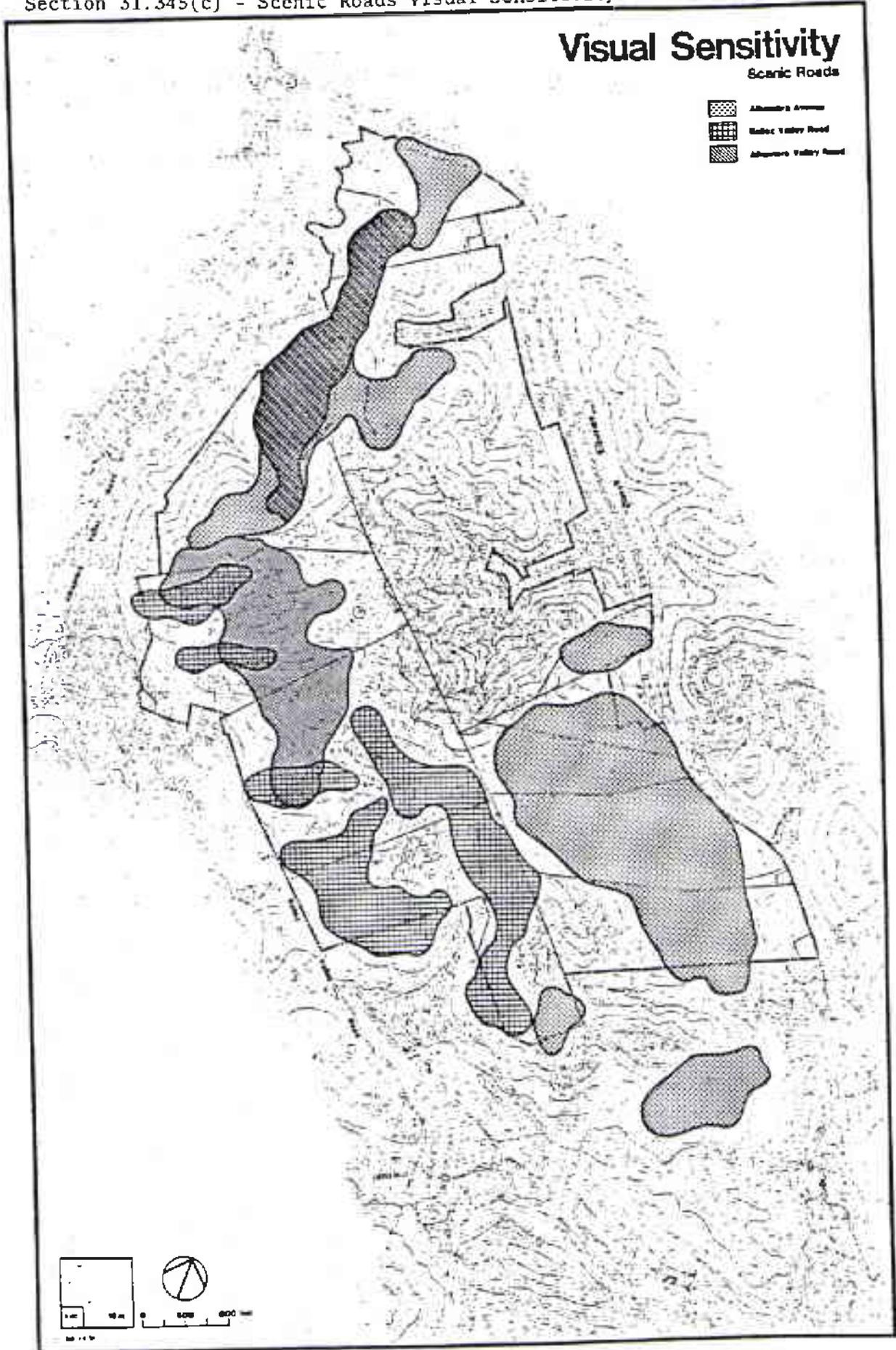
In situations of serious geologic hazard and in limited areas where significant visual impacts would result without more extensive grading, grading in compliance with the following policies may be permitted.

- C. Street Grading - Expanded street grading shall be allowed to recontour slopes and create large flat pad lots.

# Visual Sensitivity

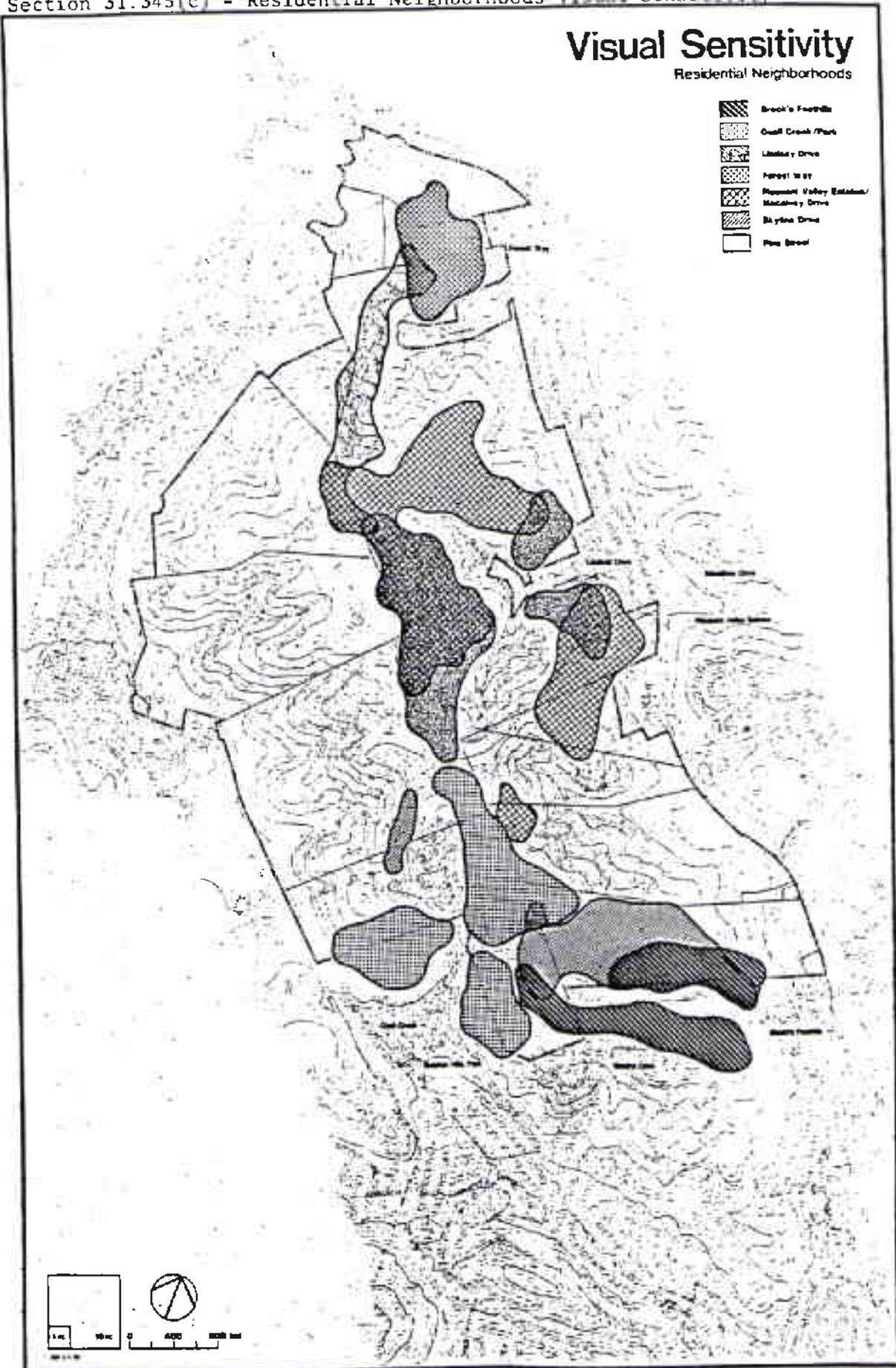
Scenic Roads

-  Alhambra Avenue
-  Silver Valley Road
-  Alhambra Valley Road



## Alhambra Hills Specific Plan • Martinez, California

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# Alhambra Hills Specific Plan • Martinez, California

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D - Lot Grading - Grading of individual lots shall be allowed to create large flat pad lots draining toward the street. The periphery of the developed area shall be tapered and rounded into the existing contours.

Mitigation measures for Rogers/Pacific Alternative 3 ( pages 3 - 8) shall be required for grading under this policy.

31.347 Up to 20% of the lots may meet R-7.5 Zoning Code requirements. All other lots shall conform with R-10 minimum requirements. Overall density shall average at least 10,000 sq. ft. of Development Area per residence.

31.348 Sites shall be planned to preserve open space, existing vegetation (especially on ridgelines) and knoll tops as much as possible. Sites along Alhambra Creek shall provide an open space buffer along the creek as required by the EIR.

31.349 Site layout and grading shall provide continuity of design between parcels.

### 31.35 BUILDING DESIGN

31.351 Building design and materials shall be compatible with and better than nearby existing development.

31.352 Structures shall be designed to blend into, rather than dominate, the natural setting.

31.353 Buildings shall be sited and designed to fit the natural topography and preserve existing vegetation as much as possible.

31.354 Buildings which can be viewed from below shall be sited, designed and landscaped so that supporting columns, piers and building undersides are not visually dominant.

31.355 Buildings on hillsides shall step down to follow the topography.

31.356 Natural appearing colors and building materials shall be required. Visually obtrusive/reflective colors and materials shall be prohibited.

31.357 Buildings shall be designed to meet all Fire District requirements (roof materials, alarms, sprinklers, etc.).

### 31.36 OFFICE DESIGN

31.361 Office development shall be of a residential scale and appearance. Building site coverage shall not exceed the coverage allowed in the nearest residential district.

31.362 Parking shall be located primarily away from the street, behind the building. When the property adjoins a residential area the parking shall also be located away from the residential area or shall be screened with extensive landscaping.

31.363 Building Design guidelines (Section 31.35) shall apply to office, as well as residential, buildings.

31.364 Office buildings shall be primarily one story structures and shall have varied facades to provide architectural interest.

31.365 Landscaping shall be used to screen offices and parking, and to provide transitions to neighboring residential areas and Open Space areas. Extensive landscaped areas shall be provided to attain a campus setting.

#### 31.37 LANDSCAPING, FENCING AND LIGHTING

31.371 The character of the natural setting shall be enhanced with natural landscape designs emphasizing native species and retaining existing vegetation.

31.372 Visually significant man-made improvements along the periphery of plateau or hilltop development areas should be landscaped to blend into the natural setting. Yard improvements and solid fencing which extend into the periphery area shall be prohibited by scenic easement.

31.373 An overall natural landscape theme for the major access road should be provided to unify the development areas.

31.374 Fencing which would be visible from outside the development areas shall be non-obscure and natural in appearance. A wood frame open wire fence is recommended.

31.375 Exterior lighting shall be compatible with and sensitive to surrounding uses and the natural setting. Necessary lighting shall be situated as much as possible in the interior portion of visually sensitive development areas.

#### 31.38 OPEN SPACE/TRAILS

31.381 Open Space areas shall be privately owned and maintained. Maintenance of such areas shall be by homeowners association rather than individuals.

31.382 Animal grazing may be permitted in Open Space areas as a fire prevention measure. Grazing shall be limited in location and intensity to prevent erosion. Grazing plans shall be prepared and reviewed by an outside consultant to ensure that overgrazing and/or erosion does not result.

31.383 Public trail easements shall link the plateau area to surrounding development and the general plan riding and hiking trail system. Minimum connections shall include the California Riding and Hiking Trail to the east near MacAlvey Drive, Briones Regional Park, Golden Hills, the Foothills area and John Swett School. Recommended linkages are shown in Figure 31.30. Trails shall be constructed by the developer when the City or other public agency will accept maintenance responsibility for the trail.

31.384 As development occurs along Alhambra Avenue and Reliez Valley Road, bikeways shall be constructed along these streets. Bikeways shall also be

provided along major access roads to be constructed including Horizon Drive, Wildcroft Drive and the ridge road. Bus turnouts along Alhambra Avenue as discussed in the EIR (page E-53) shall be required.

31.385 Sound barriers shall also be provided along major roads where needed (see Noise Element). Sound Barriers shall be designed to fit into the surrounding visual environment; large masonry walls are discouraged.

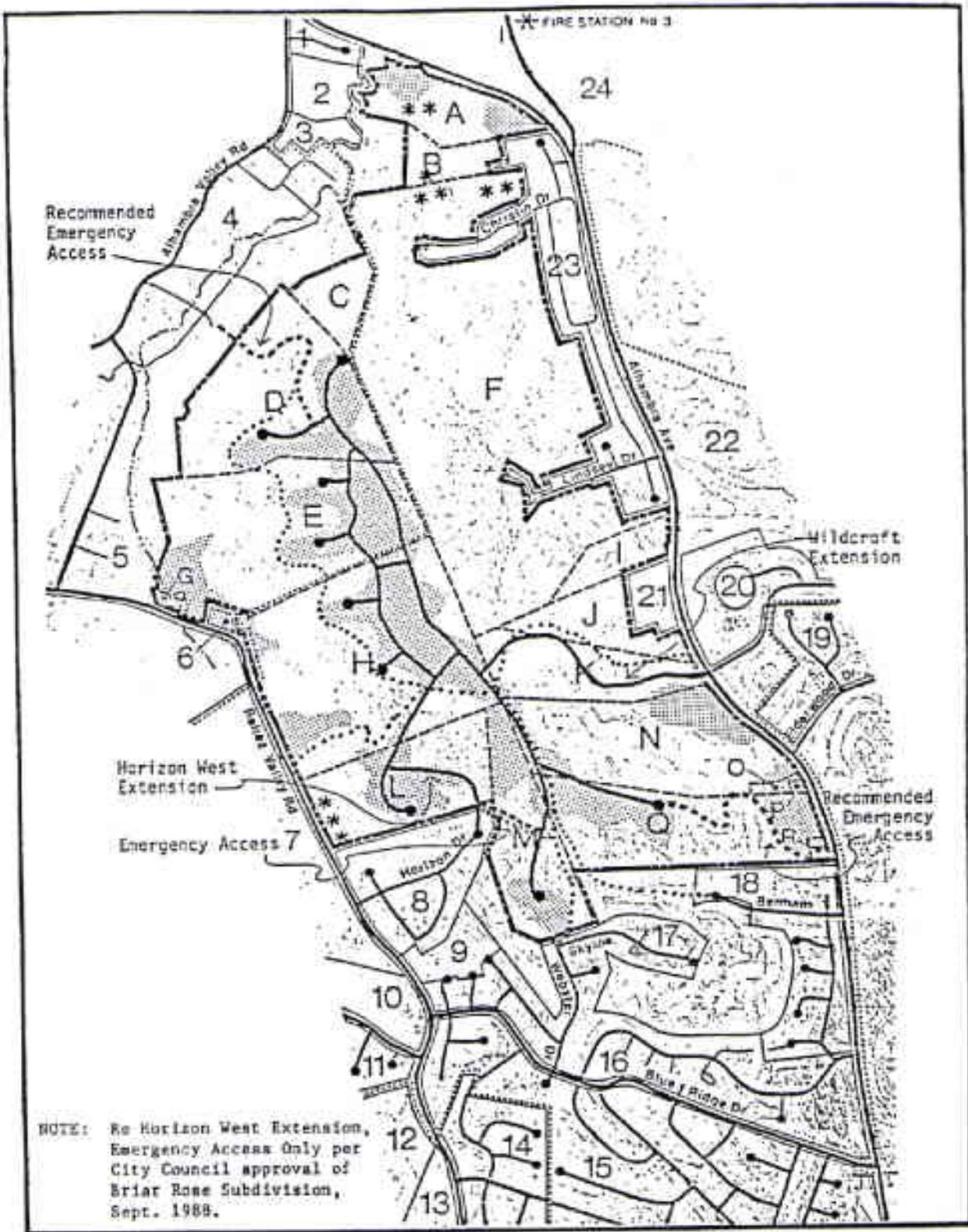
#### 31.39 MITIGATION MEASURES

31.391 Mitigation measures for significant environmental impacts identified by the EIR and addenda are hereby required and incorporated into this policy plan. Mitigation measures shall be amended or eliminated as necessary to address plan modifications (e.g. Elderwood extension mitigations shall be amended or eliminated as necessary to address Wildcroft extension impacts.).

#### 31.40 IMPLEMENTATION

31.401 Alhambra Hills Specific Plan IMPLEMENTATION ELEMENT, Section C, pages 13-29 are hereby required and incorporated into this policy plan. Implementation measures shall be amended or eliminated as necessary to address plan modifications.

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**LEGEND**

- Planning Area Boundary
- Martinez City Limits
- Primary Access Roads
- Emergency Egress
- Conceptual Nature Trail
- Development Area
- \* Remote Homesites

**Land Use and Circulation** Figure 31.30

**ALHAMBRA HILLS SPECIFIC PLAN**



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## B. SUMMARY OF IMPACTS AND MITIGATIONS

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### LAND USE

- The proposed plan would allow less development area and fewer total units than would the current (1973) plan.
- The proposed plan would allow a maximum of 750 residential units, including 467 on the plateau and 283 along the planning area fringe; the current plan would allow a maximum of 1,048 units, including 511 on the plateau and 537 along the fringe.
- The proposed plan would allow conversion of 108 acres of the Alhambra Hills to urban use (18% of the 594-acre planning area), vs. 146 acres (25%) under the current plan.
- Approximately 486 acres (82%) of the planning area would be kept as permanent open space under the proposed plan, vs. 448 (75%) under the current plan.
- The proposed plan would reduce the amount of plateau area development allowed under the current plan by 10 acres.
- The proposed plan would use the natural hillsides to separate and define 14 development areas, and to separate 7 plateau areas from 7 fringe areas.
- The proposed plan would allow 54 acres of development along peripheral road corridors (Alhambra Ave. and Reliez Valley Rd.), vs. 82 acres under the current plan. Most of this difference occurs along the Alhambra Ave. corridor.
- The proposed plan would confine development in smaller development areas, resulting in higher net residential densities than currently allowed (7.8 units/development area acre vs. 7.2 units/development area acre under the current plan).
- A planning area **absorption rate** of as many as 100 units per average year can be anticipated over the next 10 years under the proposed new plan, based on evaluation of planning area development costs and the local housing market outlook.
- At an average buildout rate of 100 units per year, full buildout of the planning area could be expected to occur as early as 1995.

### Adverse Land Use Impacts

The "Third Draft" plan net density characteristics for plateau development areas 1-7 (average density = 10.2 units per development area acre) could result in housing "footprints" that are much more intensive than the predominant surrounding residential pattern.

The proposed boundaries of 8 of the 14 development areas would include more than one ownership. As a result, prospects for a unified and harmonious development in these areas are reduced.

Allowable net densities for areas 11 and 12 (approx. 7 units/acre) would be higher than the adjacent Forest Hills tract (approx. 4 units/acre).

Max. allowable net densities for areas 13 and 14 (10 units per acre) would be significantly higher than the predominant residential development pattern along Alhambra Avenue. In particular, allowable net densities for area 14 (approx. 10 units/acre) would also be substantially higher than the adjacent Foothills tract.

Areas 2, 3, and 4 are contiguous to an existing PG&E transmission tower line.

Up to 8 existing homes could eventually be disturbed or displaced by development designations in the recommended plan.

### Mitigation Measures

Partially mitigated in proposed plan by substantial open space separations and by elevation differences of 150 to 350 feet. For area 5-7, retain the development capacity reductions (dwelling unit) reductions per property proposed in the "Third Draft," but return to the development area boundaries of the 1973 plan. With these changes, max. net density for areas 5-7 would become 7 units/acre.

Reconsideration of plateau development area configurations for areas 5-7 should include possible revisions to reduce this problem (i.e., avoid small overlaps into adjacent ownerships).

Require incorporation of landscaping and other site design features in development plans to minimize conflicts with adjacent uses.

Consider revising the "Third Draft" to reduce max. allowable densities in areas 13 and 14 to 7 units per acre.

Submit development plans for areas 2-4 to PG&E for review to ensure against possible land use conflicts.

### Adverse Land Use Impacts (continued)

The "Third Draft" Plan on page 22 calls for a development of single-family detached homes exclusively in plateau areas 1-7 (i.e., implying a net density of 6 units/acre or less). The density language on page 23 of the "Third Draft" (4-5.5 units per gross land capable acre) translates in net densities considerably higher than 6 units per acre.

The owner of the Phillips property has stated an objection to any urban development on that parcel south of Christie Drive. Portions of development areas 6 and 7 (4.2 acres, up to 56 cluster units, plus 4 remote homesites), are shown in the "Third Draft" for this area.

### Mitigation Measures (continued)

The city should resolve the present ambiguity between these two "Third Draft" Plan policy recommendations. The development area and density modifications suggested above for areas 5-7 would reduce net densities and encourage single-family semi-detached development.

If the city wishes, these development provisions could be eliminated from the "Third Draft," along with associated impact mitigation responsibilities, contingent upon rezoning of this portion of the planning area to permanent open space.

## CIRCULATION

During current commute periods under non-landslide conditions:

- All analyzed intersections along Alhambra Ave.-Pleasant Hill Rd. now operate at good to acceptable levels of service (C or better) with three exceptions:
  - (1) The Alhambra Ave./State Route 4 eastbound on-off ramp intersection now operates at level of service D (poorest acceptable level of operation);
  - (2) The Pleasant Hill Rd./Taylor Blvd. intersection now operates at PM level of service F (over capacity, "jammed conditions"); and
  - (3) The Pleasant Hill Rd./Deer Hill Rd. intersection now operates at AM level of service E (at capacity, major delays).
- Traffic safety problems currently exist at the Reliez Valley Rd. intersections with Blue Ridge Dr. and Horizon Dr. due to the lack of left-turn lanes and the Reliez Valley Road approaches
- Existing conditions at three intersections in the vicinity already warrant installation of traffic signals (all are on Alhambra Ave.):
  - (1) Alhambra Ave./Alambra Valley Rd.;
  - (2) Alambra Ave./John Muir Rd.; and
  - (3) Alhambra Ave./State Route 4 westbound on-off ramps.

- A comparative evaluation of 18 planning area access possibilities is included in the report. The report concludes that 12 of the 18 access choices would result in significant adverse neighborhood impacts due to substantial increases in traffic volumes past existing homes, and 4 of those 12 would require actual removal of one or two existing homes. Of the six remaining possibilities, the proposed Elderwood extension alignment would have the lowest degree of combined adverse impact in terms of grading requirements, cut-and-fill stability, slope stabilization needs (slide repair), separation from existing intersections, sight distances, and visual impact.
- Under the recommended plan, the planning area would generate approximately 3,620 additional vehicular trips on the surrounding road system by 1990, and 8,250 by year 2000. These traffic increases would be 40 percent less than increases expected under the current (1973) plan.
- Over 85 percent of the planning area traffic increase would be associated with the 650 units served by the Elderwood Dr. extension.
- By 1990, traffic increases from cumulative new development, including the planning area, are not expected to result in excess demands (over capacity) on any local roadway.
- Planning area development under the proposed plan would account for the following portion of total cumulative traffic volume increases on local streets by 1990:

Alhambra Ave.:	Less than 45 percent south of the planning area, approximately 25 percent north of the planning area
Reliez Valley Rd.:	Less than 30 percent
Alhambra Valley Rd.:	Less than 20 percent
Blue Ridge Dr.:	Up to 50 percent at the eastern end, less than 20 percent at the western end
Elderwood Dr.:	Less than 20 percent east of Alhambra Avenue
- By the year 2000, these planning area percentages of anticipated cumulative traffic increases would be less than in 1990.

### Circulation System Impacts

#### Offsite Roadway Links

By 1990, peak-hour volumes on the 2-lane section of Alhambra Ave. south of Elderwood are expected to increase by 25 percent due to cumulative development, including the planning area. Although volumes would still be within the road's design capacity, queues of slow-moving vehicles could be expected during the evening commute.

By year 2000, peak-hour volumes on this section of Alhambra Ave. are expected to exceed the road's design capacity due to cumulative development, including the planning area. Long, slow-moving queues would result, with extended morning and evening backups.

By year 2000, the 2-lane section of Alhambra Ave. between Alhambra Valley Rd. and State Route 4 would be approaching design capacity with increasing delays during the evening commute period.

### Mitigation Measures

Planning area developers should contribute on a fair-share basis towards costs of the following cumulative off-site road improvement needs (precise amounts should be set through an assessment district, development agreement, or similar mechanism, based on benefit received or trips generated):

Widen Alhambra Ave. from 2 to 4 lanes between Elderwood Dr. and Benham Dr. prior to the year 1990. By 1990, require left-turn acceleration lanes on Alhambra Ave. at unsignalized intersections like Malcalvey Dr. and Lindsey Dr.

Widen Alhambra Ave. from 2 to 4 lanes between Alhambra Valley Rd. and State Route 4 by the year 2000.

Circulation System Impacts (continued)

Offsite Roadway Links (continued)

Under the **recommended plan**, peak-hour traffic volumes on Horizon Dr. could increase from approximately 50 (1985) to over 120 trips during the period of interim use by areas 1, 2, and 4. Average daily volumes could increase from around 500 (1985) to around 1,150 during this period. These volumes would be slightly higher than those currently experienced on Macalvey Dr. The increase would be well under design capacity, but would decrease road safety, esp. on the steep segment, and would reduce neighborhood quality.

By year 2000, Blue Ridge Drive volumes could increase by close to 40 percent (around 14 percent due to the proposed plan), approaching maximum tolerable levels for a residential street.

Under the proposed new plan, planning area related changes in traffic volumes could have a noticeable added impact on residential environments along Elderwood Ave. (existing segments), Blue Ridge Dr., and Reliez Valley Rd. by the year 2000.

Under the **current (1973) plan**, Horizon Dr. peak-hour traffic volumes could permanently increase to over 220 vehicles, and Benham Dr. peak-hour volumes could permanently increase by nearly 15 times (from 35 in 1985 to 510 by year 2000).

Mitigation Measures (continued)

Employ techniques recommended in Implementation Element to finance construction of the Elderwood extension and to close the Horizon Dr. connection to the plateau areas upon completion of the Elderwood extension.

Make revisions to the "Third Draft" plan as recommended in the Plan Viability chapter of this EIR to improve the feasibility of plateau area development in the near future, and thus shorten the period of Horizon Drive interim use.

Unavoidable adverse impact of cumulative development. Under current (1973) plan, increase could have been greater (43 percent).

Unavoidable adverse impact of planning area development under the proposed new plan.

The proposed plan would eliminate potentials for these permanent impacts on Benham Drive, and would provide for the eventual elimination of traffic impacts on Horizon.

Circulation System Impacts (continued)

Offsite Roadway Links (continued)

Under the current (1973) plan, related changes in traffic volumes could have a very noticeable added impact on the residential environment along Horizon Dr., Benham Dr., and Reliez Valley Rd., and a noticeable impact along Blue Ridge Dr. and Alhambra Valley Rd.

Mitigation Measures (continued)

Most of these current plan impacts would be eliminated by the proposed plan.

Circulation System Impacts (continued)

Offsite Intersection Impacts

By 1990, under the proposed plan, additional planning area and cumulative commute traffic could result in poor operational conditions at the Alhambra Ave./State Route 4 westbound on-off ramp intersection (LOS E\*), and at the Alhambra Ave./Elderwood Dr. intersection (LOS E).

Existing over-capacity conditions at the Pleasant Hill Rd./Deer Hill Rd. intersection would be exacerbated by additional planning area traffic.

By 1990, existing and cumulative traffic without the planning area could produce LOS F at the Taylor Blvd./Pleasant Hill Rd. intersection.

By the year 2000, the additional planning area and cumulative traffic would create poor operation at the Alhambra Ave./Alhambra Valley Rd. intersection (LOS E), and the Alhambra Ave./John Muir Dr. intersection (LOS D).

Alhambra Ave./Blue Ridge Dr. intersection LOS would change from A to B/C by the year 2000 due to planning area plus cumulative development.

\* Level of service F = "jammed" conditions, E = poor conditions (major delays and stoppages), D = min. design level--congestion, delays at signals, C = acceptable, B = good, A = free flow.

Mitigation Measures (continued)

Alhambra Ave./State Route 4 intersection: Signalize westbound on-off ramps now; add a second southbound left-turn lane on the Alhambra Ave. approach by 1990; add a second westbound offramp left-turn lane by year 2000.

Alhambra Ave./Elderwood intersection: Signalize by 1990; widen Alhambra Ave. through-lanes from 2 to 4 by 1990 as part of overall intersection improvement program; widen Elderwood Dr. extension eastbound approach to 3 lanes (one left, one through, one right).

No Martinez mitigation measure.

Add a second eastbound left-turn lane on Taylor by 1990.

Alhambra Ave./Alhambra Valley Rd. intersection: Signals warranted now; partial geometric redesign is also required; widen Alhambra Ave. through-lanes from 2 to 4 by year 2000.

Alhambra Ave./John Muir Dr. intersection: Signals warranted now.

Signalize around 1990

## POPULATION AND HOUSING

- The recommended new plan would reduce the overall number of housing units in the planning area from the current (1973) plan total, but would not significantly change the annual absorption rate (estimated at around 100 units per average year).
- At 100 units per year, the planning area would accommodate around 329 households and 1,050 people by 1990 (3 percent of the city's projected 1990 population).
- By the year 2000, the planning area would accommodate approximately 750 households and 2,400 people (6 percent of city's projected year 2000 population).
- The projected average annual planning area absorption rate (100 units per year) would amount to about 15 percent of projected annual citywide housing construction.
- The planning area could be expected to provide up to 40 percent of the city's projected annual need for single-family housing over the next decade.
- Horizon Dr. homes marketed during the interim road connection period could be subject to prolonged selling periods and reduced selling prices due to the interim traffic increases. The knowledge that the route would return to cul-de-sac status in the near future may help offset this market effect.
- Possible adverse effects of planning area development on the value of surrounding residential development (adverse changes in neighborhood quality due to traffic increases, public aversion to higher density housing types, adverse impacts on the character of the Alhambra Hills, decrease in the area's rural character) would probably be offset by the beneficial effects of planning area development in stimulating and adding to the overall prominence and market attractiveness of southern Martinez.
- The proposed new plan would mitigate the most significant effects on nearby residential values which would have occurred under the current 1973 plan (i.e., it eliminates Benham Dr. as an access road, reduces the amount of traffic increase on Horizon Dr. and would eventually eliminate Horizon Dr. as an access road).
- Planning area average household incomes would be substantially higher than the citywide median of \$40,895 per year.

### Mitigation Measures

- The city should strive to implement its Housing Element goals to encourage and assist in the development of affordable housing citywide. Planning area housing prices would accentuate the importance of and need for this effort.

- In development areas 13 and 14, proposed "Third Draft" net density provisions (10 units per acre) would allow townhouse clusters similar to the nearby Valley Oak, Oak Manor Plaza, Parkland Plaza, and Thistle Drive projects which could provide opportunities to meet city "moderate income" housing needs.

## GEOTECHNICAL FACTORS

### Potential Impacts

Since the proposed Elderwood extension would ultimately be the only primary access route to the plateau areas, inundation or underlying ground failure along the route by mud, water, or slide debris would be unacceptable.

The landslide map shows no slide deposits beneath the proposed Elderwood extension alignment, but the lower segment just above area 13 traverses the toe of a geologic unit of questionable stability and is located immediately below two large, active slump landslides.

These two slide deposits may result in road inundation by mud and water, or serious slide damage during a heavy rainfall or an earthquake.

Preliminary grading plan calls for the first segment of the Elderwood extension to be constructed almost entirely on fill atop an existing drainage swale.

Preliminary grading plan calls for 80-ft-high fill ramp with 2:1 slope on the 1,800-ft Elderwood extension segment west of and above area 13.

### Mitigation Measures

It appears that the Elderwood Dr. extension alignment could be constructed as proposed in the "Third Draft" plan using conventional engineering and construction approaches, if engineering precautions and design refinements recommended in this EIR are adopted.

A more detailed engineering analysis should be completed by plateau area developers, including subsurface exploration, to develop specific engineering recommendations for road construction, including grading and drainage design criteria and allocation of specific cost responsibility.

The engineering analysis should include detailed recommendations for stabilization of these two active landslides on the hillside south of area 13.

The lower segment of the Elderwood extension provides a buffer separating area 13 from the two large landslide deposits above.

Ensure through close supervision that fill is compacted and drained in accordance with engineering recommendations.

At least one drainage terrace should be incorporated in 80-ft-high fill slope.

Proposed 40-ft-high 2:1 cut slope on the Elderwood extension near Alhambra Ave. is probably not feasible, given location of two landslides on slopes south of area 13 (highly vulnerable to slope stability problems).

Proposed alignment of interim Horizon Dr. extension does not pose any unusual engineering or geotechnical problems.

Preliminary grading plan for Elderwood extension indicates that western portion of area 13 would be constructed atop road fill ramp. Extensive fill presents potentials for damage to buildings, roads, etc., from differential settlement.

Construction of residential units in the 7 plateau areas on cut pads, a likely approach, would not aggravate hillside erosion problems. However, the edges of plateau areas may be too steep to receive fill.

Runoff from graded areas, particularly on the plateau, if discharged into natural drainage channels, could result in rapid downcutting and erosion, esp. in steep upper reaches.

Numerous plan-designated development areas and roads are underlain by "inactive" fault traces.

Consider minor realignment of road to minimize grading. Rock-filled crib-wall recommended in lieu of cut slope.

Detailed engineering investigation should still be performed prior to issuance of construction permits to provide standards for earthwork, drainage design, and stabilization of slide areas immediately north of extension.

Consider some combination of the following: no construction on fill ramp for 2 years after emplacement; use of special foundations; over-excavation of areas so that fill thickness is constant under proposed structures.

Development at these edges should be at-grade or on cut-pads. Use of fills should be discouraged. Use of cut-pads here would also minimize erosion potentials and improve slope stability.

If such discharges into steep onsite creek channels are necessary, special erosion protection measures should be taken (lined channels, etc.)

"Inactive" fault traces should be evaluated for special foundation problems prior to construction.

## DRAINAGE

### Impacts

The planning area drains into two watersheds. The northern 75 percent of the area drains north into Alhambra Creek; the southern 25 percent drains south into Grayson Creek.

Significant flooding problems exist along Alhambra Creek in downtown Martinez.

The increase in peak storm flows from the planning area into the Alhambra Creek drainage after full development under the proposed plan would be 40 percent less than under the current (1973) plan.

The proposed plan would result in a 14 percent runoff increase in the planning area portion of the Alhambra Creek drainage basin; the current (1973) plan would result in a 26 percent increase.

### Mitigation Measures

The Implementation Element includes a storm drainage system layout and financing program designed to mitigate drainage impacts associated with full buildout of all 14 "Third Draft" Plan development areas. The system was designed to meet CCCFCD criteria and includes two major components:

- (1) A planning area storm drainage collection system; and
- (2) A system of planning area detention basins, either onsite or offsite. (The CCCFCD is currently studying prospects for a detention basin system which would serve the planning area and other development in the Alhambra Creek drainage.)

The Implementation Element also recommends a drainage fee requirement similar to that imposed on recent developments in the Alhambra Valley, which would go to a flood mitigation fund. The Implementation Element also suggests the amount and use of this fee.

The Implementation Element recommends specific offsite improvements to the Lindsey Dr. storm drainage system and to the drainage system downstream of Lindsey Drive to the point of discharge into Alhambra Creek to provide an adequate margin of safety with planning area buildout. These improvements would not be necessary if the Phillips property components were eliminated from the plan-designated development scheme.

The Implementation Element also recommends 11 storm drainage policies for application to all future planning area development to ensure adequate storm drainage provisions.

## MUNICIPAL SERVICES

### Water

The City of Martinez Water Department (MWD) provides water service to customers located up to an elevation of 300 feet using two existing pressure zones: Zone I and Zone II. Areas above 300 feet require additional pumping and storage facilities.

#### Impacts

Up to 273 fringe area units (36 percent of the planning area total) would be at or below the 300-foot elevation and thus could be served by existing Zone II storage and delivery facilities. The added maximum day demand for domestic and fireflow needs on Zone II would be small compared with the available pumping capacity in Zone II, and would not present a problem.

Development of the planning area as proposed in the "Third Draft" plan would result in 44 percent less demand on the existing offsite water system (Zone II) than would development under the current (1973) plan.

Up to 477 planning area units (417 without the Phillips property) would be well above the 300 foot elevation and thus would require construction of new transmission, pumping, and storage facilities.

The water system components described in the Implementation Element would increase city water system operational costs.

#### Mitigation Measures

The Implementation Element includes a water system layout and financing program designed to meet the domestic and fireflow requirements of the planning area at full buildout of all 14 "Third Draft" Plan development areas. The system includes four water service zones: Zone II (existing) for areas at or below 300 feet, Zone III for areas between 300 and 450 feet, Zone IV for areas between 450 and 600 feet, and Zone V for areas above 600 feet.

User fees for the various planning area service zones would be set and periodically adjusted to cover added ongoing costs.

### Sewer Service

The planning area is within the sphere of influence of the Central Contra Costa County Sanitary District (CCCCSD) and can be served by extensions of two existing sewerage systems which lie at the northern and southern ends of the area. The northern system carries flow through downtown Martinez and is old and constrained by infiltration problems and other capacity limitations. The capacity of the southern system is significantly better than the northern system.

Two sewer layout alternatives are described in the Implementation Element.

### Impacts

The preferred layout, Alternative 1, would direct only 12 percent of the total planning area flow into the northern system; the remaining 88 percent would be directed south, as preferred. Alternative 2 would direct 47 percent of planning area flow into the northern system. Alternative 1 would require greater slope disruption to construct, and would cost \$500,000 more than Alternative 2.

The sewer system components described in the Implementation Element would increase ongoing CCCCSD operating costs.

Severe soil and slope limitations exist in areas 8 and 9 where septic tank systems are suggested in the proposed plan.

### Fire Protection Service

#### Impacts

Four existing fire stations are available; response times would be less than 5 minutes to most planning area homes, but would exceed 5 minutes for the most distant plateau 7 units (the fire district considers 5 minutes to be the maximum acceptable response time).

District fire service facilities are currently at capacity; any new development could result in substandard levels of service.

### Mitigation Measures

The reduced offsite impact of Alternative 1 must be weighed against its greater cost.

A capacity study of the two existing systems is being undertaken by CCCCSD staff to precisely determine their comparative capacities (will require 3 months time).

In addition to the costs for offsite and onsite sewer improvements described in the Implementation Element, planning area developers must pay connection fees set to cover the capital cost of annexation. Ongoing user fees would be set to cover operating costs.

Septic tank systems have been eliminated as an alternative in the Plan Elementation Element and in this worst-case EIR analysis. The "Third Draft" should be revised to show this change.

#### Mitigations

Decrease response times and increase levels of protection by installing built-in protection (automatic fire sprinkler systems, heat-smoke alarms, etc.) and special traffic signal systems.

Provide required water system fire-flows.

Provide permanent emergency access road connections (gated) from Lindsey Drive and Horizon Drive which meet minimum fire department standards.

Subject all structures to a per-square-foot assessment for additional fire service costs.

A new station planned for the Alhambra Valley area would improve service to the planning area (probably after 1995; location currently undetermined).

Meet minimum fire abatement standards for weed abatement, brush removal, firebreaks, and fire trail access.

Require use of fire-resistant building materials.

### Police Services

#### Impacts

Development under the proposed plan would not create any unique service problems for the department.

Response times would be approximately 3 to 5 minutes.

Full closure of Horizon Dr. could mean all emergency access must be from Alhambra Ave.

750 new planning area homes would create need for approx. 2.2 more officers--less impact than the current (1973) plan.

### Education Services

#### Impacts

Over 90 percent of planning area units would be in Martinez Unified School District (MUSD); less than 10 percent in Mt. Diablo Unified School District.

Both districts agree that MUSD should serve entire area through interdistrict transfers or service boundary modifications.

#### Mitigations

Provide clear address numbering and adequate street lighting.

Consider providing police access from both Alhambra Ave. and Reliez Valley Rd. via a permanent, gated, emergency access connection from Horizon Dr.

#### Mitigations

Make necessary boundary changes or other jurisdictional revisions prior to any population growth in planning area.

The MUSD has indicated that projected planning area school demands can be met by the three schools (K-12) serving the area. However, the District also notes that by the year 2005, cumulative growth in the area could create the need for a new school.

Fair-share contributions from all area developers should be collected toward acquisition of an appropriate school site somewhere in the area. The MUSD estimates that at least ten (10) acres of land should be dedicated for completion of a new elementary school for occupancy by the year 2005.

## VISUAL FACTORS

### Impacts

The proposed plan represents a careful reduction and reconfiguration of the 1973 plan development pattern to minimize visual impacts.

Development in these reconfigured areas could still noticeably disrupt the pristine character of the Alhambra Hills.

Portions of 13 of the 14 development areas would still remain exposed to various views from surrounding road segments, and neighborhood view-points.

In general, development in exposed portions of areas 1, 7, 9, 10, 12, 13, and 14 would have the highest visual impacts.

The degree of impact would depend on a number of design variables described in this report.

The Phase I segment of the Elderwood extension would be highly exposed to direct views from the adjacent segment of Alhambra Ave.

The proposed Elderwood extension alignment would require removal of between 15 and 20 native oaks.

All seven possible detention basin locations shown in the Implementation Element are screened behind existing clusters of native oak.

Portions of each of the three water tanks may be visible from certain surrounding viewpoints if located as proposed in the Implementation Element.

### Mitigations

This EIR describes a comprehensive set of reasonable development guidelines for implementation in the development review process which would together significantly reduce the visual impacts of planning area development. The guidelines include:

- grading measures,
- architectural measures,
- landscaping measures,
- Elderwood extension design measures,
- road setbacks,
- fence and utility measures,
- exterior lighting measures,
- detention basin and drainage swale measures, and
- water tank measures.

Modifications recommended in this EIR for "Third Draft" development area configurations for areas 4, 6, and 7 could increase potentials for adverse visual impacts.

Portions of a number of planning area development areas and the Elderwood extension visible from segments of two designated Scenic Routes-- Alhambra Avenue and Reliez Valley Road.

If these modifications are made, also incorporate a set of detailed design guidelines for these plateau areas into the specific plan in order to ensure that additional adverse visual impacts are minimized.

Planning area roadside development along these routes should be subject to the landscaping, lighting, and setback provisions set forth in General Plan Section 27.35.

## NOISE

### Impacts

Added planning area traffic would increase average day-night noise levels by between 1 and 4 decibels ("imperceptible" to "barely perceptible") on Alhambra Ave., Elderwood Dr., and Blue Ridge Dr.

Interim use of Horizon Dr. by traffic from areas 1, 2, and 4 could increase average day-night noise levels from 8 to 14 decibels; i.e., more than a doubling of current noise levels. Under the proposed plan, these noise impacts would occur until the Elderwood extension is opened; under the current (1973) plan, these impacts would be permanent.

New homes in areas 8-14 nearest peripheral collector roads would be subject to exterior noise levels which warrant special design treatments to abate noise.

## AIR QUALITY

### Impacts

Emissions generated by added vehicular trips due to the proposed plan would be substantially less than levels anticipated under the current (1973) plan, and would not result in a measurable degradation of regional air quality.

Development under the proposed plan would result in localized increases in carbon monoxide levels due to added traffic. Increases would be greatest at the Alhambra Ave./Elderwood Dr. intersection, although levels would be in compliance with state and federal standards.

### Mitigations

The traffic-related noise impacts on existing homes described in this report would be an unavoidable result of cumulative urban growth planned in the area.

Interim Horizon Dr. noise level increases could be substantially reduced through installation of speed humps on the route.

A noise report should be required prior to development approvals in these areas. The EIR lists a number of design measures to reduce traffic noise intrusion impacts.

### Mitigations

Implement roadway improvements described in Circulation section of EIR.

Reduce vehicular trips by improving transit service and by constructing bus stops and shelters.

## VEGETATION AND WILDLIFE

### Impacts

Development under proposed plan would result primarily in loss of common grassland vegetation.

Planning area habitat values would decline with increases in human activity.

Development in areas 9 and 10 could infringe on Alhambra Creek riparian corridor.

Home and road construction could result in the loss of or damage to numerous native oaks.

### Mitigation

Require that pets be leashed or otherwise restrained from open space areas.

Provide adequate open space buffer.

The EIR lists a number of measures to minimize tree removal or damage.

## PLAN VIABILITY

### Impacts

Given the proposed "Third Draft" highest plan development area configurations and associated density provisions:

- Development feasibility would be highest in areas 10, 11, 1, 4, 2, and 3;
- Areas 9, 8, 6, 13, and 14 would have the lowest development feasibility (probably infeasible);
- In particular, development of areas 8 and 9 would be infeasible due primarily to high sewer extension costs coupled with low densities (septic tanks are probably infeasible);
- Feasibility for areas 13 and 14 is low because high net densities would result in relatively low sales prices in comparison to high finished land costs.

### Mitigation

Increase the allowable density of areas 8 and 9 to 4 units per acre and increase minimum road setback.

Reduce the effective net density maximum for these areas to 7 units per acre.

• Residential development at the high net densities implied for plateau areas 5-7 may not be marketable in this region.

Re-adopt the plateau area development boundaries for these three areas established in the 1973 plan, but keep the reduced dwelling unit capacity totals recommended in the "Third Draft." The result will be a more marketable net density of approx. 7 units per acre.

**REVISED DRAFT**

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# **ALHAMBRA HILLS SPECIFIC PLAN IMPLEMENTATION ELEMENT**

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**CITY OF MARTINEZ  
MARCH 1986**

Revised Draft

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ALHAMBRA HILLS SPECIFIC PLAN  
IMPLEMENTATION ELEMENT

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Prepared for the  
CITY OF MARTINEZ

by

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March 1986

### 3. Water System

The planning area is within the service area of the City of Martinez Water Department. However, facilities necessary to serve the planning area do not exist. Provision of water service facilities adequate to meet the domestic and fireflow needs of planning area buildout under "Third Draft" Plan policies will require substantial onsite and offsite improvements. This section describes an integrated planning area water system installation program, including water demand estimates and recommended storage, pumping, and distribution layouts and sizes to adequately accommodate full buildout under the provisions of the "Third Draft" Plan.

Characteristics of the existing offsite water delivery system in the area, and the potential impacts of future planning area development on that system, are described in the plan EIR (Section IX.H.2).

The city currently provides water service to customers up to the 300-foot elevation, using two pressure zones. Pressure Zone I serves development up to 150 feet. Pressure Zone II serves development from 150 feet to 300 feet. Areas above 300 feet in elevation require additional facilities to provide water service, including some combination of pumping and storage. For example, there is a pumping station and hydropneumatic pumping system on Webster Drive which now serves 61 homes in that vicinity located above Zone II. Another pumping station is currently being designed for a location on Sage Drive to serve another 50 homes above Zone II. (Details on the capacity of these stations are described in the plan EIR, Section IX.H.2.)

The 14 "Third Draft" Plan development areas range in elevation from 140 to above 670 feet; i.e., all development areas are above the Zone I service elevation, and a majority are also above the Zone II service elevation.

City of Martinez water system design criteria listed in Table 1-1 provide the basis for the water system recommendations described below.

a. "Third Draft" Plan Water Service Zones and Demands. Six of the 14 "Third Draft" Plan development areas have been assigned to the existing Zone II pressure zone, and eight areas have been assigned to three new pressure zones--III, IV, and V--based upon assumptions regarding the most likely service elevations (finished

Table I-1  
CITY OF MARTINEZ WATER SYSTEM DESIGN CRITERIA FOR THE ALHAMBRA  
HILLS

<u>System Element</u>	<u>Criteria</u>
Water pressure	40 to 80 psi
Water demand	Average of 160 gpd (gallons per capita per day)
Maximum day demand	1.9 times the average day demand
Peak hour demand	3.0 times the average day demand
Fire flow	Set by Contra Costa Consolidated Fire District depending on land use and type of construction
Storage	20 percent of maximum day demand for equalization, plus 100 percent of maximum day demand for emergency reserves, plus fire flow
Pumping capacity	Equal to average rate on maximum day
Transmission pipelines	Sized to deliver either the peak hour demands or sum of maximum day and fire flow

SOURCE: Walter Pease, City of Martinez Water Superintendent, personal communication, April 1985.

grades) of the highest home in each area. Table I-2 shows anticipated water demand estimates for each zone for the year 2000 (plan buildout), based upon the planning area absorption assumptions described in the EIR. In summary, the Table I-2 demand estimates are based upon the following planning area water system assumptions:

<u>Zone</u>	<u>Service Elevation</u>	<u>Number of Added Units, Year 1990*</u>	<u>Number of Added Units, Year 2000 (buildout)*</u>
II	150 to 300 feet	134	273
III	300 to 450 feet	4 (120 exist)	10 (120 exist)
IV	450 to 600 feet	126	127
V	Above 600 feet	65	340
	Totals	329	750

The Table I-2 demand calculations also include 120 homesites within the service area of the Webster Drive and Sage Drive pumping stations (there are 111 units there now). Water service to these existing units will improve with completion of the improvements necessary to serve the planning area. If some final building sites shown in Zone III actually fall within the upper reaches of Zone II, or sites shown in Zone V actually end up in Zone IV, there are reasonable options to serve these homes. Options include use of pressure regulators from Zone III to Zone II, or from Zone IV or V to Zone III; or use of a hydropneumatic system from Zone III or IV to serve IV or V.

b. Storage and Pumping Requirements. Year 2000 storage requirements for the "Third Draft" Plan are shown in Table I-3, based on the demand estimates in Table I-2. Based on the Table I-2 and I-3 figures, the planning area water system should include the following water storage and pumping capacities:

<u>Zone</u>	<u>Storage (million gallons)</u>	<u>Pumping Capacity (gallons per minute)</u>
II	Existing	Existing
III	0.35	2,359
IV	0.35	2,286
V	0.78	2,208

The pumping capacity figures include pumping for the zone in which the pumping station is located, the zone's fireflow requirements, and the pumping requirements of all higher zones. A fireflow pumping capacity of 2000 gpm is included in the total figure for each zone.

c. Proposed Water System Layout. A suggested planning area water system layout is diagrammed on Figure I-2 for general planning and cost-estimating purposes. The system shown includes the common components necessary to provide the domestic and fireflow needs of all 14 designated development areas. The system has been designed to meet the City of Martinez design criteria shown in Table I-1, and the future water demand estimates for the "Third Draft" Plan, as itemized in Tables I-2 and I-3. Water laterals and loops necessary to serve individual home-

\* From Table E-8 of the plan EIR.

Table 1-2  
 "THIRD DRAFT" PLAN WATER DEMANDS--1990 AND 2000

Zone	Development Areas	1990 Demand				Year 2000 Demand			
		Total Units	Ave. Day (gallons)	Max. Day (gallons)	Peak Hr. (gallons)	Total Units	Ave. Day (gallons)	Max. Day (gallons)	Peak Hr. (gallons)
II	9-14; A,B, E, N-5	134	62,200	118,200	106,400	273	126,700	240,800	379,740
III	Existing units <sup>a</sup>	120	55,700	105,800	167,000	120	55,700	105,800	167,000
IV	8; C,D,F,G 1-6; T-V	4 126	1,900 58,500	3,500 111,100	5,600 175,300	10 126	4,600 58,500	8,800 111,100	13,900 175,300
V A	5	65	30,200	57,300	90,500	110	51,000	97,000	153,100
V B	6-7; I-M	0	0	0	0	229	106,300	202,800	320,200
Total for Planning Area (Zones III, IV, VA, and VB)		329	152,800	290,100	457,800	750	347,100	600,500	1,042,240
Grand Total (incl. existing units in Zone III)		449	208,500	395,900	624,800	870	402,800	766,300	1,209,200

SOURCE: Brown and Caldwell, May 1985.

<sup>a</sup>By 1990, approximately 120 existing homes in the upper Webster Drive and Sage Drive areas will benefit from improvements to Zone III made necessary by planning area development.

Table i-3  
 "THIRD DRAFT" PLAN WATER STORAGE REQUIREMENTS

Zone	Maximum day, gallons	Fire flow, gpm/duration	Fire reserve, gallons	Total Storage, gallons
II	250,374	2,000/2 hours	240,000	490,374
III	105,792	2,000/2 hours	240,000	345,792
IV	111,872	2,000/2 hours	240,000	351,872
VA	96,976	2,000/2 hours	240,000	336,976
VB	202,768	2,000/2 hours	240,000	442,768

SOURCE: Brown and Caldwell, June 1985.

sites and homesite clusters are not shown. These secondary components would be constructed as part of the individual site preparation process.

Alternatives for providing water service to the planning area are few. Options exist for Zone V and are primarily dependent on the phasing of development. To provide adequate water service, the following components are included in the scheme diagrammed on Figure 1-2:

- Zone II System consists of water main extensions from the existing Zone II water system (see Figure E-22 in the plan EIR).
- Zone III System includes a new storage tank at elevation 530 feet, plus conversion of the Webster Drive and Sage Drive pumping plants to provide for the pumping requirements of the new tank.
- Zone IV System includes a new tank at elevation 650 feet (±), plus a pumping plant at the Zone III tank.
- Zone V System includes two hydropneumatic pumping systems to serve sub-zones A and B. The Zone V development can be phased, because the storage for areas 5 and 6 is provided in the Zone IV tank. Development of area 7 would require construction of the Zone V tank.

In addition, major water transmission mains are shown connecting the tanks, plus smaller water mains to serve the various development areas. All water pipelines are located in roads or other public rights-of-way. Zone VA would have a standby 2,000-gpm fire pump. This pump would be engine-driven, allowing it to operate in the event of an electrical power outage.

**d. Water System Policies.** The following water service policies should be applied to all future development in the planning area to ensure that adequate water service is provided with minimal impact on the existing, offsite water systems:

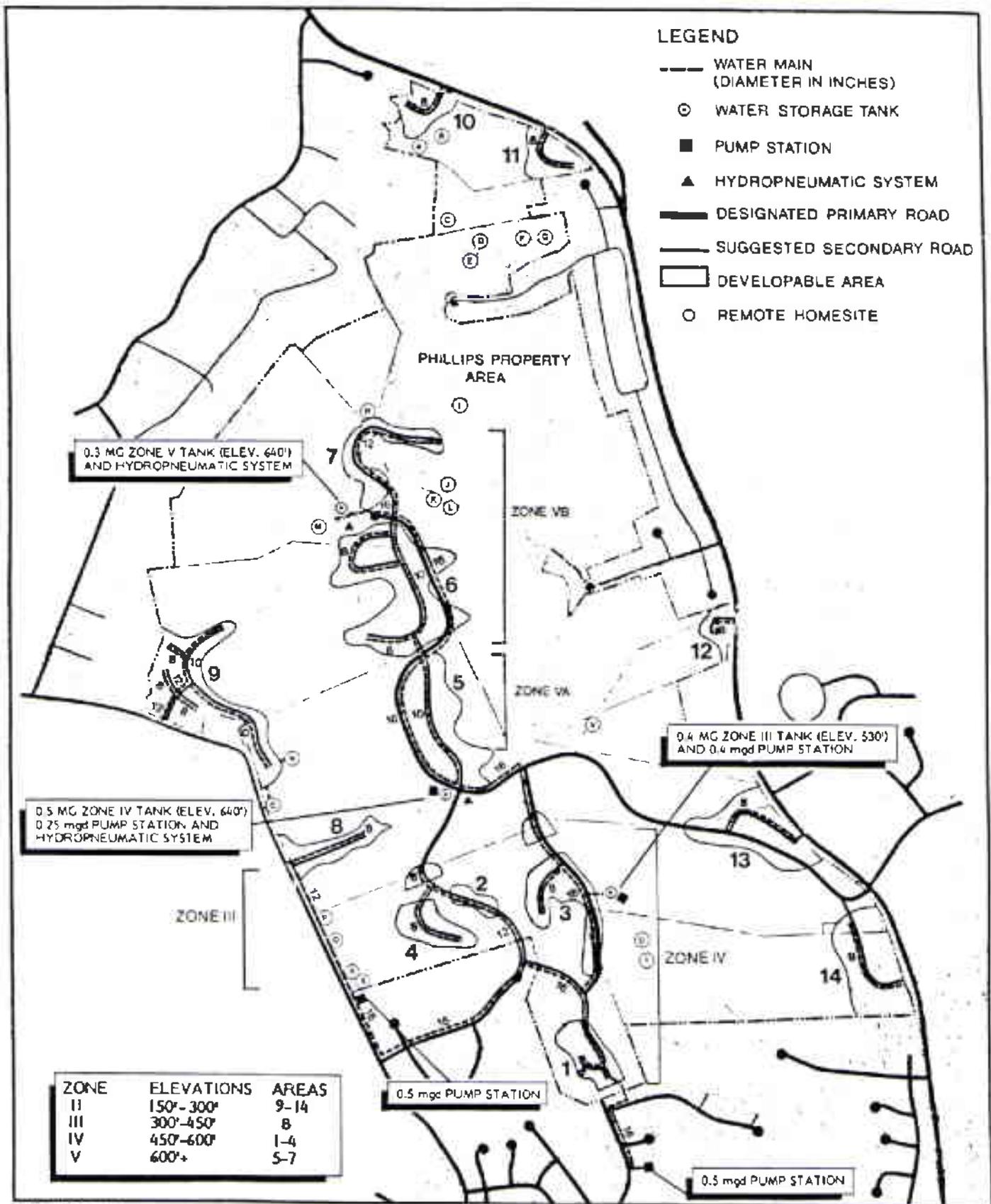


FIGURE 1-2  
SUGGESTED WATER SYSTEM

ALHAMBRA HILLS SPECIFIC PLAN MARTINEZ, CA.

WAGSTAFF AND BRADY URBAN AND ENVIRONMENTAL PLANNERS BERKELEY, CALIFORNIA



- (1) Accommodate development in the planning area in accordance with the ability of the City of Martinez Water Department to provide adequate water service.
- (2) All planning area water systems shall meet City of Martinez Water Department design criteria.
- (3) Development approvals within the planning area should be conditioned upon applicant fair-share participation in an integrated water system improvement program as described in this plan.
- (4) The planning area water system should be constructed in logical increments as needed, financed by benefitting developers, and sized as necessary to meet the ultimate domestic and fireflow needs of planning area buildout under the "Third Draft" Plan.
- (5) Water system looping should be provided wherever possible to ensure continuous service and maximum fireflow reliability in the event of a main disruption.

#### 4. Sanitary Sewer System

Like water service, provision of sanitary sewer service adequate to serve the needs of planning area buildout under "Third Draft" Plan policies will require significant onsite and offsite improvements. This section describes an integrated planning area sewer system, including recommended collection system layouts and sizes, which would adequately accommodate full buildout under the provisions of the "Third Draft" Plan.

a. District Boundaries. All of the planning area is within the sphere of influence of the Central Contra Costa County Sanitary District (CCCCSD). Most planning area properties are also within the boundaries of the District itself. For that portion not currently within the District, LAFCO approval of annexation to the District will be required before sewer service can be provided.

b. District Treatment Capacity. The CCCCCSD treatment plant is approaching its rated capacity. The 1985 average dry weather flow for the treatment plant was 36 million gallons per day (mgd), which is close to the rated plant capacity of 38 mgd. A current plant expansion program, which is scheduled for completion in October 1986, will increase the capacity to 45 mgd. No guarantee can be given that sewer connection approvals for all future new development in the District will be granted until plant expansion construction is completed. The 45 mgd treatment plant capacity should be adequate until about the year 2000, based upon 1985 ABAG population growth projections for the District's existing boundary and sphere of influence.

c. Existing Collection System. The planning area can be served by two existing major collection systems which lie along the northern and southern boundaries of the planning area (see Figure E-25 in the plan EIR). The northern system carries flow through downtown Martinez; the southern system passes through the residential area south of the Alhambra Hills and through the city of Pleasant Hill. The characteristics of these existing offsite sewage collection and related treatment

systems, and the potential impacts of future planning area development on these systems, are described in the plan EIR (Section IX.H.3)

There is a 10-inch sewer line running from central Martinez south along Alhambra Valley Road terminating north of the planning area at Gilbert Lane. No immediate plans exist for extending this line south of Gilbert Lane. Other residential projects currently planned for the Alhambra Valley (90+ homes--see Figure E-15 in EIR) assume that septic tanks can be used; but if adequate percolation rates are not demonstrated through future soil testing, this development could only proceed if the 10-inch Alhambra Valley Road sewer line was extended.

Sewer conditions and capacities in the downtown Martinez portions of the northern collection system are inadequate for a number of reasons, as described in the plan EIR. The capacity and condition of the southern collection system is significantly better than the northern system.

d. Septic Tank Suitabilities. In those "Third Draft" Plan development areas where septic tanks might be used (especially areas 8 and 9), severe soil and slope limitations exist; consequently, based on discussions with Contra Costa County Health Department officials, septic tanks were eliminated in this Implementation Element as the primary alternative for these areas.

e. Sewer Design Criteria. In designing the planning area sewage collection system, a general objective should be to minimize the amount of sewage directed to the northern collection system because the capacity immediately downstream from the planning area (along the northeastern boundary) is limited (only 6-inch diameter lines exist), and because of the problems in downtown Martinez.

According to CCCCSD policies, sewer systems shall be designed to operate under gravity flow. The use of common pumping stations or sewage pumps for individual lots will not be permitted unless it is economically impractical to provide gravity service. Consequently, gravity lines should be planned in virtually all cases.

It is also CCCCSD policy to locate proposed sewers in streets if at all possible. The planning area is in a location which is subject to the District's Hillside Sewer Policy. The policy requires that new sewer systems shall be designed with the maximum amount of pipe in streets or easily accessible areas. A 10-foot exclusive public sewer easement must be established over the alignment of any public main not located within a public road to provide access for future maintenance.

The cost for operation and maintenance of new sewer collection systems is paid for by its users through ongoing user charges.

f. Recommended Planning Area Collection System Layouts. Two planning area sewage collection system alternatives are diagrammed on Figures I-3 and I-4 for general planning and cost-estimating purposes. The schematics are limited to common systems necessary to serve all 14 designated development areas (750 units). Laterals necessary to serve individual homesites and homesite clusters are not shown. These components would be constructed as part of individual project site preparation procedures.

Both of the sewer layout alternatives shown are designed to allow for construction in components or sequences in order to meet the immediate needs of separate, near-term development actions. The layouts were developed based upon the following considerations:

Areas 1, 2, 4, 8, and 10-14 are limited to one feasible sewer extension alternative. Although minor variations in pipe routing are possible, such changes will not significantly affect the overall system cost. In general, sewer extension routings which avoided the need for right-of-way acquisition were selected over routing that required additional rights-of-way.

Regarding pipe sizes, the CCCCSD requires an 8-inch minimum sewer diameter for maintenance purposes. Pipe sizes are based upon the most conservative estimates of sewer demand.

The main differences between the two alternatives involve service to development areas 3, 5, 6, 7, 8, and 9.

Alternative 1. The basic Alternative 1 design objective is to carry planning area sewage south in order to avoid connection to the system in downtown Martinez where capacity problems exist. Although more expensive than Alternative 2 (see Section VIII.C), Alternative 1 is the preferred alternative from an engineering standpoint because the choice involves less potential for offsite sewer impacts and associated offsite costs, and would not require pumping.

Alternative 2. In Alternative 2, sewage from areas 6 and 7 would be carried north; area 5 sewage would still go south. A pump station and force main are used to serve area 9. Use of pump stations is highly discouraged by the CCCCSD. However, in light of the significant capital cost differential between the two area 9 alternatives (\$931,000 vs. 394,000), it might be best to seek a CCCCSD variance. The above costs do not include ongoing operation and maintenance costs or rebate potential. Consequently, the total cost differential may be smaller, as explained in Section D.2 of this chapter.

In any event, the cost to provide sewer service alone under either alternative will be very high for development area 9 unless other future developments planned in the Alhambra Valley also participate in the sewer extension.

g. Sewer Policies. The following policies should be applied to all future development in the planning area to ensure that adequate sewer service is provided with minimal impact on the existing offsite sewer system:

- (1) Development approvals within the planning area should be conditioned upon provision of the common sewer improvement requirements set forth in this plan.
- (2) Development in the planning area should be accommodated in accordance with the ability of the Central Contra Costa County Sanitary District to provide adequate offsite sewage collection and treatment services.
- (3) Since planning area development will be served by the Central Contra Costa County Sanitary District, all planning area sanitary sewer collection systems shall

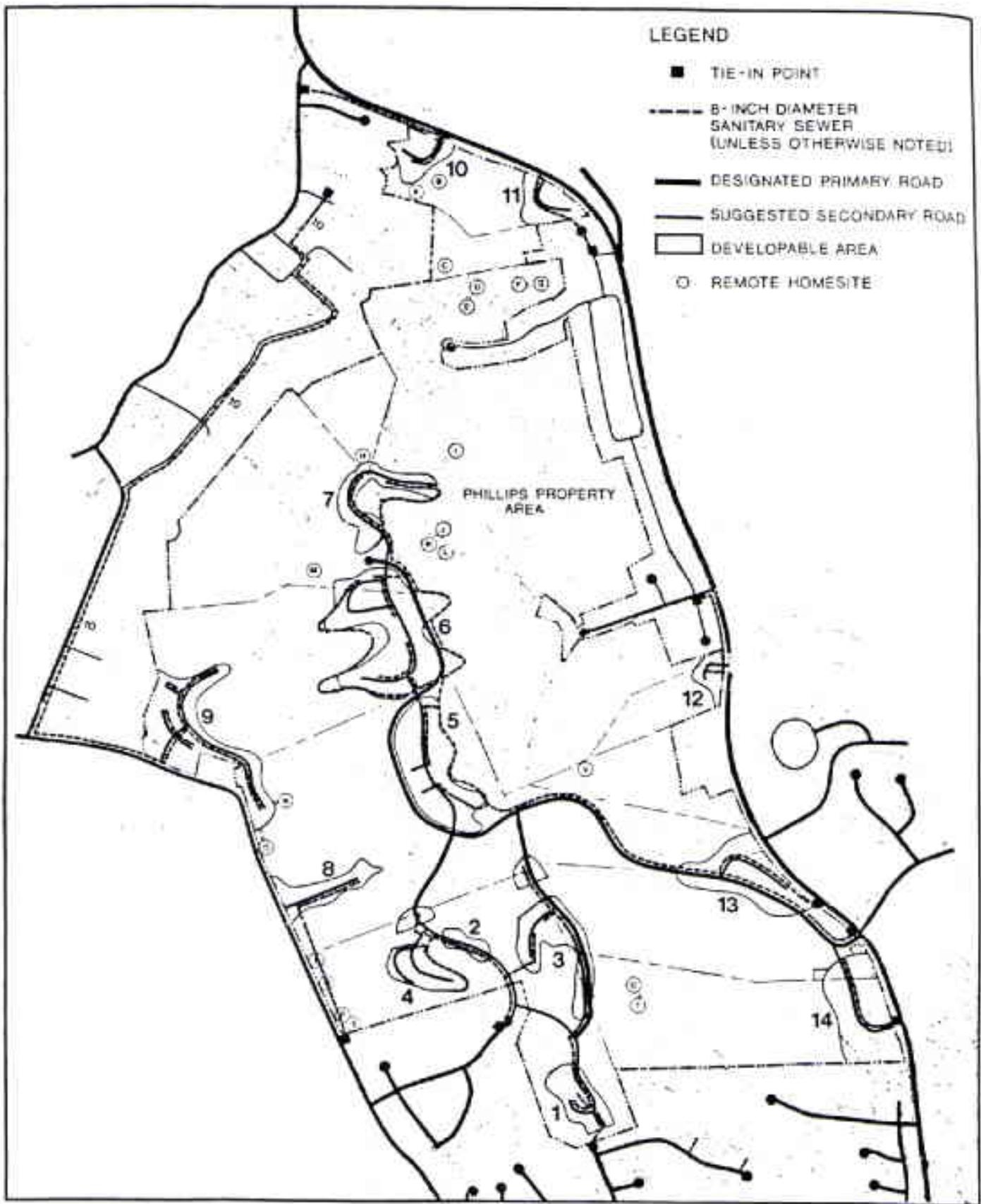


FIGURE I-3  
**SUGGESTED SEWER SYSTEM - Alternative 1**

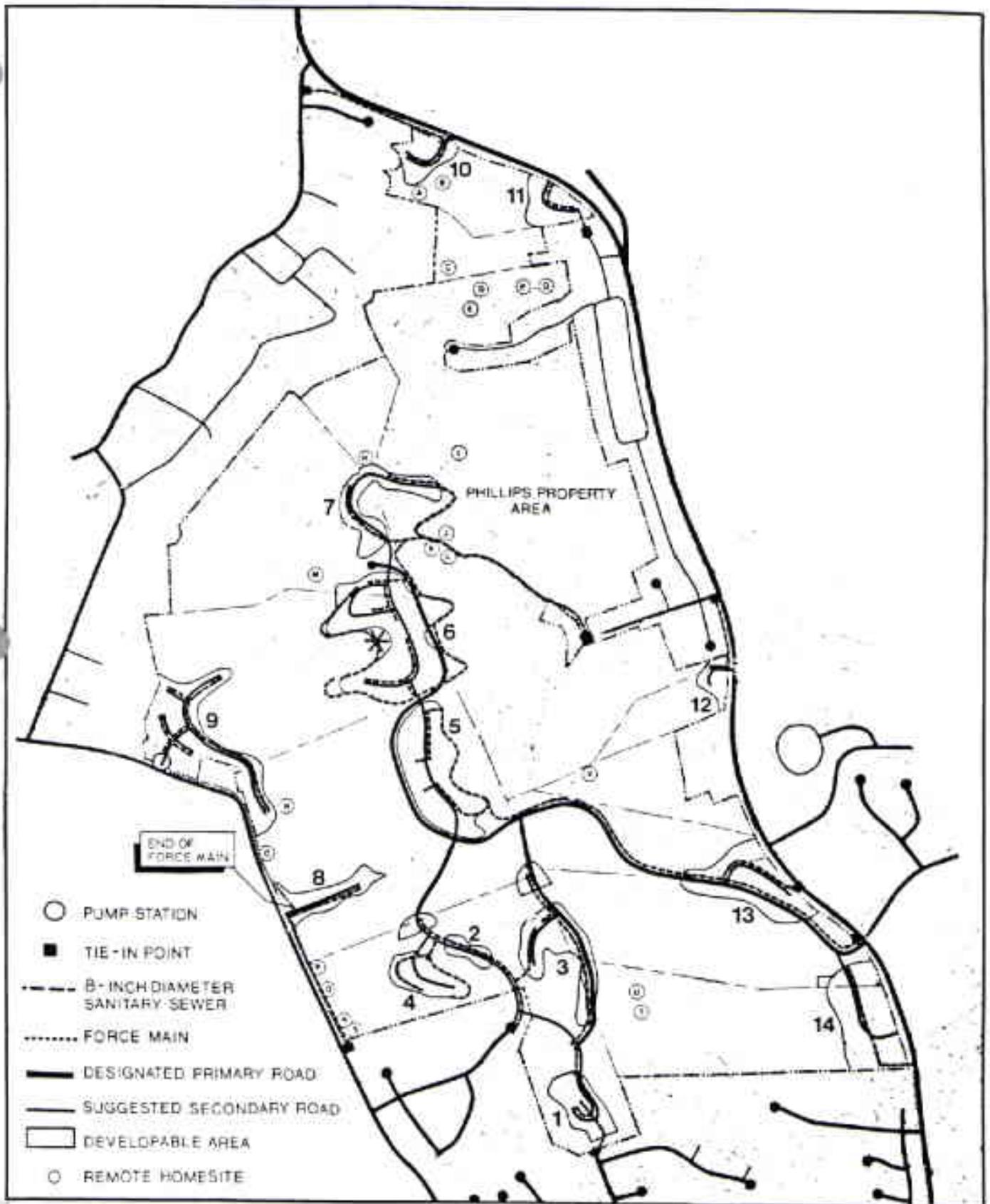


FIGURE 1-4  
**SUGGESTED SEWER SYSTEM-Alternative 2**

meet CCCCSD design criteria. The Sanitary District must review and approve any construction plans involving work on the public sewer system. To meet CCCCSD criteria, sewers shall be located in streets if possible. Sewers located outside of streets shall meet the criteria in CCCCSD's Hillside Policy. Any public sewer not in streets must have a 10-foot exclusive sewer easement to provide access for future maintenance.

(4) The sewer system shall be designed to operate under gravity flow, unless economically impractical. In the unusual case where a pump station is used, ongoing operation and maintenance costs will be paid by the users.

(5) The planning area sewer system should be constructed in increments as needed, financed by benefitting developers, and sized as necessary to meet estimated ultimate planning area buildout sewage collection demands.

(6) In lieu of a common sewer collection system for development areas 8 and 9, each lot must receive the approval of the City Department of Public Works and Contra Costa County Health Department for an individual sewage disposal system adequate to serve a four-bedroom residence, prior to Final Map approval.

#### 5. Storm Drainage System

The planning area is in the Contra Costa County Flood Control District (CCCFCD) Study Area 47, Zone No. 5. The planning area drains into two watersheds, as shown in the plan EIR. The northern watershed, which comprises approximately 75 percent of the "Third Draft" Plan development area, drains north into Alhambra Creek. The remaining 25 percent of the planned development area drains south into Grayson Creek. The ridgeline running north-south along the Alhambra Hills divides each of these two drainages into two parts.

For the northern planning area watershed, drainage is currently collected near the perimeter of the Alhambra Hills and transported north into Alhambra Creek via short runs of concrete pipe, concrete-lined channels, and natural channels. For the southern watershed, drainage is transported toward Grayson Creek via two large storm drainage systems through the existing residential area south of the planning area. These two systems discharge into the Alhambra Avenue storm drainage crossing near Danegal Way.

**a. Storm Drainage System Layout.** A recommended storm-drainage system layout is diagrammed on Figure I-5. The system has been designed to serve the storm drainage collection needs of all 14 development areas under "Third Draft" Plan buildout conditions. The layout includes two major components: a planning area storm drainage collection system, and a system of planning area detention basins.

(1) Collection System. It is assumed that grading of the development areas would direct runoff toward the street where the main collection system is indicated. Water collected in street gutters would flow through catch-basins to collector pipes under the street (18 inch minimum diameter). For the plateau areas, some of the storm drainage collector systems would discharge into underground pipes that roughly parallel existing natural channels. Other plateau area collection systems

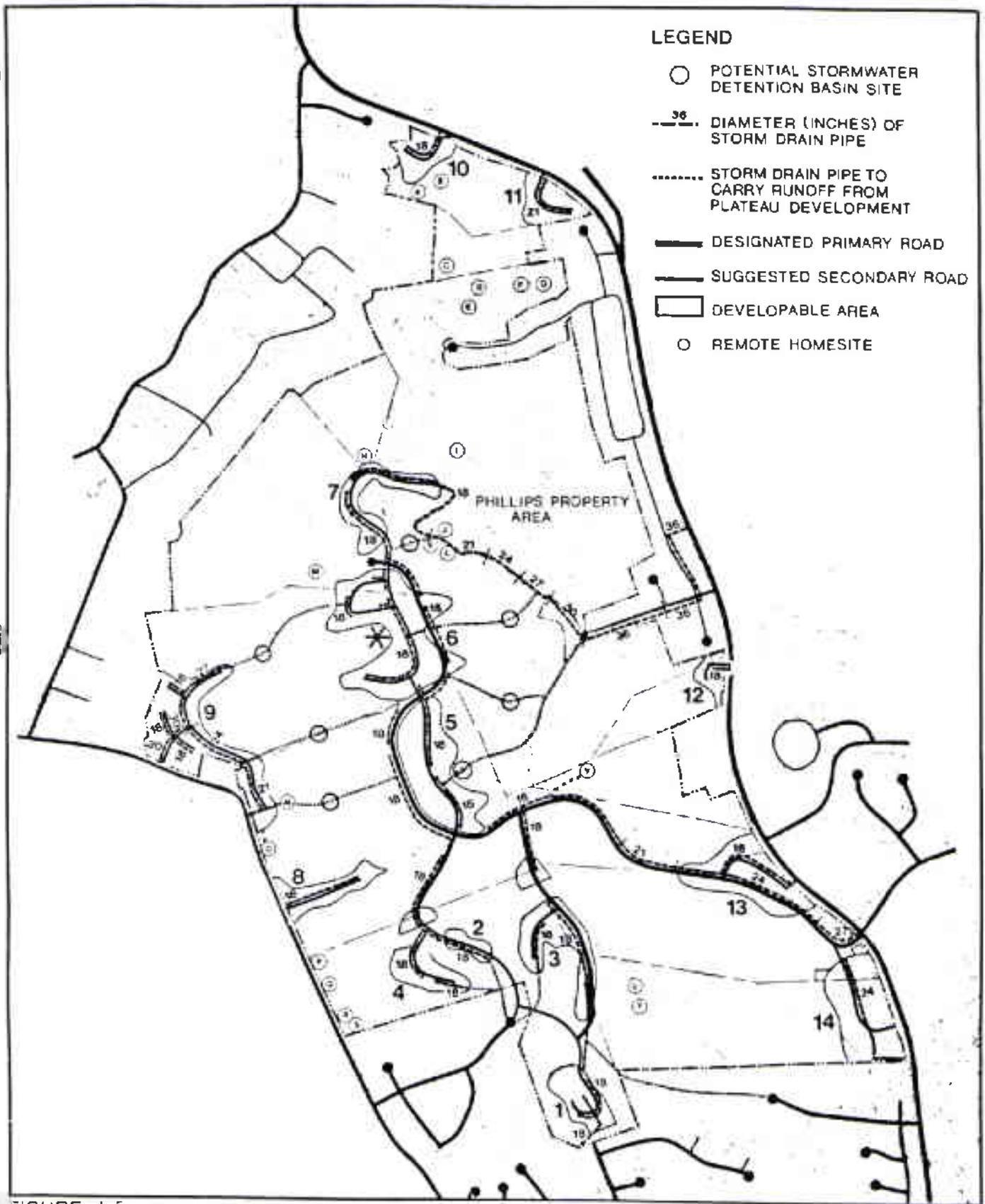
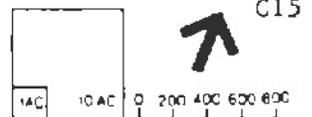


FIGURE 1-5

# SUGGESTED STORM DRAINAGE SYSTEM

ALHAMBRA HILLS SPECIFIC PLAN · MARTINEZ, CA.

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and all fringe area collection systems would connect at different points to existing storm drainage collection facilities.

Specific collection recommendations for individual development areas are shown on Figure I-5. Plateau development areas 1 through 4 would connect to existing systems on Horizon Drive, Webster Drive, and Benham Drive. Plateau development areas 5 through 7 would discharge west and east to the drainage pipes that parallel the natural channels. Since the plateau tributary areas are small, minimum pipe sizes could be used. Fringe development areas 8 through 14 could connect to existing systems at different points. Pipe sizes for these areas should generally exceed the minimum since they would receive drainage from the upper hillsides.

(2) Detention System. Runoff discharged into the pipes that parallel the natural drainage channels from the plateau areas should generally pass through individual planning area storm water detention systems to minimize the offsite impacts of increased runoff due to development. Detention facilities could include temporary storage in basins formed along the hillside by constructing dams across ravines. With hillside detention basins, flow from all storms would pass through the basins via the natural drainage channel. The basin discharge outlets would be sized so that, under severe storms, flow would back up into the basins and be released at a controlled rate. Under less severe storms, significant backup of runoff in the detention basins would not occur.

Storm detention basins would be necessary in the planning area's northern watershed (75 percent of the area) only, which drains into the Alhambra Creek where significant flooding problems exist. Detention basins are not necessary for the planning area's southern watershed (25 percent of the area) since existing storm drainage facilities immediately offsite and farther downstream in Grayson Creek appear adequate.

The purpose of this planning area detention system is to mitigate the impact on offsite drainage facilities of increased runoff from planning area development. According to the CCCFCD, the detention system must be designed to maintain the peak flow after development at or below the existing peak flow. Since the northern drainage area is less than one square mile, the applicable "recurrence interval" for the design storm is 10 years, according to the CCCFCD. The detention system must therefore maintain the 10-year peak offsite flow after planning area development at or below the existing 10-year peak flow.\*

Simply maintaining post-development peak flows at pre-development rates does not ensure that adverse impacts will not occur downstream, particularly in downtown Martinez. Consequently, the effect on peak flows in the Alhambra Creek due to the timing of the controlled release of flows from the detention basins must be studied.

\* The CCCFCD did not indicate that a 10 percent reduction in peak flow should be required as was done through Conditions of Approval of the recent Subdivision 6487 (Stonehurst) in the Alhambra Valley. Slightly more detention system storage capacity would be necessary if a 10 percent reduction in peak flow is required.

Adequate planning area storm detention could require construction of three or four individual storm drainage systems (excluding the Phillips property), as shown on Figure I-5. Their locations, and the manner in which they work together, must also be studied. It will not be feasible to provide adequate storm detention with only one onsite detention system.

Although the design of the planning area storm detention system should be based in general on the 10-year storm event, the system must also operate without failing under more severe storms, such as the 100-year storm. For detention basins located on planning area hillsides, the dam across the drainage ravine should be designed to also act as an overflow spillway when the capacity of the basin is exceeded during very severe storms. To perform this function, the dam should be constructed of impervious fill and lined with gunite to prevent erosion. Generally, slopes on the dam should not exceed 2:1 horizontal-to-vertical. The height of such dams may be as high as 20 feet in some cases, in order to obtain adequate storage along steep hillsides. The size of the dam outlet pipe would be determined by existing peak flows near the detention basin site, and on the dam height. These detention basins should be subject to design and site restoration criteria to minimize their visual impact, and should be fenced for safety purposes.

**b. Drainage Fees.** Payment of a drainage fee has been required for recent developments in the Alhambra Valley, and will probably be required by the City of Martinez for future development within municipal boundaries, and by the CCCFCD for development in the unincorporated areas, unless offsite drainage improvements are constructed. Based on recent charges for other nearby subdivisions (\$0.25 per square foot of added impervious area), a fee of approximately \$1,200 per planning area home can be anticipated. The fee goes into either a city flood mitigation fund or the County Drainage Deficiency Trust, depending on whether development is in the city or county. According to the CCCFCD, there are currently no approved improvement plans to be financed by this fund (i.e., fees that have been collected to date). The U.S. Army Corps of Engineers sponsored an Alhambra Creek study that identified alternatives for mitigating flood impact potentials in downtown Martinez. None of the measures received the acceptance of city residents; consequently, no improvements are currently planned. An approach that could be taken is to construct a regional detention facility downstream of the Alhambra Hills and upstream of downtown Martinez. This approach seems acceptable to the CCCFCD as a reasonable way to use drainage fees. The CCCFCD is presently studying potential sites for such offsite, common detention facilities.

**c. Offsite Improvement Requirements.** The capacity of the storm drainage system along Lindsey Drive should be increased to provide an adequate margin of safety. Although the detention system shown on Figure I-5 above Lindsey Drive would maintain post-development 10-year peak flows at existing levels, an additional margin of safety is needed for more severe storms.

Other areas adjacent to the planning area should not be adversely affected by the drainage system proposed herein.

**e. Storm Drainage Policies.** The following storm drainage policies should be applied to all future development in the planning area to ensure that adequate

**storm drainage provisions are incorporated in future development with minimal impact on offsite drainage conditions:**

- (1) An engineering study should be completed before individual detention basins for area 5-7 are designed in detail, to determine the effect of the controlled release of flows from the planning area system on peak flows in the Alhambra Creek (especially conditions in downtown Martinez). The study should also determine the best locations of the various detention basins (3 or 4 may be required, excluding the Phillips property) and the manner in which they will work together. This engineering should be funded by benefitting landowners in the Alhambra Creek drainage portion of the planning area.
- (2) Development approvals within the planning area should be contingent upon applicant fair-share provision of the common storm drainage improvement program set forth in this plan.
- (3) The planning area storm drainage system should be constructed in logical increments as needed and financed by benefitting developers.
- (4) The planning area storm drainage system should include three components, as described in this plan: (a) an onsite storm drainage collection system, (b) an onsite storm drainage detention system, and (c) a drainage fee to be used for mitigating regionwide storm drainage problems.
- (5) Grading of all development areas should be designed to direct storm runoff toward the streets where the main collection system would be located.
- (6) Otherwise, natural runoff patterns should be maintained to the greatest extent possible.
- (7) Erosion protection should be provided along those natural hillside channels where flow will be concentrated, including lining of existing channels with rock 4 to 6 inches in size or some other effective liner, and the installation of small check dams to decrease the velocity of flow (see Figure I-5).
- (8) If the development and drainage components on the Phillips property are to be implemented, the capacity of the existing storm drainage system along Lindsey Drive should be increased to provide an adequate margin of safety under more severe storm conditions (100-year storm). Capacity impacts on the channel along Pleasant Hill Road east, particularly at the Barber Land crossing, should also be checked and increased as necessary. Both of these capacity investigations and identification of warranted mitigation measures should be completed by applicant's professional engineer prior to approval of development in this drainage. These offsite improvements shall be financed on a fair-share basis by benefitting developers.
- (9) The capacity of the north branch of Grayson Creek between Taylor Boulevard and Apollo Way should be checked by the applicant's professional engineer, and mitigation measures warranted by the proposed development identified, prior to approval of development in areas 1-4, 13, and 14.

(10) A number of common infrastructure improvements have been described in this Implementation Element as necessary to meet the joint storm drainage and other infrastructure needs in the planning area (road, sewer, and water). These common improvements would be financed by fair-share contributions from benefitting planning area landowners. The storm drainage component of this program should include preparation of an erosion control plan which addresses the concerns of the community, the Contra Costa County Resource Conservation District (CCCRCD) and the San Francisco Regional Water Quality Control Board with respect to short-term and long-term erosion and sedimentation protection needs in the Alhambra and Grayson Creeks. The CCCRCD would welcome the opportunity to provide technical assistance to the parties involved in the preparation of this plan.

(11) The city and CCCFCD should study the possibility of using drainage fee collections from the planning area and other future development in the Alhambra Creek drainage to plan for, select and procure a site for, and construct a regional detention facility downstream of the Alhambra Hills and upstream of downtown Martinez.