

**RANCHO DEL SUR
FINAL ENVIRONMENTAL IMPACT REPORT**

Prepared For:

**City of Chula Vista
Environmental Review Coordinator
276 Fourth Avenue
Chula Vista, California 92010
EIR-87-3
SCH 87040118**

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LIST OF APPENDICES
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<u>Letter</u>	<u>Title</u>
A	Rancho del Sur (Phase I) Traffic Impact Analysis, by JHK & Associates.
B	Report of a Biological Survey of a 100-Acre Parcel on the South Side of Telegraph Canyon Road at Medical Center Drive, by Pacific Southwest Biological Services, Inc.
C	Preliminary Soil and Geologic Investigation for Rancho del Sur, 107-Acre Parcel, San Diego County, California, by Geocon, Incorporated.
D	Acoustical Analysis Report, Rancho del Sur (Phase I), Chula Vista, California, by WESTEC Services, Incorporated.
E	Rancho del Sur Fiscal Impact Analysis, by Public Affairs Consultants.

SECTION 1
INTRODUCTION AND SUMMARY

1.1 PURPOSE

This document is an Environmental Impact Report (EIR) prepared for the City of Chula Vista on the proposed Rancho del Sur project. The purpose of an EIR is to inform the public and decisionmakers about the nature of a proposed project and the extent and kinds of environmental impacts which would be expected to result if the project or project alternatives were implemented. Environmental impact reports must contain discussions of specific topics as outlined in the guidelines for implementation of the California Environmental Quality Act (CEQA) which were prepared by the State Secretary for Resources. These guidelines are periodically updated to comply with changes in CEQA and court interpretations. This report complies with the most recent guidelines and amendments to CEQA.

The Rancho del Sur project proposes residential development for the 108.3-acre project site. Annexation from the County of San Diego has been completed for a portion of the site which was previously under the County's jurisdiction. The remainder of the project site lies within the City of Chula Vista. Discretionary actions required for the Rancho del Sur project include approval of a Zone Change, Precise Plan and a Tentative Map.

This EIR contains sections required by CEQA, including a summary, project description, environmental setting and project alternatives, as well as a detailed resource-by-resource impact analysis. The impact analysis, contained in Section IV, discusses the following resources: land use, transportation, services/utilities, biological resources, cultural resources, geology/soils/groundwater, water quality/drainage, mineral resources, landform alteration/visual quality, noise, air quality, and fiscal impacts.

The final three chapters of the EIR include growth inducement, the relationship between local short-term uses of man's environment and maintenance and enhancement of long-term productivity, and significant irreversible environmental changes.

This Draft Environmental Impact Report will be available for review by the public and public agencies for a period of 30 days. Comments on the environmental analysis contained in this report are invited and may be submitted to the City of Chula Vista Department of Planning, 276 Fourth Avenue, Chula Vista, CA 92010. The Draft EIR will be available at the Department of Planning and major City libraries. The Department of Planning will consider all written comments on the Draft EIR before

making recommendations to the Planning Commission regarding the extent and nature of the environmental impacts of the proposed project.

The City of Chula Vista Planning Commission will hear further public input and will consider the Final EIR when making recommendations on the project to the City Council. (Contact City Planning at [619] 691-5101 for exact time and date of Planning Commission hearing.) The Council will certify the Final EIR as complete and in compliance with CEQA and will consider it in approving or disapproving the project. Public input is encouraged at all hearings. In the final review of the project plan, environmental considerations as well as economic and social factors will be weighed to determine the most appropriate form of development for the project site.

1.2 SUMMARY OF FINDINGS

Project Description

The Rancho del Sur project site is located approximately 3 miles east of downtown Chula Vista and 5.5 miles north of the United States/Mexico International Border. Annexation of the portion of the 108.3-acre project site lying in County lands outside the City of Chula Vista's corporate boundaries is expected to be completed prior to project approval.

The Rancho del Sur development involves the construction of 302 single-family dwelling units in four residential subsections and 220 multi-family units in a fifth subsection. In addition, the project is currently proposing a 5.71-acre public park onsite, 5.3 acres of which would be located within the SDG&E easement (2.0 acres immediately north of East Naples Street and 3.3 acres immediately south of East Naples Street) and include a multi-purpose playing field, children's playground, trail system and parking area. The additional 0.41 acres of the park would be located adjacent to the easement onsite to the southeast of East Naples Street. This area would contain three lighted tennis courts. Approximately 85 percent of the site would be graded, with 800,000 cubic yards of balanced cut and fill. An additional 300,000 cubic yards would be involved in remedial grading and site preparation. A small portion of the site east of Medical Center Drive and south of the proposed extension of East Naples Street is designated for future development, the nature of which is yet to be determined. When future development in this area is proposed, additional environmental review may be required. Property to the south and east of the site represents future development, which will require additional environmental review when development plans are proposed.

Environmental Setting

The Rancho del Sur project site encompasses 108.3 acres of gently to steeply sloping hillside topography. Site elevations range from approximately 245 feet above mean sea level (MSL) in the northwestern portion of the site to 400 MSL on the most prominent hill, located in the eastern section of the property. Other onsite hills peak between 350 and 360 MSL.

Vegetation consists primarily of native grasses, with chaparral on the steeper portions of the site. The project site is essentially undeveloped, with the exception of numerous dirt roads running through the area. In addition, a 250-foot San Diego Gas and Electric easement runs through the property in a southwest to northeasterly direction. There is some evidence of off-road vehicle activity on the site, as well as illegal trash dumping.

Telegraph Canyon Road runs along the northern boundary of the project site. Medium density single-family and single-family attached dwellings lie to the north of the site, across Telegraph Canyon Road. The Foxhill Run single-family residential development borders the southwest portion of the project site. Greg Rogers Park and Greg Rogers School are located along the western boundary across Foxboro Avenue. A large residential area also lies to the west of the site. A medical complex which includes Vista Hill Hospital, Community Hospital, and several medical/dental offices is located southeasterly of the site. The site can be accessed from Interstate 805 via Telegraph Canyon Road to Medical Center Drive.

Impact Analysis

Each topic in the impact analysis includes the following subsections: Existing Conditions - describes the environmental setting for each issue; Impacts - assesses the effects related to the project; Mitigation Measures - discusses measures which would avoid or reduce any adverse impacts identified; and Analysis of Significance - evaluates the significance of each impact after mitigation.

Land Use

The proposed project would alter the utilization of the site from undeveloped open space to an urban development containing both single- and multi-family dwellings. This change would result in impacts such as increased traffic flows, decreased air quality, and additional public service and utility demands. The proposed land uses for Rancho del Sur are, however, compatible with the existing and planned land uses in the vicinity of the project. The project is consistent with applicable land use policies.

The only potentially adverse land use impact created by the development is the compatibility of the proposed high density multi-family subsection, and, secondarily, the smaller single-family lot sizes, with the existing residential development. However, those affected lots are buffered from nearby residential development by landscaping and open space such that the potential impact is reduced to a level of insignificance. No further mitigation is required as long as adequate buffering of these sensitive land uses is maintained.

Transportation

The Rancho del Sur project is expected to add approximately 4400 average daily trips (ADT) to the street system in the area. Results from the analysis of projected traffic volumes at time of project completion indicate that in all but one case, the acceptable level of service (LOS) for each intersection will not be exceeded. The exception to this is at the intersection of the northbound I-805 off- and on-ramps with Telegraph Canyon Road, where the drop in LOS is caused mainly by the large eastbound approach volumes. This drop in LOS is expected to occur even if the Rancho del Sur project is not completed. In addition, the unsignalized intersection at Oleander Avenue and East Naples Street would be placed at near capacity if the expected high rate of growth is experienced prior to project completion.

To mitigate the unacceptable LOS at the intersection of the northbound I-805 off- and on-ramps, a change in lane assignments on the eastbound approach to I-805 to allow double left turns is recommended. Other roadway improvements, including the addition of another lane permitting double left turns resulting in two left-turn and two eastbound through-lanes may also be necessary in the long term. This would improve the LOS to acceptable levels. The developer will also be required to contribute a proportionate share to a fund for roadway improvements.

Services/Utilities

Schools: The Rancho del Sur project would incrementally affect the Chula Vista Elementary and Sweetwater Union High School Districts. A cumulative impact to these school districts will result from this project and other proposed developments. However, because the required facilities are currently planned, and assuming construction is completed concurrent with need and Rancho del Sur pays the required development fees in accordance with State Law (Assembly Bill Number 2926), then the cumulative impact would be mitigated to a level of insignificance.

Parks, Recreation, and Open Space: The project proposes a 5.71-acre neighborhood park located largely within the SDG&E easement, hiking and pedestrian

trails connecting the development with Greg Rogers Community Park and some private recreation facilities for residents in the multi-family dwelling area. These parkland allocations are considered insufficient, however, to meet the requirements of the City of Chula Vista. As a result, the potential for a significant impact on nearby parkland could result. However, payment of in-lieu fees, offsite improvements, and/or additional onsite parkland dedication outside the SDG&E easement could mitigate this impact to a level of insignificance, which the developer has agreed to implement to the satisfaction of the Parks and Recreation Department. A project alternative is also included in the EIR to address this issue.

Fire and Police Protection: The project-generated population, approximately 1389 persons at maximum buildout, would require the addition of two officers to the City of Chula Vista Police Department. Provision of additional police personnel is underway. Project-generated revenues to the City of Chula Vista's General Fund would offset this cost.

The project would also contribute to the need to expand Fire Department facilities. Contributions by the Rancho del Sur applicant for the expansion of facilities would mitigate this impact. Proposed expansion plans include the relocation of Station #4 to the east and the construction of a new station on East H Street. The extension of East Naples Street would also allow Station #3 to service the project site more effectively.

Water and Sewer Availability: It is estimated that, at full buildout, the Rancho del Sur development would have an average demand of 0.312 million gallons of water per day and would generate 0.13 million gallons of sewage per day. The provision of water and sewer service to the project site would not represent significant impacts to existing facilities within the project vicinity. The combination of the Rancho del Sur project with other similar projects in the vicinity may represent a cumulative impact; however, both the Otay Water District and the City of Chula Vista have plans to expand existing facilities or provide new facilities. The impact associated with extending water and sewer service to the project site would thus be reduced to a level of insignificance, provided funding, planning, and construction of expanded facilities coincide with development within eastern Chula Vista.

Energy Conservation: Project development would require existing energy facilities to be extended to serve the project site. At full buildout, the Rancho del Sur development would require 20,880 therms per month of natural gas and 208,800 Kwh per month of electricity. This energy demand is similar to that of neighboring develop-

ments and does not represent an adverse impact on capacity and supply for San Diego Gas & Electric (SDG&E) at this time.

Biological Resources

Among the sensitive biological resources identified onsite were five plant species, grassland and coastal sage scrub habitats, and one bird species (i.e., the California black-tailed gnatcatcher). A cumulative impact to the biological resources resulting from project implementation is identified. This effect, however, is not considered to be significant because of the following factors: few numbers of sensitive plant species onsite; low to moderate potential for other plant species to occur; low potential for declining reptiles to occur onsite; few California black-tailed gnatcatchers onsite; and lack of adjacent natural open space for habitat. Because of the above factors and the highly degraded nature of most of the native vegetation onsite, no mitigation is proposed for its loss. However, recommendations concerning activities within the preserved open space area are given in the Biological Resources section of the document.

Cultural Resources

Three areas containing a limited number of stone artifacts were found in portions of the project site that have been disrupted by plowing and dumping. Due to the small number of artifacts found in these areas and the highly disturbed nature of the sites, these finds are not considered to be significant. Thus, no significant impacts on cultural resources are identified and no mitigation measures are proposed.

Geology/Soils/Groundwater

Contingent on results from an additional required reconnaissance of an unsurveyed 10-acre portion of the project site, available geological data indicate that there are no major geologic constraints on the project site that would preclude development. Potential identified impacts include settlement problems associated with expansive surficial soils, potential erosion within fill slopes, seismic activity in the area, and possible groundwater problems. Assuming that all pertinent mitigation measures (as identified in the geology section of this document) are incorporated into the project design, no significant geotechnical impacts are anticipated.

Water Quality/Drainage

The proposed development would result in substantial grading, infilling of drainages, and construction of impervious surfaces to accommodate the planned residential community. This would produce changes to both the nature and quantity of runoff within the site. The project proposes an onsite drainage system consisting of a

series of underground storm-drains, curb inlets and catch basins designed for the expected runoff of a 10-year storm, consistent with the City of Chula Vista's policy for local drainage basins. Implementation of the proposed drainage system is contingent upon approval by the City of Chula Vista's Department of Public Works, and no impacts would be expected due to inadequacies in the proposed facilities.

The preliminary geotechnical report prepared for the Rancho del Sur project contains recommendations to provide adequate surface and subsurface drainage and erosion control that should be incorporated into the project design.

Mineral Resources

The geotechnical survey of the Rancho del Sur project site indicated no evidence of mineral resources onsite, i.e., no impacts are identified and no mitigation is necessary.

Landform Alteration/Visual Quality

Development of the Rancho del Sur project would entail grading of approximately 85 percent of the project site and a permanent change from a rural to an urban landscape. In addition, existing and proposed electrical lines within the existing SDG&E easement onsite could have an adverse visual impact. Homes to the north and west, hospital facilities to the southwest, and motorists along Medical Center Drive would be most affected by changes in landform and vegetation onsite.

Since the existing topographic relief is relatively low, the degree of landform alteration proposed would create an adverse but not significant impact on the view into the project site. In addition, the proposed landscaping and design concepts associated with project development would preserve the scenic qualities of the Telegraph Canyon scenic highway landscape corridor by buffering and screening many views. Implementation of the proposed landscape plan, along with additional grading and design guidelines, would reduce the visual and landform impacts associated with the Rancho del Sur development to a level of insignificance.

Noise

The noise generated by the helipad operations at the hospital would not affect significantly the ambient noise levels onsite. Modeling of traffic-generated noise levels indicates that future noise levels at the facades of the buildings adjacent to portions of Medical Center Drive and East Naples Street would exceed the City of Chula Vista's guidelines for residential land uses by up to 4 dB(A). Masonry walls and/or berms located along portions of Medical Center Drive and East Naples Street, in conjunction with the actual construction of the proposed structures, would reduce first floor,

exterior, onsite noise levels to 65 dB(A) CNEL, i.e., within the City's guidelines, thereby mitigating noise impacts to a level of insignificance.

Two hospitals are located in the vicinity of the project site and would contribute to the noise environment. Sirens are considered single-event noise issues or a nuisance noise by the City of Chula Vista. Although noise levels attributed to the ambulances do not represent a significant environmental impact, the applicant has agreed to provide additional sound attenuating features (e.g., double-paned windows, added insulation, or higher noise barrier) for residences located adjacent to Medical Center Drive.

Acoustical engineering studies will be required to determine that appropriate use of building materials has been incorporated into the project design. Noise studies to determine if acoustical barriers would be necessary for the multi-family development area will also be required prior to submittal of site development plans.

Air Quality

The Rancho del Sur project would generate both short- and long-term air pollutants. Short-term impacts result from construction vehicle emissions and from fugitive dust associated with clearing and grading activities. Potential long-term air quality degradation would emanate primarily from vehicular traffic.

The project proposes a more intensive land use than SANDAG's Series V and Growth Forecasts had anticipated; an adverse though not significant cumulative effect on the region's air quality would result.

Fiscal Analysis/Community Social

Implementation of the Rancho del Sur project is expected to result in a positive fiscal impact to the City of Chula Vista. Since no adverse fiscal impacts are expected, no mitigation measures are recommended.

Alternatives

Four alternatives were evaluated: proposed action, no project, additional parkland and reduced density. A summary, in tabular format, of the impacts of the alternatives is presented in Table 1-1. The additional parkland alternative is considered identical to those referenced for the proposed action.

No-Project Alternative: The No-Project alternative would result in no fiscal impacts to the City and no impacts to the regional air quality and resources. Traffic generated by the proposed development would not occur. The No-Project alternative would result in no significant adverse impacts to

TABLE 1-1

SUMMARY FOR COMPARISON OF ALTERNATIVES

	<u>Proposed Action*</u>	<u>No Project</u>	<u>Reduced Density</u>
Number of Units	522 dwelling units (302 single-family, 220 multi-family)	0	433 dwelling units (433 single-family)
Land Use	No impact	No impact	No impact
Transportation	4400 ADT, contribute to significant adverse traffic impacts and provide funds for regional improvements	0 ADT, significant traffic condi- tions still exist	4330 ADT, contribute to significant adverse traffic impacts and provide funds for regional improvements
Services/ Utilities	1389 residents	0 residents	1152 residents
Schools	314 students, development fees required	0 students	260 students, development fees required
Parks/ Recreation and Open Space	Impacts mitigated through dedication of parklands, in-lieu fees or contributions to regional parks	No impacts to parklands	Impacts mitigated through dedication of parklands, in-lieu fees or contributions to regional parks
Fire/Police	1.7 additional Police; expansion of Fire Department	No impact	1.4 additional Police; expansion of Fire Department
Water/Sewer	0.312 mgd water 0.13 mgd sewer	No impact	0.25 mgd water 0.12 mgd sewer
	Regional improve- ments required, development fees assessed	Regional improvements required.	Regional improve- ments required, development fees assessed

TABLE 1-1

SUMMARY FOR COMPARISON OF ALTERNATIVES (Continued)

	<u>Proposed Action*</u>	<u>No Project</u>	<u>Reduced Density</u>
Energy	20,880 therms per month natural gas 208,800 kwh per month electricity 1063 gallons fuel per day	0	17,330 therms per month natural gas 173,300 kwh per month electricity 1046 gallons fuel per day
Biology	Adverse, not significant	No impact	Adverse, not significant
Cultural Resources	No significant cultural resources onsite	No impact	No significant cultural resources onsite
Geology/Soils	No significant geotechnical constraints that cannot be mitigated	No impact	No significant geotechnical constraints that cannot be mitigated
Water Quality/ Drainage	No significant unmitigable impacts	No impact	No significant unmitigable impacts
Mineral Resources	No impact	No impact	No impact
Landform Alteration	No significant impact	No impact	No significant impact
Noise	Significant, mitigable	No impact	Significant, mitigable
Air Quality	Incremental increase over SANDAG's forecast, cumulative impact	No impact	Meets SANDAG's forecast, no impact
Fiscal Analysis/ Community/Social Concerns	Positive impact	No impact	Not evaluated

*Impacts for Additional Parkland Alternative are identical to this column.

resources, and the existing conditions as outlined in the proposed action would be retained. Because the project site is privately owned and is planned and zoned for residential development, the No-Project alternative would only temporarily retain the property undeveloped.

Additional Parkland Alternative: The Rancho del Sur development, as proposed in the draft EIR, did not provide sufficient useable parkland acreage to comply with the Parks and Recreation Department's standards. Subsequently, the developer has revised the project to comply with Parks and Recreation Department's standards. Please see Comment 3 in Section 10.0, Comments and Responses. This alternative could comply with these standards by providing additional onsite parkland acreage outside of the SDG&E easement, improvements to nearby Greg Rogers Park and/or payment of in-lieu fees. This plan could alter the proposed grading plan and, thereby, reduce the number of proposed dwelling units. All other impacts described for the proposed action would be similar if this alternative was implemented. No significant, unmitigable environmental impacts would occur as a result of this alternative.

Reduced Density Alternative: This alternative addresses the level of impacts if the project site was developed at the densities previously designated for this site (i.e., 4 Du/acre). This reduction results in approximately 17% fewer dwelling units. Incremental reduction in the number of trips generated (70 ADT), school children (54), utilities consumption and air quality would occur; however, the reduction is not considered significant. Fiscal impact study was not conducted; therefore, no conclusion can be made. Otherwise, all other impacts are considered to be similar in nature as those identified for the proposed action.

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SECTION 2
PROJECT DESCRIPTION

2.1 GEOGRAPHIC LOCATION

The Rancho del Sur project site is located approximately 3 miles east of downtown Chula Vista and 5.5 miles north of the United States/Mexico International Border (Figures 2-1 and 2-2). The 108.3-acre site lies partially within the City of Chula Vista's corporate boundaries and partially within unincorporated County lands in the City of Chula Vista's Sphere of Influence. Annexation of these County lands will be completed in March 1987.

2.2 DISCRETIONARY ACTIONS INVOLVED

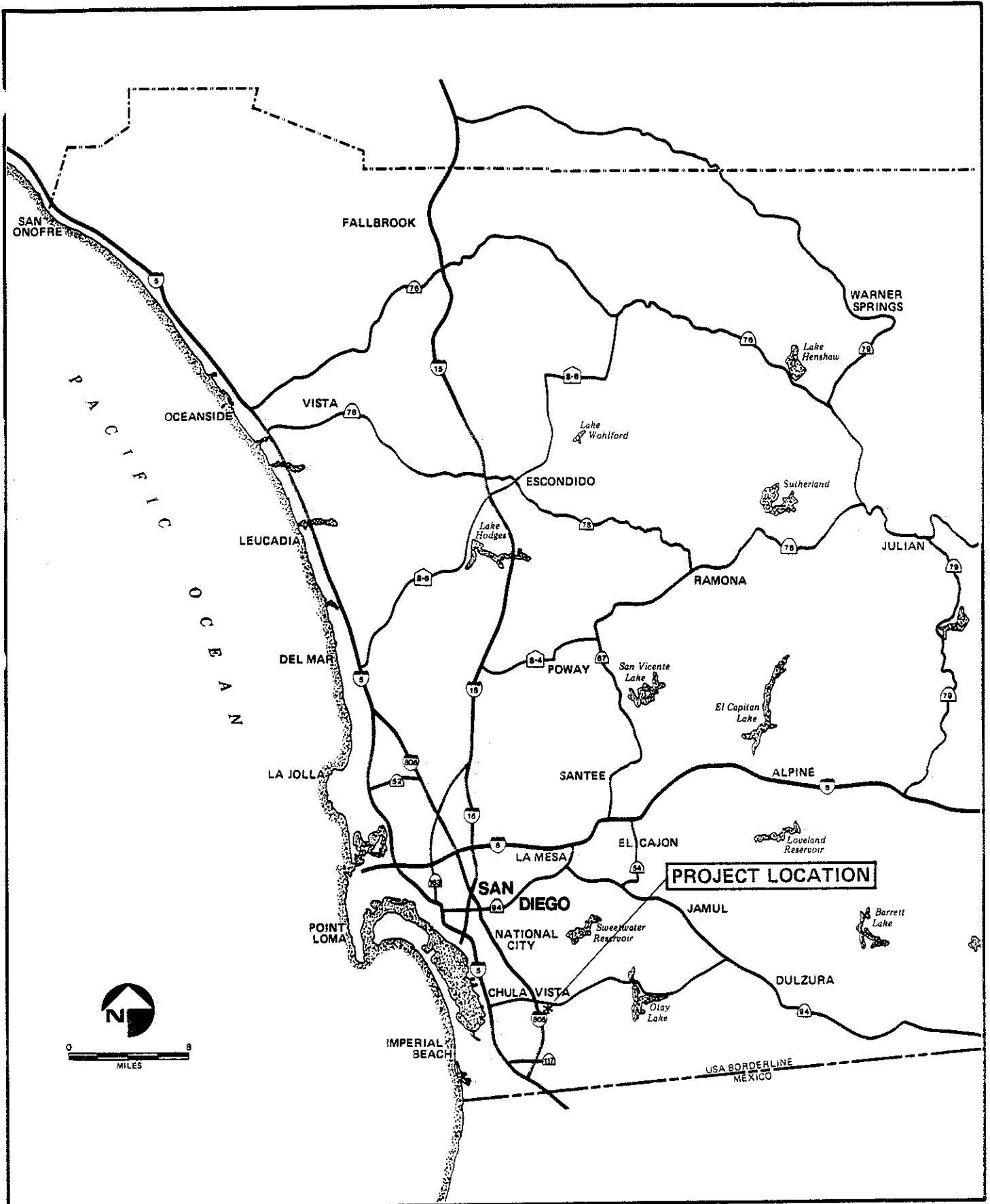
Discretionary actions associated with the development of the Rancho del Sur project involve the approval, by the City of Chula Vista, of a Zone Change, Tentative Map and Precise Plan.

2.3 PROJECT CHARACTERISTICS

The proposed project involves a Precise Plan and Tentative Map for a 108.3-acre site to be developed as Rancho del Sur. Future development to the south and east is also proposed, but planning is not complete and a subsequent environmental review will be required for that project.

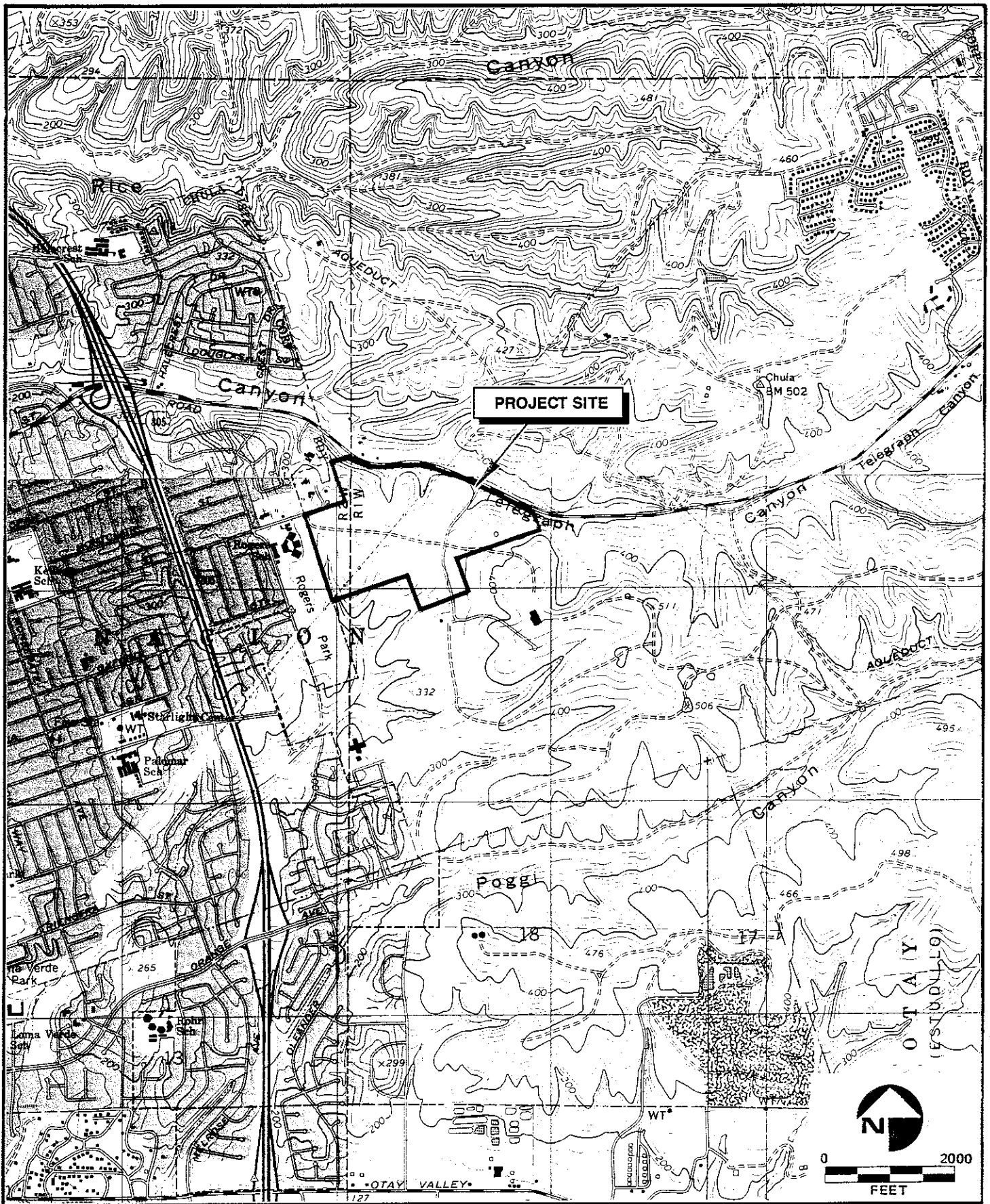
Rancho del Sur is comprised of five residential subsections (Table 2-1, Figure 2-3). A total of 522 dwelling units (including single- and multi-family units) will be built, and a 1.7-acre recreational area is proposed. The latter will include a park area located within the SDG&E easement and directly south of East Naples Street. It will contain picnic areas, a children's playground, open play turf, multipurpose courts, and off-street parking. A recreation facility containing a pool, and jacuzzi will be located adjacent to the park area.

Telegraph Canyon Road borders the site to the north. Medical Center Drive runs from Telegraph Canyon Road southward through the site; Foxboro Avenue runs along the western boundary. Access to each of the five subsections will be provided from East Naples Street, which will be extended from Foxboro Avenue to traverse the site from west to east, ending in a cul-de-sac south of Subsection 1. No development is currently proposed for a small portion of the site east of Medical Center Drive and south of the proposed extension of East Naples Street. If future development in this area is proposed, additional environmental review may be required.



Regional Map Showing Project Location

**FIGURE
2-1**



Project Site Location as Shown on National City and Imperial Beach USGS, 7.5' Quadrangles

**FIGURE
2-2**

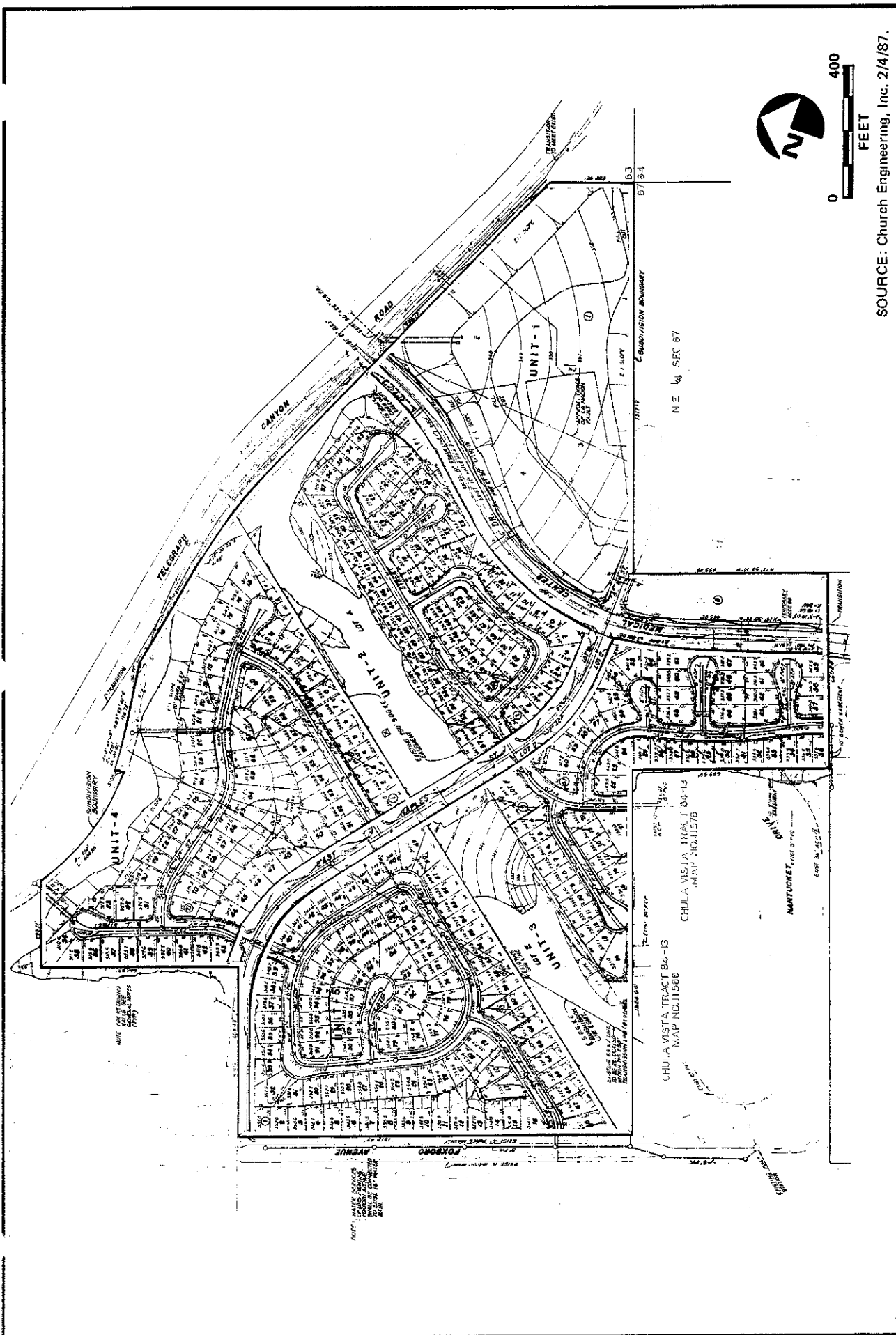


FIGURE 2-3

Proposed Rancho Del Sur Site Plan

Table 2-1

CONCEPTUAL DEVELOPMENT PLAN FOR THE
RANCHO DEL SUR PROJECT

<u>Subsection</u>	<u>Total Acres</u>	<u>Type of Units</u>	<u>No. of Units</u>	<u>Typical Lot Size (sq. ft.)</u>	<u>Density (DU/ac)</u>
1	17.1	Multi-family	220	—	12
2	10.1	Single-family	68	3,750	6.7
3	10.3	Single-family	61	5,000	5.9
4	19.0	Single-family	71	7,000	3.7
5	15.3	Single-family	102	5,000	6.7
Other	36.5	SDG&E Easement, streets, other nondeveloped	0	0	0
<u>Summary</u>	<u>108.3</u>	<u>—</u>	<u>522</u>	<u>—</u>	<u>4.8</u>

The County of San Diego zoned its portion of the site RS4, which allows single-family residential development at a density of 4.3 dwelling units (DU) per acre. The City zoned its portion of the site R-1-P-4, which allows single-family residential development under a Precise Plan at a density of 4 DU per acre. The Precise Plan for the project proposes zoning the property R-1-P-6 and R-3-P-12. This designates single-family residential development under a precise plan at a density of 6 DU per acre and multi-family development at a density of 12 DU per acre.

Approximately 85 percent of the site will be graded, with 800,000 cubic yards of balanced cut and fill onsite. An additional 300,000 cubic yards will be involved in remedial grading and site preparation. Maximum slope ratio of 2:1 will include cut slopes of 50 feet and fill slopes to 70 feet.

The SDG&E easement running through the project site from the southwest to the northwest will be preserved as open space and a large portion retained in its natural state; additional areas will be revegetated. A system of pedestrian and hiking trails will be provided from Greg Rogers Park (southwest of the site) northward through the SDG&E easement, then continued on East Naples Street and Medical Center Drive to Telegraph Canyon Road.

The primary landscaping elements used throughout the development will include native or naturalized trees, cobblestone, and wood materials. Major street intersections and entries will be characterized by special planting, wall materials, and signage. All graded slopes will be landscaped with groundcover, shrubs, and trees.

Project utilities will be provided in underground easements. Gas and electric service will be provided by SDG&E. Water needs for the project will be provided by the Otay Water District. A sanitary sewer (8-inch minimum sewer mains) will be provided and connected to the City of Chula Vista sewer system. Telephone service will be provided by Pacific Telephone.

SECTION 3 ENVIRONMENTAL SETTING

The Rancho del Sur project site encompasses 108.3 acres of gently to steeply sloping hillside topography (Figure 2-3). Onsite elevations range from approximately 245 feet above mean sea level (MSL) in the northwestern portion of the site to 397.5 MSL on the most prominent hill, which is located in the eastern section of the property. Other onsite hills peak between 350 and 360 feet MSL. The project site is located within the Coastal Plains Physiographic Province which is characterized by gently westward sloping, deeply dissected terraces. Drainage of the site is through a series of ravines running northward to controlled drainage facilities along Telegraph Canyon Road. Three geologic formations (Otay, San Diego, and Lindavista formations) as well as surficial deposits consisting of alluvium/colluvium and topsoil are present on the project site. A portion of the La Nacion fault traverses a portion of the site designated for the multi-family development.

Vegetation consists primarily of native grasses, with chaparral on the steeper portions of the site. The project site is essentially undeveloped, with the exception of numerous dirt roads running through the area. In addition, a 250-foot SDG&E easement runs through the property in a southwest to northeasterly direction. There is some evidence of off-road vehicle activity on the site, as well as illegal trash dumping.

Telegraph Canyon Road runs along the northern boundary of the project site. High density single-family and multi-family dwellings lie to the north of the site, across Telegraph Canyon Road. The Foxhill Run single-family residential development borders the southwest portion of the project site. Greg Rogers Park and Greg Rogers School are located along the western boundary across Foxboro Avenue. A large residential area also lies to the west of the site. A medical complex which includes Vista Hill Hospital, Community Hospital, and several medical/dental offices are located southeasterly of the site. The site can be accessed from Interstate 805 via Telegraph Canyon Road to Medical Center Drive.

SECTION 4
IMPACT ANALYSIS

4.1 LAND USE

4.1.1 Existing Conditions

The Rancho del Sur project site is a 108.3 acre parcel of land in eastern Chula Vista, east of Interstate 805. The project site is currently undeveloped, with the exception of several dirt roads and the SDG&E transmission corridor which traverse the site. The site is bounded by Telegraph Canyon to the north with Medical Center Drive traversing the eastern portion of the property. The proposed multi-family development, and a parcel that is not proposed for development, is located to the east of Medical Center Drive. Interstate 805 lies approximately 0.5 mile west of the project site (Figure 2-2).

Land to the north is developed primarily with single-family residences (Figure 4-1). The Elk's Club is sited to the northwest of the project site and south of Telegraph Canyon. The Foxhill development of single-family residences, Parkview and Greg Rogers elementary schools, and Greg Rogers Park are adjacent to the western property boundary. Immediately to the south, the land is undeveloped but planned for future residential development. To the southeast of the site is Community Hospital of Chula Vista, Vista Hill Hospital, and the associated medical offices and clinics. Approximately 1125 feet east of the southern property boundary lies the helipad that services the Community Hospital. The lands immediately to the east, owned by United Enterprises, are currently undeveloped, but have the potential for future residential development.

Annexation to the City of Chula Vista from the County of San Diego have been completed. The entire site had previously been included in the City's Sphere of Influence and is designated as medium density residential (4 to 12 DU/acre) within the General Plan (City of Chula Vista 1983). The area to the north, south, east, and west are similarly designated, with the exception of the two elementary schools and Greg Rogers Park to the west, and the hospital facilities to the southeast. In addition, a small strip of land adjacent to the northeast corner of the property is designated retail; it currently contains an Elk's Club. According to the General Plan, a junior high school site has been proposed between the hospital facilities and the Rancho del Sur project site.

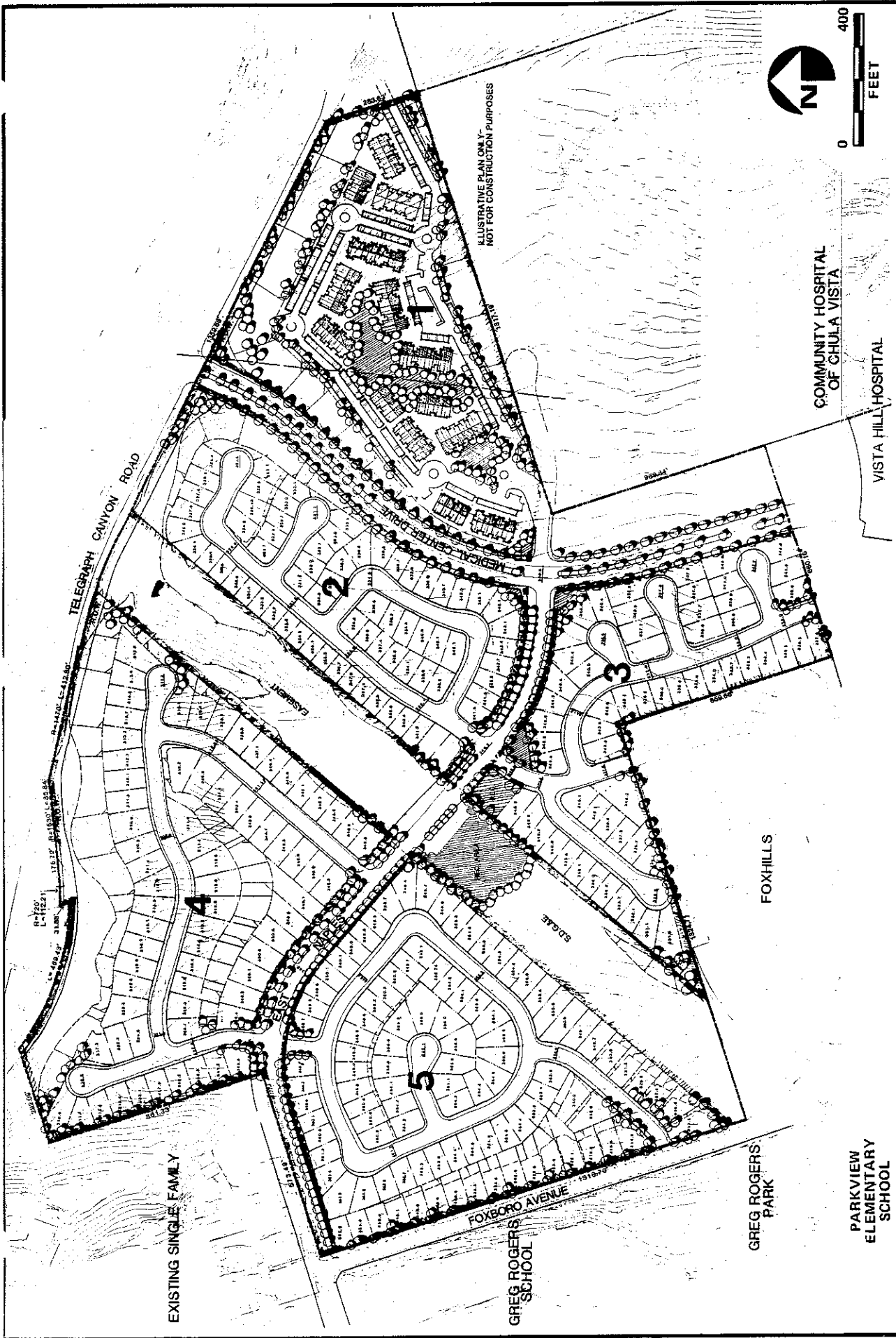


FIGURE 4-1

Land Uses Surrounding Rancho Del Sur Project Site

The Chula Vista General Plan contains a number of elements, including Housing, Conservation, Open Space, Seismic Safety, Noise, Scenic Highways, Safety, Parks and Recreation, Public Buildings, and Bicycle Routes. Each element is discussed within this EIR wherever conformance with the policies is applicable and appropriate.

Zoning

The County of San Diego zoned the site RS4, which allows single-family residential development at a density of 4.3 DU per acre. The City zoned its portion of the site R-1-P-4, which allows single-family residential development under a Precise Plan at a density of 4 DU per acre. The Precise Plan for the project proposes zoning the property R-1-P-6 and R-3-P-12; this allows single-family residential development under a Precise Plan at a density of 6 DU per acre and multi-family development at a density of 12 DU per acre, respectively. The Precise Plan allows the development of a variety of lot sizes (i.e., 3750, 5000, and 7000 square feet) provided that average lot size is maintained as 6,000 square feet.

The Foxhill Run development to the west is zoned R-1-P-5, 5 DU/acre. The residences near the northwest corner of the site are zoned R-1-10, single-family residential development with a lot size of 10,000 square feet. Across Telegraph Canyon Road to the north, the homes are zoned PC, Planned Community, which promotes orderly development of large parcels of land that may contain a variety of land uses but are under unified ownership or control.

4.1.2 Impacts

The residential uses proposed for the Rancho del Sur project site are compatible with the existing and planned residential uses in the vicinity of the project. Within the proposed Precise Plan, land uses have been sited to minimize land use conflicts.

The single-family residences would be placed to the west of Medical Center Drive, while the multi-family (high density) residential areas would be on the east side of Medical Center Drive along Telegraph Canyon Road. The neighborhood park, recreation facilities, and pedestrian trail would be centrally located within the SDG&E easement corridor to make them accessible to all single-family residential areas. The multi-family residential area would feature recreation facilities for private use by residents of the units. The easement and hillside open spaces would provide buffering between residential areas and between residences and roadways.

The only potentially adverse land use impact created by the development could be impacts associated with the compatibility of the proposed lot sizes with

surrounding residential lots, and the proposed high density residential. The Precise Plan maintains an overall average lot size of 6000 square feet. The project proposes a variety of lot sizes; in particular, 3750 square foot lots would be located in Planning Area 2 in the northeast corner of the single-family residential area, 5000 square foot lots would be located to the south of Naples Street in planning areas 3 and 5, and 7000 square foot lots in Planning Area 4 in the northwest corner of the residential area (Figure 4-1).

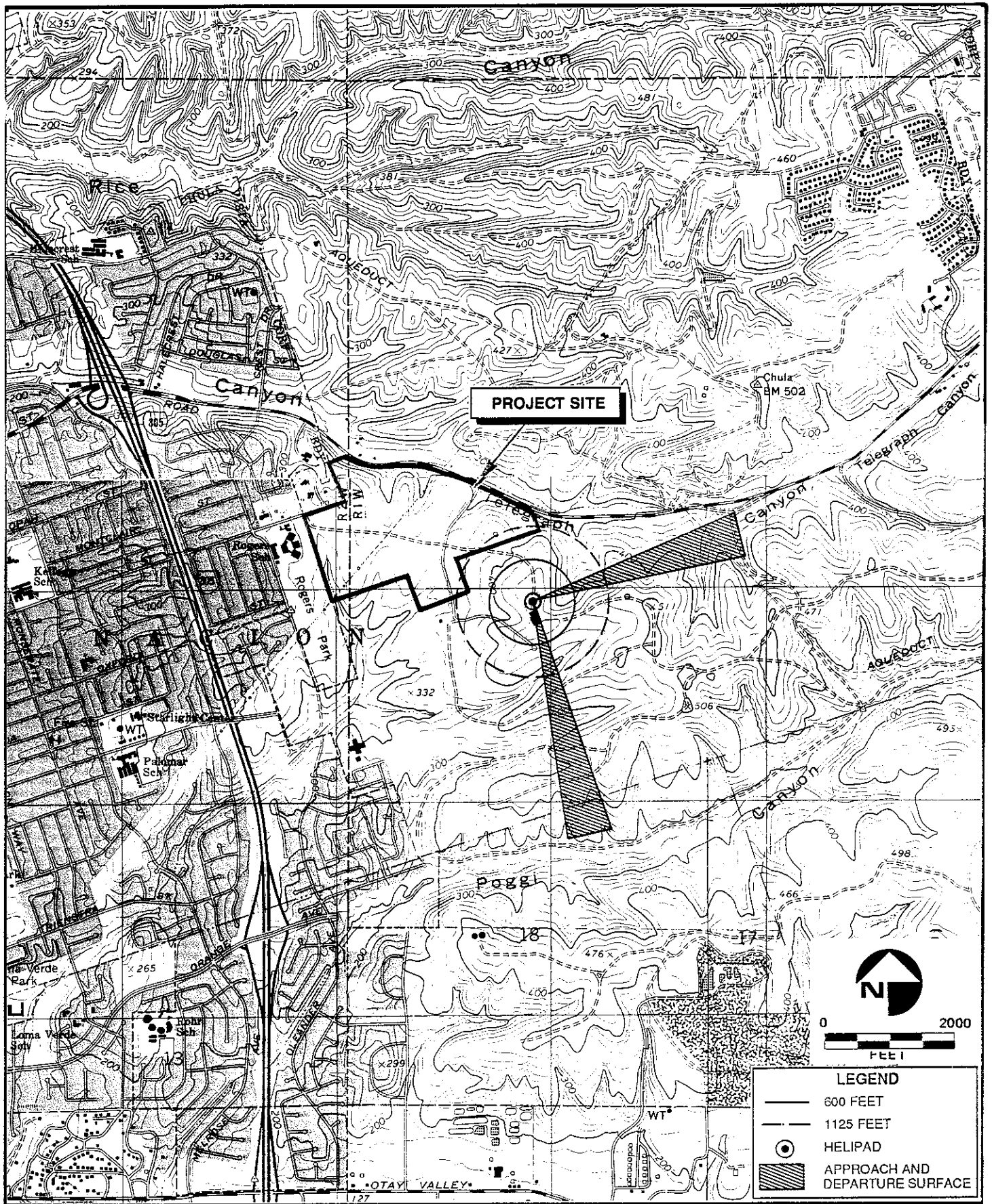
The zoning in the project vicinity varies, resulting in lot sizes ranging from 4000 to 10,000 square feet. The Foxhill Run development to the west has an average lot size of 5000 square feet, with lot size ranging from approximately 3000 to 7000 square feet, and a typical lot size of 4000 square feet. The residential area to the northwest has 10,000 square foot lots, and the residential lots across Telegraph Canyon to the north range from 5000 to 7000 square feet. Lot sizes similar to those proposed within the project are thus located nearby. The compatibility of the 3750 square foot lots contained within Planning Area 2 to existing offsite development could represent an adverse impact; however, the lots are buffered from nearby residential lots by the larger lots proposed, the easement open space, and the roadways onsite. Consequently, the potential adverse land use impact would be reduced to a level of insignificance.

The incorporation of the high density residential area onsite could, however, represent an adverse land use impact since surrounding uses are primarily medium density residential. Proposed landscaping and open space adjacent to the high density land use would buffer the use from residences within the vicinity, and thus reduce the impact to insignificance. Accordingly, no adverse impacts to the land use policies of the City of Chula Vista are anticipated as a result of implementation of the proposed project.

The safety impact associated with the helipad at the hospital is insignificant because the approach and departure paths do not cross the project site (Figure 4-2). The residents may be subjected to noise from the helipad's use, but, from a compatibility and safety standpoint, the helipad land use represents no impact to the proposed project. (Noise impacts are addressed in Section 4.10.)

4.1.3 Mitigation Measures

Mitigation measures to reduce land use impacts related to landform/visual quality, transportation, services and utilities, cultural and biological resources, mineral resources, noise, and air quality are discussed within the appropriate sections. Because the existing and planned land uses in the vicinity are compatible with a majority of the



Helicopter Approach and Departure Zone for Community Hospital of Chula Vista

**FIGURE
4-2**

land uses proposed onsite and are consistent with land use policies and plans of the City of Chula Vista, implementation of the Rancho del Sur development would result in no significant adverse land use impacts. The exception to this would be the compatibility of the high density residential development proposed; if buffered with landscaping and open space as proposed, this impact would be reduced to a level of insignificance, and no mitigation measures would be required.

4.1.4 Analysis of Significance

The majority of the land uses proposed for the Rancho del Sur development are compatible with land uses in the project vicinity and comply with the land use policies and plans of the City of Chula Vista. The exception is the compatibility of the high density residential area proposed onsite which, if buffered with landscaping and open space as proposed, would reduce the impact to a level of insignificance. As a result, implementation of the Rancho del Sur development would result in no adverse land use impacts and thus would require no mitigation measures.

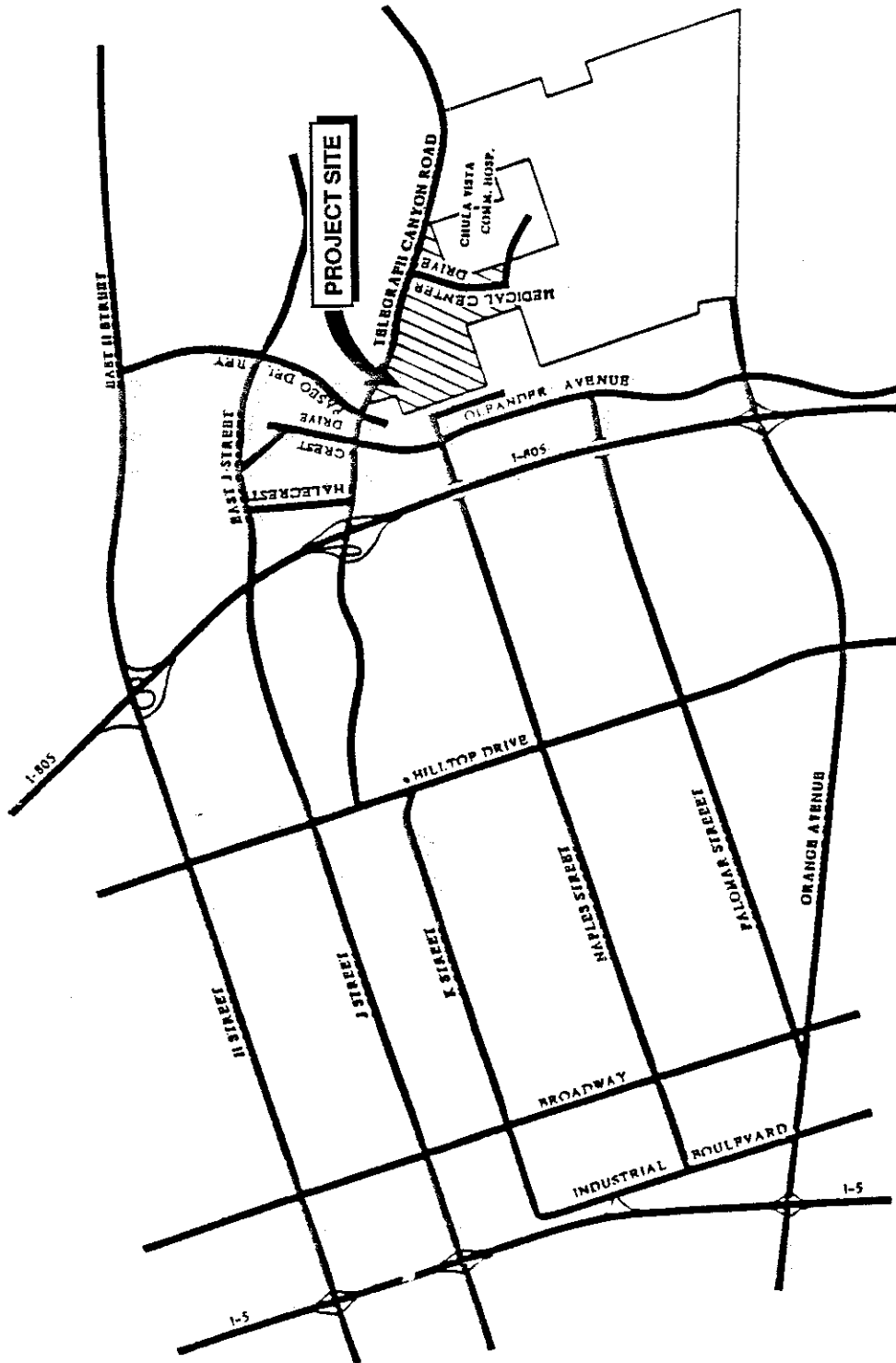
4.2 TRANSPORTATION

A traffic impact analysis, conducted by JHK and Associates in January 1987, assessed the impacts of the project development (see Appendix A). Data from a previous traffic analysis of the Rancho del Sur project were also used in the assessment (Basmacyan-Darnell, Inc. 1986) and are incorporated herein by reference.

4.2.1 Existing Conditions

Regional access to the project vicinity is provided by Interstate 805 (a major north-south, eight-lane divided freeway) via the Telegraph Canyon Road interchange. Direct access to the project site from Telegraph Canyon Road, a six-lane divided road which borders the site to the north, is via Medical Center Drive, currently a two-lane roadway. Development plans also show access to the site from East Naples Street. This would be accomplished by extending East Naples to the east and routing it through the project to intersect with Medical Center Drive. East Naples Street intersects with Oleander Drive west of the site. Figure 4-3 shows the arrangement of the roadways in the area and their relation to the project site.

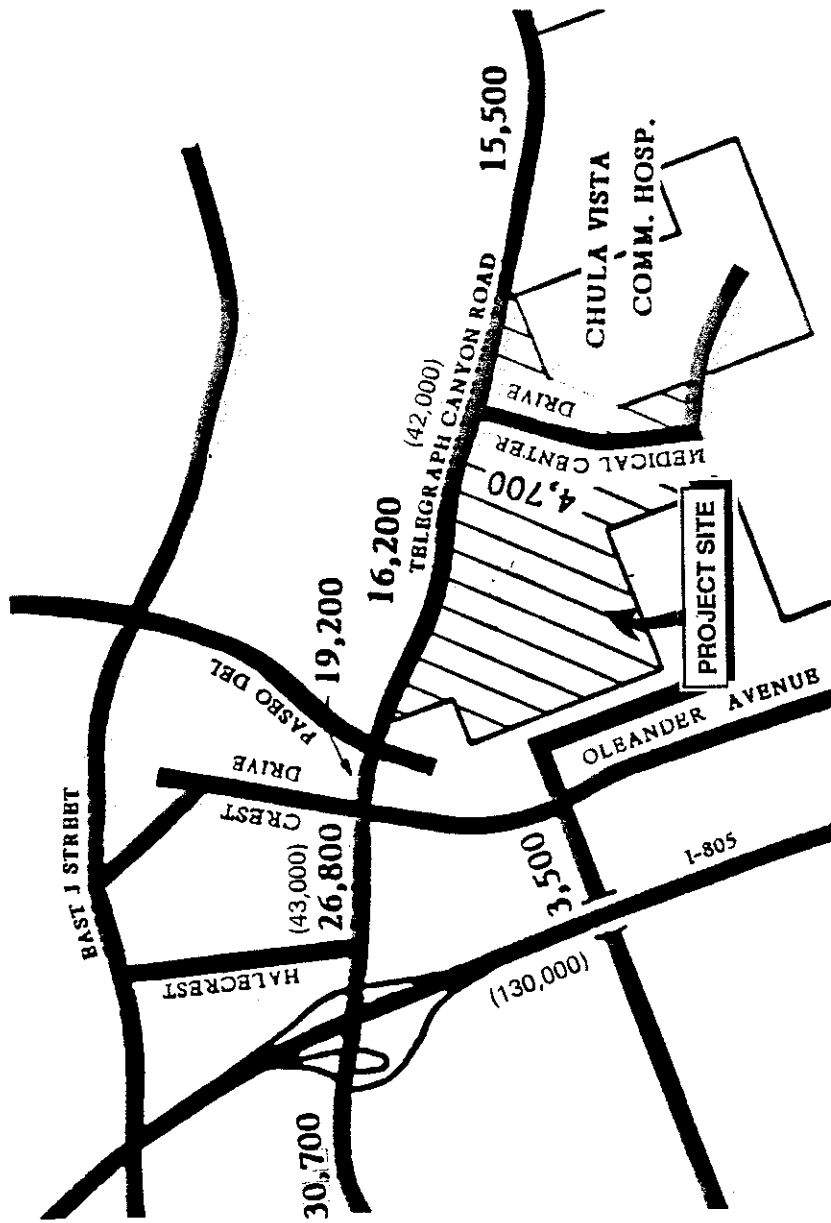
Average daily traffic (ADT) volumes measured in late 1986 by the City of Chula Vista are shown in Figure 4-4; future volumes, year 2005, are also presented. Traffic along Telegraph Canyon Road reaches a high of 26,800 ADT just east of I-805 and decreases to approximately 15,500 ADT east of Medical Center Drive. Oleander Avenue has an ADT of 7,900 south of Telegraph Canyon Road, and Medical Center Drive volumes are 4,700 ADT.



SOURCE: JHK & Associates

**FIGURE
4-3**

Traffic Circulation Network



XXXX = EXISTING
 (XXXX) = FUTURE

FIGURE 4-4

Existing and Future (Year 2005) Average Daily Traffic

SOURCE: JHK & Associates, 1986 and SANDAG, 1984



WESTEC Services, Inc.

Telegraph Canyon Road operates as a six-lane arterial east of I-805. It transitions to a four-lane roadway east of Paseo del Rey, and continues in this manner past Medical Center Drive. Left-turn bays are provided at each of the signalized intersections in this area. Although Oleander Avenue has only one travel lane in each direction, it widens to accommodate a left-turn lane on both the north and south sides of its intersection with Telegraph Canyon Road (Oleander becomes Crest Drive north of Telegraph Canyon). This is also true for Paseo del Rey's southbound movement onto Telegraph Canyon. Halecrest Drive intersects Telegraph Canyon Road on the north side, just east of the I-805 northbound ramp intersection. A traffic signal is also provided here. The intersection geometrics of the five signalized intersections along Telegraph Canyon Road and the unsignalized intersection at Oleander Avenue and East Naples Street are shown in Figure 4-5.

4.2.2 Impacts

The JHK and Associates traffic analysis for the Ranch del Sur project was based on 303 single-family and 222 multi-family dwellings being developed. Subsequent to this analysis, the number of proposed dwelling units was reduced to 302 single-family and 220 multi-family dwellings. Because this reduction is minimal, the calculations and conclusions from the initial analysis are presented here without change.

Trip Generation

For the purpose of this study, trip generation rates of 10 trips per dwelling unit (DU) and 6 trips per DU were used for single-family houses and apartments, respectively, for a total of approximately 4400 trip ends/day. Table 4-1 shows the percentages and number of trips associated with the directional split of morning and evening peak hour trips.

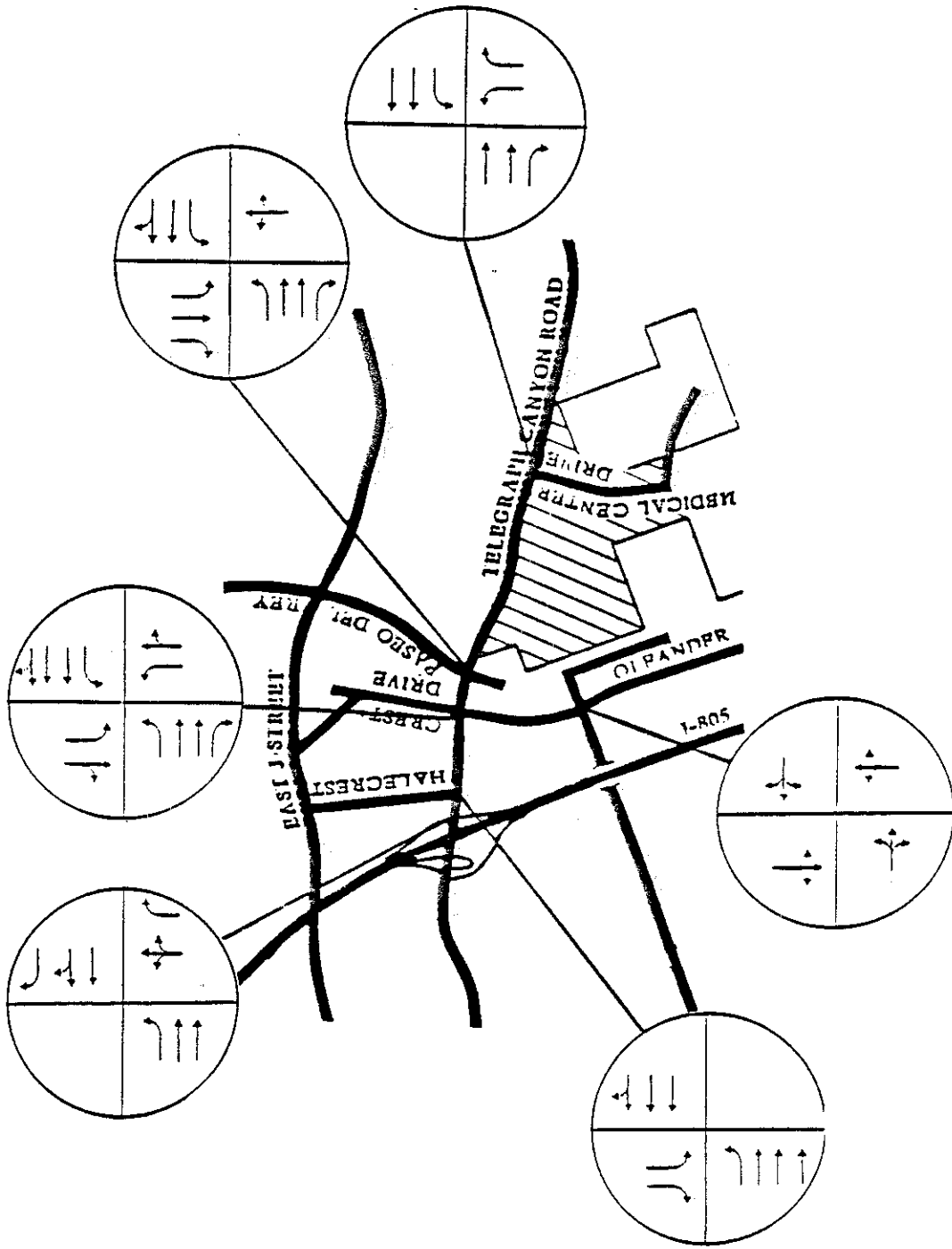
Trip Distribution

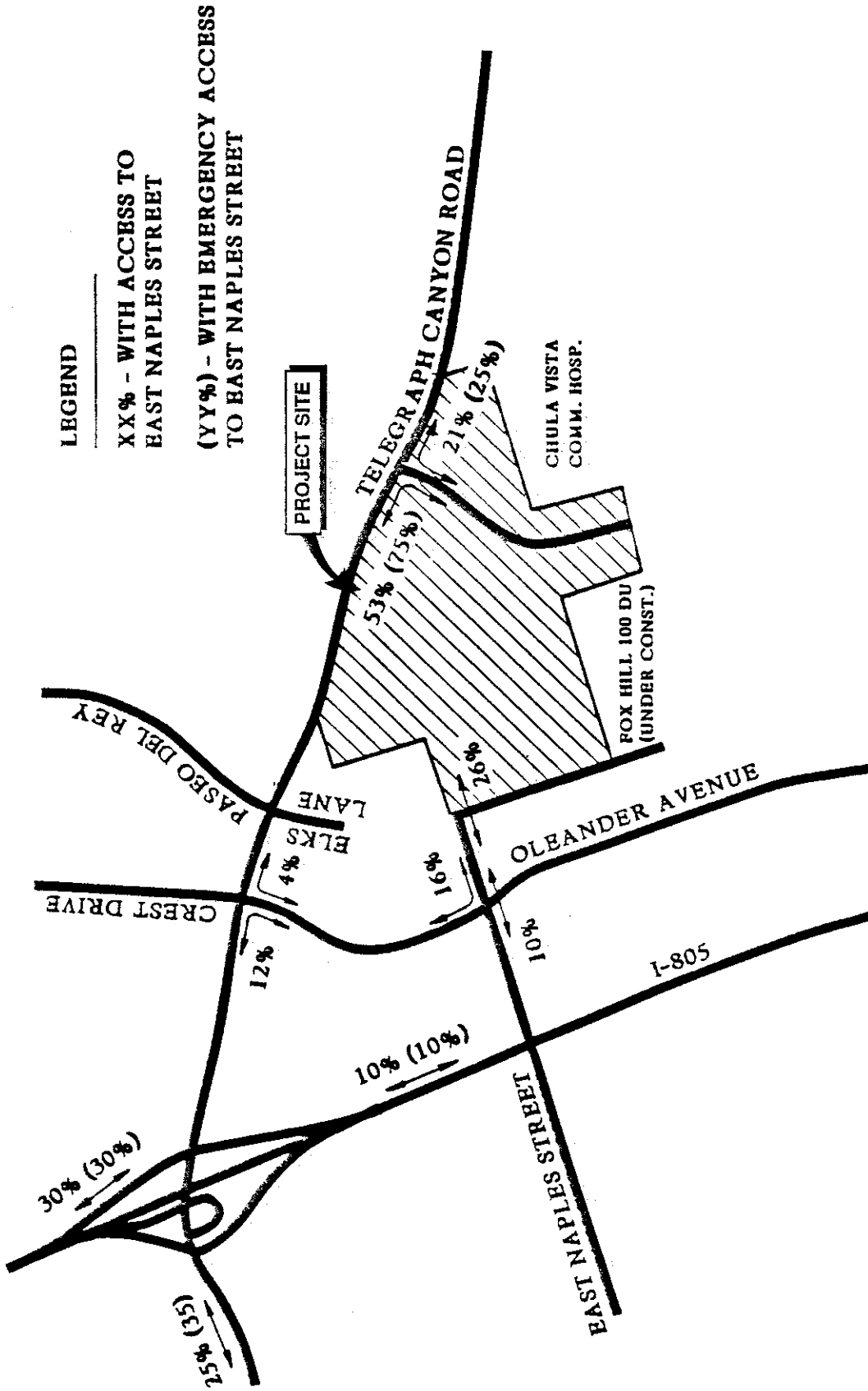
Distribution of projected trips to and from the project site is presented in Figure 4-6. Future traffic volumes for the year 2005 are shown in Figure 4-4. Concern has been expressed that the Rancho del Sur development might generate sufficient traffic to overload the intersection of East Naples Street and Oleander Avenue, and that the section of Oleander between East Naples Street and Telegraph Canyon Road might also become overloaded. Distribution of traffic volumes from the site was modeled using two alternatives, with and without access to East Naples Street. Denying access to East Naples Street is likely to create difficulties as it would work to isolate the new development. The Foxhill Run single-family residential development south of the Rancho del Sur site currently has access to East Naples via a two-lane road. An extension of East Naples Street would form a T-intersection with

**FIGURE
4-5**

Existing Intersection Lane Configuration

SOURCE: JHK & Associates





SOURCE: JHK & Associates

FIGURE 4-6

Distribution of Projected Trips

this access road. An analysis of the operation of the unsignalized intersection of East Naples Street with Oleander Avenue is presented below.

Table 4-1

DIRECTIONAL SPLIT OF MORNING AND EVENING PEAK HOUR TRIPS

	A.M. Peak Hour		P.M. Peak Hour	
	Inbound (20%)	Outbound (80%)	Inbound (70%)	Outbound (30%)
Number of Trips	70	282	308	132

Source: Basmaciyan-Darnell, Inc. 1986.

Signalized Intersection Capacity

Capacity analyses at each of the five signalized intersections along Telegraph Canyon Road were based on the existing volumes, on volumes projected for 2 years hence, and on the future volumes combined with the predicted volumes generated by the proposed Rancho del Sur development. Both the morning and evening peak periods were analyzed. These analyses are in terms of levels of service (LOS) for roadways and intersections, which are a function of traffic movement and delay. Descriptions of basic LOS conditions are listed below in Table 4-2. The Chula Vista vicinity is experiencing substantial growth and existing traffic volumes can be expected to continue to increase. Because the actual rate of increase cannot be estimated at this time, the capacity analysis evaluated a range of 5 to 10 percent per year increase in traffic rates. In the event there is a high rate of traffic increase on roads in the project area, 10 percent per year was chosen to represent the worst case (in terms of traffic operation) and these values are presented in this analysis.

A review of the results for the existing traffic volumes shows that all intersections are currently operating with an acceptable LOS (Table 4-3). Analysis of future conditions, based on a 10 percent annual increase in the volumes along Telegraph Canyon Road, with traffic generated by the new development added on, indicates that in all but one case, the acceptable LOS for each intersection would not be exceeded. The exception is the intersection of the northbound I-805 off- and on-ramps with Telegraph Canyon Road. Analysis of future conditions without project input reveals that unacceptable LOS at this intersection would occur regardless of project development and is a result of cumulative impacts to the roadway system from other development in Chula Vista. The ADT generated by the project on the northbound ramp

of I-805 represents approximately 5 percent of the expected ADT. LOS at the I-805 northbound ramp-Telegraph Canyon Road intersection is projected to drop to an unacceptable level if the assumed high level of growth is experienced over the next two years. Even if a 5 percent growth rate is assumed, the LOS would still be at unacceptable levels (D or below). This condition is expected whether or not access is allowed to the development along East Naples Street. The drop in LOS would be caused mainly by the large eastbound approach volumes. The left-turn movement onto the northbound ramp to I-805 will require, at minimum, two lanes. If this double left is allowed with the current geometric configuration, operation would be improved but the LOS would still be unacceptable. The addition of another lane that would allow two through lanes and two left-turning lanes would be required for an acceptable level of operation; this would raise the LOS to C for both the morning and evening peak periods. Analysis using the projected traffic volumes without the addition of volumes from the new development indicates that there will be operational problems at this intersection even if the project is not completed.

Table 4-2

LEVEL OF SERVICE (LOS) DEFINITIONS

<u>Level of Service</u>	<u>Operating Conditions</u>
A	Free flow; speed controlled by driver's desires, speed limits, or physical roadway conditions.
B	Stable flows; operating speeds beginning to be restricted; little or no restrictions on maneuverability from other vehicles.
C	Stable flow; speeds and maneuverability more closely restricted.
D	Approaches unstable flow; tolerable speeds can be maintained, but temporary restrictions to flow cause substantial drops in speed. Little freedom to maneuver, comfort and convenience low.
E	Volumes near capacity; flow unstable; stoppages of momentary duration. Ability to maneuver severely limited.
F	Forced flow; low operating speeds; volumes below capacity, queues form.

Table 4-3

INTERSECTION CAPACITY ANALYSIS

Telegraph Canyon Road Intersection	Level of Service									
	Existing		Future* with Access to East Naples		Future* with- out Project Input		Mitigated			
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		
I-805 Northbound Ramp	C	B	E**	F**	F**	F**	E**	E**	C	C
Halecrest Drive	B	B	C	B	C	B	C	B	B	***
Oleander Avenue/ Crest Drive	C	C	C	C	C	C	C	C	C	***
Paseo Del Rey/ Elks Lane	A	A	A	A	A	A	A	A	A	***
Medical Center Drive	A	B	B	B	B	B	A	A	B	***

* Assumes 10 percent annual growth in existing volume plus traffic generated by project.

** Indicates an unacceptable level of operation.

*** No mitigation required, adequate LOS

An extension of East Naples Street would provide a second access point for the development and would also help maintain continuity of the Chula Vista street network. From a traffic operations standpoint, this access is not necessarily required. As stated earlier, analysis of the intersection of Medical Center Drive with Telegraph Canyon Road shows that even if all of the traffic generated by the development is routed through this one intersection, an acceptable LOS will be maintained during the morning and evening peak periods.

Unsignalized Intersection Capacity

The intersection of Oleander Avenue and East Naples Street is currently a four-leg, unsignalized intersection with stop signs on each approach. Counts for the existing peak hour traffic volumes were not available for this location, and an estimate was made based on the 1986 volumes provided by the City of Chula Vista. The morning peak period is estimated to have 8 percent of the daily traffic and the evening peak 10 percent, giving a total intersection approach volume of 1140 vehicles per hour. Approximately 70 percent of the total intersection traffic approaches the intersection along Oleander's north and south legs, with the other 30 percent coming from the east-west directions. This imbalance lowers the overall capacity of the intersection, and indicates an existing level of operation less than LOS C, but not yet reaching capacity. Future volumes are expected to raise the total to approximately 1380 vehicles per hour during the evening peak period, and estimated development traffic of 114 vehicles during this peak hour would raise the value to 1494 vehicles per hour, placing this intersection near capacity. A decrease in growth rate prior to project development would lower the total expected volume. A lower growth rate (i.e., <10 percent) is anticipated in this instance because the area surrounding this intersection is fairly well developed. This would result in volume totals being under capacity at the time of project buildout.

4.2.3 Mitigation Measures

If the predicted high rate of growth is experienced over the next two years and if Rancho del Sur is developed, operation at the intersection of the northbound I-805 off- and on- ramps with Telegraph Canyon Road will drop to LOS F during both the morning and evening peak periods. By changing the lane assignments on the existing eastbound approach to I-805 to allow double lefts, operation at the intersection can be improved in the short-term. Since the northbound on-ramp to I-805 has two lanes, this appears to be a relatively simple adjustment that would not require geometric changes to the interchange. As traffic volumes increase, the operation at this intersection will

continue to deteriorate. Based on the assumptions of this analysis, the addition of one eastbound lane allowing a double left-turn while maintaining two through lanes would provide an acceptable LOS (C). A review of projected long-term growth in this area with an analysis of lane requirements at that time is recommended before substantial improvements to this interchange are undertaken.

The unsignalized intersection at Oleander Avenue and East Naples Street is relatively heavily loaded, and would be placed at near capacity if a high rate of growth is experienced over the next two years. If additional access is provided to the new development, the added number of trips, although relatively small, will cause an increase in the delays experienced during the peak periods at this intersection.

The developer will also be required to contribute a proportionate share to a fund for roadway improvements, including the I-805 and Oleander Avenue/East Naples.

4.2.4 Analysis of Significance

Development of the Rancho del Sur project would contribute to an adverse impact in traffic LOS at the intersection of the northbound I-805 off- and on-ramps with Telegraph Canyon Road. This impact can be mitigated in the short term by changing the lane assignments on the existing eastbound approach to I-805 to allow double left turns and in the long term adding one eastbound through-lane, which would result in double left turns and two eastbound through-lanes. The applicant would be required to contribute to the regional fiscal benefits assessment district for these improvements.

4.3 SERVICES/UTILITIES

As a result of the extreme growth within eastern Chula Vista, many public services will be subjected to cumulative impacts. Uncertainties have arisen regarding the type and size of new facilities, the developers' responsibilities, and the funding of new facilities. In order to insure timely provision of public services to the project area, a cumulative study, contained within Section 5.1, addresses the growth issue. The following analysis of public services addresses Rancho del Sur's contribution to the public facilities that service eastern Chula Vista.

4.3.1 Schools

Existing Conditions

The project site is located within the jurisdiction of two school districts: Chula Vista Elementary School District, which serves grades kindergarten through six, and Sweetwater Union High School District, which provides education to junior high and high school students.

During the 1985/86 school year, the Chula Vista District was operating at capacity with an enrollment of 13,821 students. The closest elementary schools to the Rancho del Sur project site are Rogers, Parkview, and Kellogg, located on East Naples Street and Juniper Street, adjacent to the western property boundary. The capacities of the permanent facilities and current enrollments at these elementary schools are as follows:

	<u>Capacity</u>	<u>Current Enrollment</u>
Parkview	527	500
Rogers	435	445
Kellogg	325*	383

*This figure is from the 1985-86 school year; no revised figures are available for the current year (Chula Vista Elementary School District 1987). Other data received from individual schools. These capacity figures do not include temporary facilities, such as portable classrooms.

The Sweetwater UHS District, with an enrollment of 24,578 students, operated beyond capacity during the 1985/86 school year. The closest secondary schools to the site are Bonita Vista and Hilltop Junior High and High Schools.

Three elementary schools are planned for construction over the next 5 years, according to the Chula Vista Elementary School District. One will be located adjacent to Southwestern College, approximately 2 miles northeast of the project site; another in Terra Nova, approximately 1.5 miles northwest of the project off East "H" Street; and the third in Eastlake I, approximately 5 miles east of the site off Otay Lakes Road. The capacity of each new school would be approximately 600 students. Another future school site close to the Rancho del Sur project site has yet to be determined. The School District is currently examining the options available, but no schedule has been established, and sufficient numbers of students have not yet been generated to signal an immediate need for any of these facilities.

Each school within the district has specific boundaries which determine the eligibility for attendance of all students, and the boundary between Bonita Vista Junior High and High School and Hilltop Junior High and High School runs along the northern and western boundaries of the project site. According to the Sweetwater School District, there is no guarantee that a student will attend the school in his or her

neighborhood, or that the boundaries will not be adjusted to accommodate school housing needs (Kroese 1986).

The capacities and current enrollment figures for the Sweetwater Union High School District are as follow:

	<u>Capacity</u>	<u>Current Enrollment</u>
Bonita Vista Junior High	1284	1250
Bonita Vista High School	1400	1440
Hilltop Junior High	1386	1316
Hilltop High School	1388	1408

According to the School District, construction of another junior high school within the Eastlake development should begin by the time Bonita Vista Junior High reaches enrollment capacity. A second high school, located in Eastlake, is scheduled for construction in 1988 with completion expected by September 1990. The need for another high school site is currently being discussed by the school district and United Enterprises, a private developer with large holdings just southeast of the Rancho del Sur development. Each developer is required to contribute financially to the acquisition of land and the construction of new school facilities in accordance with State Law (Assembly Bill Number 2926); the amount of the contribution is dependent upon the school district's requirements and can be up to \$1.50 per square foot of site coverage for residential development.

The Rancho del Sur project and other developments in eastern Chula Vista will contribute new students to the school districts. The school districts' plans for new facilities to accommodate the growth have been considered in this analysis.

Impacts

The Chula Vista Elementary School District assumes an average of 0.3 elementary students per dwelling unit. Full buildout of the project would result in 522 residences, and an estimated 157 new students. This is not enough to warrant a new school, but is a significant increase in the number of students that must be housed. The school that Rancho del Sur students would attend initially has yet to be determined; determination will depend upon student distribution within the district. An additional elementary school will eventually be required.

The district's policies state that elementary schools must be developed in accordance with need; if a school planned within the vicinity is not phased concurrently with housing, a significant impact on the existing facilities would occur. This would

represent only a short-term impact if an additional elementary school was eventually developed. In addition, the schools may utilize up to 30 percent portable classrooms to absorb the additional students. Therefore, if facilities are built concurrently with housing, no impact would occur.

The Sweetwater Union High School District assumes an average of 0.3 students generated per dwelling unit; and 157 secondary students would be expected at full project buildout. Initially, junior high students from Rancho del Sur would most likely be sent to Bonita Vista Junior High School, although they could be sent to Hilltop Junior High if school enrollment boundaries change as a result of changes in student distribution. Assuming the new junior high school at EastLake is built before Bonita Vista reaches its enrollment ceiling, no impact would occur. A tentative completion date of 1994 has been established for the Eastlake facility.

High school students from the Rancho del Sur development would initially be sent to Bonita Vista High School, provided that the boundary between Bonita Vista and Hilltop High School does not change to incorporate new student distributions. The completion of the EastLake High School would represent a significant increase in capacity, and if an additional high school site is established southeast of Rancho del Sur, capacity would be further increased. The Sweetwater School District foresees no significant impacts to current facilities as long as the schedule of construction of new facilities remains concurrent with need, and adequate fees are received from the developers. Phasing of development would incrementally generate new students, allowing the school districts more time in planning new schools, thereby reducing the impact on current facilities within the school districts to a level of insignificance.

Although development of the Rancho del Sur project would increase demand on the school districts' facilities, new facilities are already planned to compensate for the decreased capacity. Provided that land dedication, financing (including development fees), and construction of the new schools are achieved in a timely fashion, no impact would result. Cumulative impacts resulting from the number of current and proposed growth projects in eastern Chula Vista will affect the capacity of the school districts and the ability of the districts to provide educational services. Because the provision of additional capacity is a primary concern of the school districts, and because the projected increases in the number of students are being incorporated into their long-range plans, these cumulative impacts should be mitigated by the phased implementation of additional facilities in eastern Chula Vista.

Mitigation Measures

The project applicant would be required to pay development fees of up to \$1.50 per square foot of site coverage in accordance with State Law (Assembly Bill Number 2926).

Analysis of Significance

If the required elementary and high schools are not provided in conjunction with Rancho del Sur and similar developments, the effect of this project constitutes an incremental significant impact. The cumulative effect produced by the proposed development and similar developments east of the project site is a concern of the school districts. The required facilities are currently in the planning phase, however, and if construction schedules remain the same and the developer of Rancho del Sur contributes financial assistance for the proposed facilities, no significant impact on school facilities is expected to result from implementation of the project.

4.3.2 Parks, Recreation, and Open Space

Existing Conditions

The project site is located within a neighborhood park district established within the Park and Recreation Element (1979) of the Chula Vista General Plan. Because regional park needs are met outside the city with Sweetwater Regional Park, Otay Reservoir, and Silver Strand State Beach Park, all located within easy driving distance from the site, Chula Vista is concerned primarily with the development of community and neighborhood parks. The policies established in the General Plan call for a system of parks designed to serve as many diverse areas and needs in the community as possible. Parks are to be located adjacent to elementary school playgrounds when possible to promote multiple use of facilities, and parks should be within proximity to those areas they are designed to serve. The standards established in the Parks and Recreation Element for neighborhood and community parks are outlined below.

Neighborhood Parks

Area: 2 acres for every 1000 persons served

Minimum Desirable Size: 5 acres when adjacent to
an elementary school,
10 acres when not adjacent
to an elementary school

Population Served: 2500-5000 persons

Service Radius: 1/2 mile

Purpose: To provide near-at-hand recreation facilities and to serve as a neighborhood focal point.

Community Parks

Area: 2 acres for every 1000 persons served

Minimum Desirable Size: 15 acres

Population Served: 7500 persons or more, depending
on the acreage of the park.

Service Radius: 1.5 miles

Purpose: To provide recreation facilities which
require more space than neighborhood park
sites can accommodate, such as tennis
courts, swimming pools, multi-purpose
courts, community centers, or recreation
centers.

The 47-acre Greg Rogers Community Park is located southwest of the western property boundary and contains turfied play areas, picnic facilities, a tot lot, and ballfields.

Impacts

Based on the City of Chula Vista's park standards and the project's predicted population of 1389 (based on SANDAG's [1985] 2.66 persons per dwelling unit), approximately 2.8 acres of neighborhood parkland would be required onsite and an equal amount for community parklands dedication. The project is currently proposing a 5.71-acre neighborhood park onsite, 5.3 acres of which would be located within the SDG&E easement (2.0 acres immediately north of East Naples Street and 3.3 acres immediately south of East Naples Street) and include a multipurpose playing field, children's playground, trail system and parking area. The additional .41 acres of the park would be located adjacent to the easement onsite to the southeast of East Naples Street. This area would contain three lighted tennis courts. Private recreation facilities within the multi-family area have been proposed, but details of the facilities are not available at this time. The open space within the SDG&E easement would be publicly accessed by a trail from Greg Rogers Park to Telegraph Canyon via the southern portion of the easement. Because the majority of the neighborhood parkland dedication onsite is within the SDG&E easement, parkland uses are restricted and a greater acreage is required to meet the minimum standards. In this case, neighborhood parkland dedication requirements in the easement must be at a ratio of 2 to 1. Community parkland dedication is not met by this project; therefore, there is the potential for a significant parkland impact. Parkland dedication fees, improvements to Greg Rogers Park, and/or additional dedication of land outside of the easement may be required by the City of Chula Vista to mitigate this parkland impact to a level of insignificance. The developer has agreed to implement the Parks and Recreation Department requirements.

Mitigation Measures

The developer will be required to pay fees to the City of Chula Vista in lieu of the parkland dedications onsite, make improvements to nearby Greg Rogers Park and/or provide additional parkland onsite, but outside the SDG&E easement, in accordance with the Municipal Code.

Analysis of Significance

The significant impact to parklands within the project vicinity that could result can be mitigated to a level of insignificance by payment of developer fees in lieu of parkland dedications, improvements to Greg Rogers Park and/or provision of additional onsite parkland outside the SDG&E easement, in accordance with the Municipal Code. The Parks and Recreation Department has agreed to the parkland program proposed by the developer. See Section 10.0, Comments and Responses: Comment 3.

4.3.3 Fire and Police Protection

Existing Conditions

The project site is within the service area of the Chula Vista Fire Department. Fire Station #4, located at 861 Otay Lakes Road (approximately 3 miles northeast of the project site), consists of one company staffed with three firefighters; it operates at a response time of 3 to 4 minutes to the project site and vicinity. In addition, Station #2 is located at 80 East "J" Street, and Station #3 is at 266 E. Oneida. Station #3 is approximately 1 mile west of the site, but Station #4 has a shorter response time due to the ease of access to the site. The maximum acceptable response time, according to the Chula Vista Fire Department, is 7 minutes (Lopez 1987), and the response times to the project site are thus considered acceptable (the exact response time and the station which would respond depends on the location of the onsite emergency). While new fire facilities would be sited and constructed in response to population growth in eastern Chula Vista and associated increases in response times, no specific thresholds currently exist to determine when the need for these facilities would occur.

The project site is also served by the Chula Vista Police Department. The project site is within the jurisdiction of Beat 32, which is staffed by one patrol car 24 hours a day. Police response usually comes from mobile units in the field, and average response time within Beat 32 is 6 minutes for priority calls and 30 minutes for routine calls (Kohls 1986). Optimum response times are normally considered to be a minimum of three minutes for priority calls and 20 minutes for routine calls. Beat 28 patrols the area north of East H Street and, should the need arise, would assist Beat 32

for emergencies in the Rancho del Sur development. The department currently operates at a service level of just less than one policeman per thousand residents, but anticipates an increase to 1.2 policemen per thousand residents upon project implementation.

Impacts

The proposed development would incrementally increase demand for fire protection services within the project vicinity. A new station and training facility are proposed within the Rancho del Rey development, 1.5 miles to the north. In addition, Station #4 is scheduled for relocation farther east to meet increased fire protection demands resulting from development proposed east of Rancho del Sur. This would occur within 4 to 5 years, after the Rancho del Rey station is completed. If the proposed extension of East Naples Street through the project site is constructed, Station #3, located 1-1/2 blocks south of East Naples, could respond to the project site more quickly than Station #4, which currently has the shortest response time. Assuming that the proposed Rancho del Rey station is constructed in a timely manner, and the extension of East Naples Street provides better access for Station #3, the provision of adequate fire service to the proposed project would represent no impact on fire services. If the facility is not constructed as planned, a significant adverse impact would be incurred as a result of development by Rancho del Sur and other proposed projects. Rancho del Sur would contribute to the new facilities for fire protection through development fees assessed by the city at the time of construction.

For the Chula Vista Police Department, increased calls associated with project implementation would place further demands on the single patrol car serving Beat 32. Current response times are slower than what is considered optimal, and the Rancho del Sur development would place additional demands on an understaffed police beat, resulting in an adverse significant impact.

The project-generated population, approximately 1389 persons at maximum buildout, would increase the need for police service in this portion of the city. To achieve an anticipated officer-to-population ratio of 1.2 officers for every 1000 residents, two additional officers would be needed. An increase of traffic on roadways in the vicinity would also create additional demands for police services. Increased police and service level to residents in this area of the city as it develops and as the service area continues to grow are planned. Rancho del Sur would be required to pay development fees to the City of Chula Vista for the new staff required for the project.

Mitigation Measures

To maintain adequate fire protection service to the Rancho del Sur project site, expansion of existing City Fire Department facilities would be required. Station #4 is scheduled for relocation farther east, and the addition of the Rancho del Rey station would be necessary to maintain acceptable response times to the project and vicinity. The extension of East Naples Street onto the project site would further reduce the response time impact, since Station #3's access, and thus response time, would be improved greatly. Assuming the proposed facility is constructed, the Rancho del Sur project would not produce any adverse impact on current facilities and no mitigation measures would be required.

Additional personnel are planned for the Police Department in Chula Vista. The addition of officers to the Department would alleviate impacts of future development to service availability. Project-generated revenues to the city could be utilized to upgrade the staffing and facilities of both the Police Department and Fire Department.

Analysis of Significance

The demand on existing fire facilities within the vicinity of the project would increase as a result of project implementation, representing an adverse impact. The provision of a new facility within the proposed Rancho del Rey development would compensate for the increased demand. In addition, the extension of East Naples Street through the proposed project site would allow better access for Station #3, reducing the response time to the site. The increased demands on existing facilities would therefore be reduced to a level of insignificance.

An increased demand for police services in a service area currently operating below the optimum response time and at an over-taxed service level could result in a significant adverse impact as a result of project implementation. Hiring of additional police and fire staff is anticipated, using funds generated by Rancho del Sur and other similar developments. As a result, impacts would be mitigated below levels of significance.

4.3.4 Water and Sewer Availability

Existing Conditions

The project area is located within the jurisdiction of the Otay Municipal Water District (OWD), Improvement District No. 22. The OWD is one of 24 member agencies of the San Diego County Water Authority (CWA). The CWA receives water from the Colorado River and the State Water Project through a contract with the Metropolitan Water District (MWD) of Southern California.

Imported water makes up 90 percent of San Diego County's annual water demand of 550,000 acre feet per year. In 1985, the Central Arizona Water Project began to divert Arizona's allocated share of Colorado River water into Arizona. Total diversion, to take place over a period of three to four years, will reduce the amount of water available to the Metropolitan Water District by 600,000 acre feet per year. Existing and proposed CWA facilities are designed, however, to meet the projected needs of its member agencies through the year 2000. A number of alternatives are being developed to counteract the water reduction; these include an enlargement of the San Diego Aqueduct or the development of a water treatment facility in the Otay Water District area. No specifics have been developed at this time.

A number of alternatives are being studied by MWD to secure additional water supplies for the future. Negotiations to obtain additional water from the Imperial Irrigation District have been conducted between the Metropolitan Water District and the Imperial Irrigation District. If successful, the water obtained through these negotiations would recover 25 percent of the amount lost to the Arizona allocation. Negotiations are currently at a standstill, however, until the finalization of an EIR which addresses the impacts of transferring conserved water out of the Imperial Valley (Rhodes 1986). No other supplemental water sources have been secured at this time.

The entire project site is served by Pressure Zone 624, which also serves locations in the project vicinity ranging from 360 to 450 feet above MSL in elevation. Pressure Zone 624 receives water by gravity from the .75 million gallon (mg) reservoir 5-1, located 3.3 miles northwest of the project site, and from the 12.2 million-gallon Patzig reservoir located approximately 700 feet north of reservoir 5-1. OWD has plans to raise the 5-1 reservoir by approximately 10 feet to allow the operation of this reservoir in parallel with the Patzig Reservoir and a new 8 mg reservoir. The new 8 mg reservoir will serve the 624 zone and provide capacity for the future 980 zone pump station, outside the project's water zone. The reservoir should be operational in late 1987.

A 24-inch main will replace the existing 16-inch line which transports water from this reservoir along Telegraph Canyon Road to the project site. Construction of the new main is the responsibility of the Water District. Water service for units fronting Foxboro Avenue, along the western property boundary, would connect to the existing 16-inch water main.

The City of Chula Vista provides sewer service in the project vicinity. The city transports its sewage to the San Diego Metropolitan Sewer Service (METRO), which discharges sewage at the Point Loma Regional Plant. The city holds 19.1 mg per day capacity in the METRO System, and currently utilizes 10.9 mg daily, leaving 8.2 million gallons per day (mgd) for future capacity. The METRO System treats its sewage at the Point Loma Sewage Treatment Plant, which is currently operating at its 160 mgd capacity. In 1987, the facility will expand its capacity to 200 mgd; the ultimate capacity of the plant may be as high as 240 mgd. The City of San Diego, which operates the plant, must obtain a waiver from the Environmental Protection Agency in order to increase the plant's capacity to 240 mgd. The future of such expansion is uncertain at this time (McCampbell 1986).

Telegraph Canyon basin drains the entire site. However, approximately 175 units will be diverted to the Chula Vista Woods pump station. The Telegraph Canyon sewer line beneath Telegraph Canyon Road is a 15-inch line with a design capacity of 2.18 mgd. Recent monitoring of the trunk line by the City of Chula Vista indicates that at the Telegraph Canyon sewer line intersection with the Interstate-805 sewer, the 18-inch line is at 45 percent of capacity. The Chula Vista Woods pump station has adequate capacity available, according to the City of Chula Vista (Thomas 1987). A 10-inch sewer line is located in Medical Center Drive, while a pump station and 6-inch force main exist beneath Foxboro Avenue, with an 8-inch sewer main throughout the Foxhill Run development.

Impacts

According to the draft Central Area Water Master Plan prepared by OWD, the Rancho del Sur development would have an average demand of 0.312 mgd. The Otay Water District has indicated that its current facilities are adequate to meet the needs of the Rancho del Sur development. However, meeting water demands from any subsequent development in the area would adversely impact the existing facilities. If existing proposals to construct new and expanded facilities within the Water District are approved and implemented, provision of adequate water service would represent no impact to the District. A new 8 million gallon reservoir is expected to be completed and operational before occupancy of the Rancho del Sur development. In addition, a 24-inch pipeline in Telegraph Canyon Road will replace the existing 16-inch pipeline which serves the project area, since it is rapidly deteriorating, and an 80-mg seasonal storage reservoir is proposed as the first phase of a probable 450 mg total seasonal storage. Funding of new regional facilities could be provided by annexation fees, water rates, assessment districts, or a combination of these and other sources.

To further reduce onsite water demand, the City of Chula Vista and State of California have policies and regulations regarding water conservation. These include landscape techniques such as the utilization of drought resistant plants, drip irrigation systems, subsurface multiporous tubing and moisture sensors. Other water saving techniques include implementation of low-flow shower and faucet restrictors and toilet dams. The incorporation of such measures would help reduce water consumption within the Rancho del Sur development.

The City of Chula Vista assumes an average of 3.5 persons per equivalent dwelling unit; each person is assumed to generate 80 gallons of sewage daily. According to these assumptions, full buildout of the Rancho del Sur development would generate 0.13 mgd. Approximately 0.05 mgd would be diverted to the Chula Vista Woods pump station, leaving a 0.08 mgd contribution for the Telegraph Canyon line. The City of Chula Vista has indicated that capacity is available within the pump station and associated sewer lines to accommodate the effluent. The Telegraph Canyon effluent, by itself, is an insignificant contribution; however, upstream from the Rancho del Sur project, similar projects, including EastLake, will also contribute sewage to the Telegraph Canyon sewer line. The combination of this project and other projects would further reduce the capacity of the line. However, since the current capacity is low, no significant impact would occur on existing sewer infrastructure.

According to the City of Chula Vista's Engineering Department, the sizing and construction of a new sewer line parallel to the existing line in Telegraph Canyon Road would be based on the generation rates projected for this project and other developments. Funding of the new sewer line would be derived partially from development fees and the balance would come from the City of Chula Vista. The Telegraph Canyon trunk line is currently being monitored, and future need would be based on current capacity and project designs proposed by future developments.

The impact to existing facilities associated with the Rancho del Sur project would be considered significant if no new sewer lines are constructed within the Telegraph Canyon basin. If planning, funding, and phasing of new facilities coincide with project development, the adverse impact would be reduced to a level of insignificance.

Mitigation Measures

No significant impacts to existing OWD facilities are anticipated provided modifications and facilities discussed within the Central Area Water Master Plan

Update are constructed in response to growth. The water district is currently negotiating with the applicant and other area developers to establish financing for the facilities (Emerson 1987). As a result, no mitigation measures would be required.

The significant impact to the existing sewer line due to implementation of the Rancho del Sur project and similar projects would be reduced to a level of insignificance provided that funding, phasing, and construction of the proposed parallel sewer line coincide with the development schedule of the project. Otherwise, because the Telegraph Canyon sewer line is currently at capacity, the significant effect would remain unmitigated.

Finalization of the onsite water system should be subject to a detailed hydraulic analysis to ensure adequate pressure and service. With the adoption of conservation measures, the project's water requirements would be reduced. In addition, the onsite sewer system should be designed to the satisfaction of the City Engineer.

Analysis of Significance

The provision of water and sewer service to the project site would not represent significant impacts to existing facilities within the project vicinity. The combination of the Rancho del Sur project with other similar projects in the vicinity, however, represents a cumulative significant impact since many facilities are currently at or near capacity. Both the Otay Water District and the City of Chula Vista have plans to expand existing facilities or provide new facilities with the growth in mind. Therefore, the impact in extending water and sewer service would be reduced to a level of insignificance, provided funding, planning, and construction of expanded facilities coincide with development within eastern Chula Vista.

4.3.5 Energy Conservation

Existing Conditions

Both natural gas and electric service are provided by San Diego Gas and Electric (SDG&E) in the project vicinity. A 250-foot SDG&E easement traverses the site in a northeast-southwest alignment, and a 230 kV transmission line and associated towers are contained therein. An additional 12 kV transmission line runs at an angle to the easement; however, the applicant proposes to relocate the 12 kV line within the easement, adjacent to the existing line. A gas line parallels the transmission line at the northern edge of the easement.

Impacts

Pursuant to rules filed with the Public Utilities Commission, SDG&E would provide natural gas and electricity to the project site. This is contingent on the continued availability of fuel and government approval of facilities construction. Existing distribution facilities near the site would be extended to serve the project; extension routes and construction of service lines would be the only impact to SDG&E.

Energy would be utilized for space and water heating, interior and exterior lighting, cooking, operation of appliances and stoves, water and sewer service, and motor vehicle transportation. At full project buildout, the project would require 20,880 therms per month of natural gas and 208,800 Kwh per month of electricity, based on SDG&E consumption rates (Perry 1986). This does not represent an adverse impact on capacity and supply for SDG&E at this time.

Motor vehicle transportation would also generate energy consumption. Based on an estimated trip rate of 4400 vehicles per day (JHK and Associates 1987), an average trip length of 5.8 miles (SANDAG 1984), and an average fuel consumption rate of 24 miles per gallon, the proposed Rancho del Sur project would generate a requirement for 1063 gallons of fuel per day.

Although transportation would utilize a major portion of the total energy requirement onsite, this consumption is not projected to be greater than any similar development within the eastern Chula Vista area.

Mitigation Measures

No significant or adverse impacts to SDG&E are anticipated as a result of project implementation; therefore, no mitigation measures are necessary.

Analysis of Significance

Project development would require that energy facilities be extended to serve the project site. Estimated energy demand for the development is similar to that of neighboring developments and would not have any significant impacts.

4.4 BIOLOGICAL RESOURCES

A biological reconnaissance of the proposed Rancho del Sur Phase I project site was conducted by Pacific Southwest Biological Services, Inc. (PSBS) during August 1986 to determine the flora, fauna, and habitat types present in the area (Appendix B). WESTEC Services, Inc. conducted a subsequent field survey in February, 1987 to document any physical and biological changes onsite and to update the previous report. Particular attention during the surveys were given to determining the presence or absence of significant biological features on or adjacent to the property. Significant

biological features are herein considered plant or animal species of rare and/or endangered status, depleted or declining faunal species, and species and habitat types of unique or limited distribution. The following report is a composite of information and recommendations gathered from both surveys. Nomenclature in this report follows Thorne (1976); Beauchamp (1986); and Laudenslayer and Grenfell (1983).

4.4.1 Existing Conditions

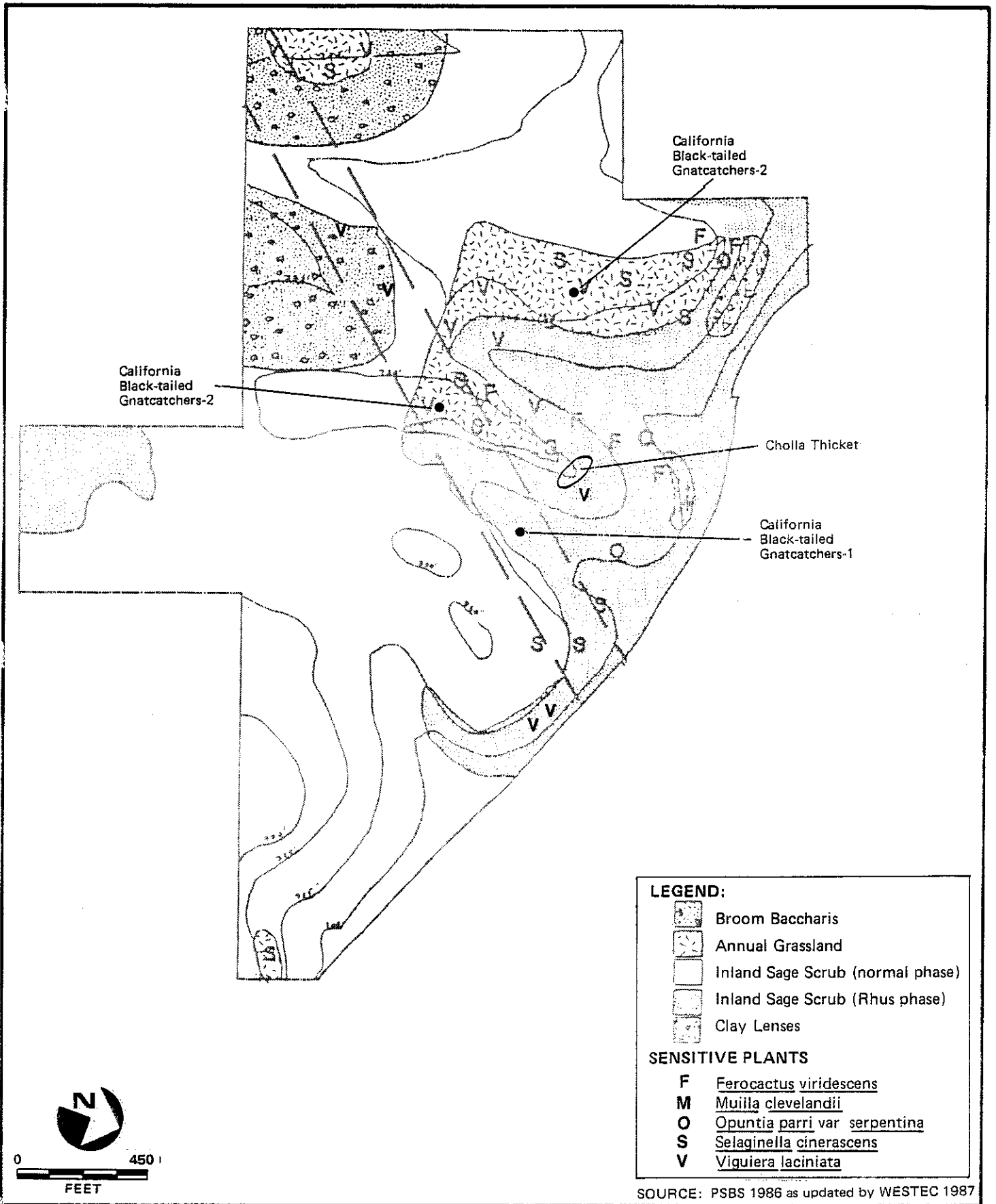
Vegetation

The property has experienced prior agricultural use which has altered the vegetational character of the site from its original native condition. Continued off-road activity and the dumping of trash sustain the disturbed nature of portions of the site vegetation (Figure 4-7).

In the southern portion of the 100-acre parcel, approximately 30 acres support an association of non-native annual grasses and forbs which form a dominant vegetation type in the region. This area is best described as an annual grassland. Common species include ripgut-grass (Bromus diandrus), foxtail (Hordeum leporinum), wild oat (Avena barbata), ryegrass (Lolium perenne), field mustard (Brassica geniculata), filaree (Erodium cicutarium), and wild radish (Raphanus sativus).

Another 40 acres of the southwestern portion of the site is dominated by broom baccharis (Baccharis sarothroides). The presence of shallower soils, versus the higher clay content of grassland areas, may explain the dominance of these plants in these disturbed areas.

The remaining 30 acres onsite consist of north-facing slopes, including three canyons, with a relatively intact cover of native inland sage scrub. Sumac woodland, consisting mostly of laurel sumac (Malosma laurina) and lemonade berry (Rhus integrifolia), is a phase of inland sage scrub and occurs in the valley bottoms. The more typical, lower growth form of inland sage scrub, mostly coastal sagebrush (Artemisia californica) and flat-top buckwheat (Eriogonum fasciculatum), occurs on the drier, upper slopes. On the natively vegetated dry slopes are some areas of clay soils which are devoid of shrubs, being replaced by herbs, bulbs and perennial grasses. These areas are included within the 30 acres of inland sage scrub and constitute about 4 acres. Occasionally found in these clay areas are needlegrass (Stipa lepida), golden-star (Bloomeria crocea) and onion (Allium peninsularis).



Vegetation and Sensitive Resources Map

**FIGURE
4-7**

Ninety-two plant taxa were identified on the project site (refer to Table 1 in Appendix B). Of this total, 27 are invasive, weedy species, usually occurring in the disturbed area. The native species occur mostly in the inland sage scrub and clay lens areas.

Sensitive Plants

Five plants (one identified tentatively) considered sensitive by the California Native Plant Society were observed on the property (Figure 4-7). None of these plants has legal listing by state or federal authorities. The pygmy spike-moss (Selaginella cinerascens) is a low ground cover which occurs in undisturbed, otherwise open areas on the site. The plant is particularly dominant on the more level ridge tops. The plant ranges as far north as Gabino Canyon in Orange County, but appears to be most common in southwestern San Diego County and on sedimentary formations. The species has a CNPS rarity listing (Smith and York 1984) of 1-2-1, which is a relatively low rating, the number 3 category being the highest (see Appendix C for rating definitions).

The San Diego sunflower (Viguiera laciniata) is a low shrub common on dry slopes in the coastal southwestern portion of San Diego County. Its distribution is generally inland of another sunflower-like shrub, the coastal Encelia californica. Both species are located on the property, suggesting an overlapping of ecological preferences of these species. The San Diego sunflower is a frequent component on inland sage scrub and occurs throughout the lower, northern portion of the site. The plant has a CNPS rating of 1-2-1.

The snake cholla (Opuntia parryi var. serpentina) is a cactus species largely confined to southwestern San Diego County and northwestern Baja California and is not widely distributed within that range. In the United States, it occurs chiefly in the Chula Vista area. The snake cholla is sympatric with and commonly associated with the more robust coast cholla (Opuntia prolifera) and hybrids between the two seem to be frequent in the region. Only a few plants which could be designated definitely as snake cholla occur in the inland sage scrub at the northwestern portion of the site. The species has a CNPS rating of 2-3-2. The coast barrel cactus (Ferocactus viridescens) is known from Oceanside to northwestern Baja California. It ranges inland to Santee and Escondido and appears to be found primarily on soils derived from marine sediment deposits. Onsite, they occur on the slopes along Telegraph Canyon Road. The densities onsite are low, relative to other occurrences in the vicinity. This is expected to be due to the northern exposure of the majority of the slopes. The species' CNPS rating is

1-3-1. Cleveland's golden-star (Muilla clelandii) was tentatively identified through dried remains located in one of the onsite clay lenses. Cleveland's golden-star's CNPS code is 2-2-2, and it has a similar southwestern distribution as other sensitive plants cited above.

In addition to the above-mentioned plants identified onsite, three other possibly occurring sensitive plants should be noted. All three species are herbaceous and can be effectively censused only in the spring or early summer. Otay tarweed (Hemizonia conjugens) is a State-endangered plant which occurs on clay soils of southwestern San Diego County. This species is an annual and closely resembles the more common tarweed (Hemizonia fasciculata); it is often overlooked but was observed in clay soils south of the project. It has also recently been observed to the north on heavy soils in the canyons of El Rancho del Rey (MBA 1985; Recon 1986). Based on these findings, the potential for this species to occur onsite, especially in the clay lens areas, is considered moderate. Two additional sensitive plant species which could potentially occur in the clay lenses onsite are the San Diego thornmint (Acanthomintha ilicifolia) and variegated dudleya (Dudleya variegata). San Diego thornmint is a State-endangered species which has recently been recorded north of the site at El Rancho del Rey in native grassland habitats (MBA 1985; Recon 1986). Variegated dudleya, listed as a declining species by the California Native Plant Society (Smith and York 1984) was also recorded in grassland habitat on El Rancho del Rey (MBA 1985).

Other possibly occurring sensitive plants include San Diego ambrosia (Ambrosia pumila), which was observed as a hybrid form with the common western ragweed (Ambrosia psilostachya) on the Foxhill Run residential project on the southern boundary of the site; San Diego needlegrass (Stipa diegoensis), which is known from Otay formation clay lenses in the Otay Mesa and Poggi Canyon areas; Orcutt's bird's-beak (Cordylonthus orcuttianus), which was found on the Foxhill Run residential site south of the project area and is still known south of and adjacent to the Foxhill Run site as well as from El Rancho del Rey (WESTEC Services 1985); velvet cactus (Bergerocactus emoryi), which was recorded on the El Rancho del Rey site (MBA 1985); California adder's-tongue fern (Opioglossum lusitanicum ssp. californicum), which was also recorded from El Rancho del Rey (MBA 1985) and could potentially be present on the slopes and ridges in the remaining native habitats onsite; and the San Diego bur-sage, which was once known to occur on the site, around the base of the southernmost electrical transmission tower. A past fire, however, destroyed the

population which seems to have represented the northernmost known occurrence of the plant in its range.

San Diego ambrosia, San Diego needlegrass, velvet cactus, and San Diego bur-sage would have been identifiable during the filed studies. Orcutt's bird's beak, although a spring annual, is distinctive when dried and would also have been observed if present. California adder's-tongue fern is an herbaceous perennial which is best observed in mid- to late-winter depending on the rain sequence. It was recently observed during the same general time period (January to mid-February) on El Rancho del Rey (MBA 1985).

Wildlife

Two general wildlife habitats occur on the project site. The most extensive habitat is open annual grassland. Much less abundant on the site is inland sage scrub.

Annual grassland on the site is of little value to most native wildlife species. It does, however, serve an important function as foraging habitat for raptors in the area. The wide-open nature of this vegetation provides potential habitat for the San Diego horned lizard (Phrynosoma coronatum blainvillei); the sandy soils favored by this declining species are, however, limited in these areas.

Inland sage scrub on the site consists of rather open, low density shrubland bordered on the north by areas with a denser canopy of lemonade berry and laurel sumac. The habitat value of this vegetation is severely degraded in some areas by illegal dumping and off-road vehicle traffic. Dense vegetation has been less affected by these activities. The habitat is expected to support a common species assemblage found in association with other similar stands of inland sage scrub communities.

No amphibians were detected or are expected to reside permanently on the property, because no permanent water source is located onsite.

Two reptiles, the western fence lizard (Sceloporus occidentalis) and the gopher snake (Pituophis melanoleucus) were detected on the project site. Additional species potentially occurring onsite include the western rattlesnake (Crotalus viridis), the red diamond rattlesnake (Crotalus ruber), the western whiptail (Cnemidophorus tigris), the orange-throated whiptail (Cnemidophorus hyperythrus beldingi), San Diego horned lizard (Phrynosoma coronatum blainvillei), and the coastal rosy boa (Lichanura trivirgata roseofusca).

Eighteen avian species were observed on the subject property (refer to Table 2 in the Biology Report, Appendix C, PSBS 1986). Included in these observations are three raptors: American kestrel (Falco sparverius), turkey vulture (Cathartes aura),

and red-tailed hawk (Buteo jamaicensis). All of the raptors were observed hunting on the site; it is unlikely that any nesting occurs due to the lack of adequate nest sites.

Seven mammalian species were observed or detected on the project site. All of these species are common to inland sage scrub or disturbed habitats. Additional species expected to occur include striped skunk (Mephitis mephitis), deer mice (Peromyscus maniculatus) and agile kangaroo rat (Dipodomys agilis).

Sensitive Animals

The sensitive bird species found onsite or expected to occur in the area are described in Table 3 of the Biology Report, Appendix C (PSBS 1986). The California black-tailed gnatcatcher (Polioptila melanura californica) was not detected on the project site during the previous PSBS survey. During the subsequent survey conducted by WESTEC in 1987, the area was checked for the presence of this species using taped calls as an aid. WESTEC field personnel recorded three territorial males and a total of five individuals (two pairs and a single male). Refer to Figure 4-7 for locations onsite. It is believed that the site supports a minimum of two to three pairs of this declining species.

An additional sensitive bird species of interest is the cactus wren (Campylorhynchus brunneicapillus). This species is not Federally or State-listed as endangered or threatened, but is recognized by local experts (Everett 1979; Rea 1981) as declining in coastal San Diego County. It was "observed frequently" during recent surveys of El Rancho del Rey (MBA 1985), and was recorded just eastward of the site and north of Telegraph Canyon Road. The species nests in stands of cholla or prickly pear. None of the characteristic nests was observed onsite, but potential nesting sites are present in the taller cholla stands on the northern point of the central ridge onsite (Figure 4-7).

Sensitive Habitats

Sensitive habitats within the study area include grasslands and coastal sage scrub. Grasslands are a declining vegetative and wildlife habitat within the San Diego region. This is especially true for native grasslands. Native grasslands onsite possess the potential to support the aforementioned high interest plant species Acanthomintha ilicifolia, Hemizonia conjugens, and Muilla clevelandii. Grassland habitats would be expected to support healthy populations of prey species, upon which larger predators that seek cover in adjacent habitats depend. Grassland habitats situated within a mosaic of coastal sage scrub habitats (such as the project onsite) would be expected to increase the species diversity and carrying capacity of the adjoining habitats.

Low scrub habitat is still fairly common in San Diego County, but is rapidly declining along the coastal plain. It has been suggested that on the order of 70 percent of this habitat within the county has been lost or modified by man (Oberbauer 1979). The extent of maritime desert scrub is limited naturally to the southwestern corner of the county and remains only in the project area, and on limited areas of Rancho Otay, western Otay Mesa, and a couple of isolated points along the coast. With the opening of the second border crossing and increasing growth in the local area, this habitat is substantially threatened. Declining species associated closely with and dependent on coastal low scrub habitat include the cactus wren and black-tailed gnatcatcher and a number of declining plant species.

4.4.2 Impacts

The proposed development would eliminate native vegetation occurring on the project site except for that located within the 250-foot wide SDG&E easement and some of the natural slopes facing Telegraph Canyon Road. Of particular importance is the incremental reduction of native grassland habitat (clay lens areas) and coastal sage scrub habitat, which is considered regionally declining. Both of these habitats form a mosaic and potentially support a large number of sensitive species. Retaining the SDG&E easement area in its natural state would preserve representative aspects of all vegetational features onsite. In addition, graded slopes adjacent to this open space area will be revegetated with native plant material. It would not, however, preserve any of the sensitive cacti, Ferocactus viridescens or Opuntia parryi var. serpentina, or the clay lenses potentially supporting Muilla clevelandii. In addition, few representatives of Viguiera laciniata or Selaginella cinerascens would be retained. However, the low scrub habitat onsite is not considered prime habitat for Ferocactus, Opuntia parryi var. serpentina, Viguiera laciniata or Selaginella cinerascens due to its density and north-facing character. These species generally prefer more arid, south-facing exposures. Because most of the above-mentioned species are present onsite in low numbers, the impact of project development is not considered significant.

Only 6 to 7 acres of existing natural habitat which will support possibly one pair of black-tailed gnatcatchers will remain. This loss is considered adverse but not significant due to their low numbers onsite and the high potential for protection of this species in the El Rancho del Rey area.

The project would eliminate the vast majority of animal habitat on the project site including most of the raptor foraging area. This constitutes an incremental loss but is not considered significant on its own.

Taking all the above factors into consideration, a cumulative impact to these resources is identified. This effect, however, is not considered to be significant because of the following factors: few numbers of sensitive plant species onsite; low to moderate potential for other plant species to occur; low potential for declining reptiles to occur onsite; few California black-tailed gnatcatchers onsite; and lack of adjacent acreage of natural open space for habitat.

4.4.3 Mitigation Measures

Due to the highly degraded nature of most of the native vegetation onsite, no mitigation is proposed for its loss. Sensitive cacti should be salvaged for relocation to suitable habitats within the SDG&E easement. A spring salvage should be carried out if the bulb Muilla clevelandii is verified onsite. Fencing of the open space area within the SDG&E easement does not appear to be warranted due to the lack of significant biological resources and the intended passive recreational use of the area. It is recommended that off-road vehicle activity in this area be prohibited, or severely restricted, and that any brush clearing within the easement, for either trail development or fire control, be kept to a minimum.

4.4.4 Analysis of Significance

No significant biological impacts associated with project development have been identified; therefore, no specific mitigation is necessary. The recommendations concerning relocation of sensitive species within the SDG&E easement would benefit some of the impacted species.

4.5 CULTURAL RESOURCES

An archaeological field survey of the Rancho del Sur project site was conducted on August 18, 1986, as well as a literature search for previously recorded archaeological sites in the project area (TMI Environmental Services 1986). An additional field survey was conducted by WESTEC Services, Inc. in January 1987.

4.5.1 Existing Conditions

The record search indicated no known sites on the property. Three small areas containing a limited number of stone artifacts were found during field survey of the project site. The following characteristics of each area were noted (TMI Environmental Services 1986):

Area 1 - is made up of one small core and three flakes and is contained in an area with a diameter of approximately 10 meters. It is located on the northeast end of a north/south trending ridge which overlooks Medical Center Drive.

Area 2 - is made up of approximately 5 meters. It is located 90 meters south of Area 1.

Area 3 - is made up of approximately 1 core, 1 scraper, and 3 to 5 flakes and is contained in an area of approximately 15 meters. It is located just southwest of the intersection of an east/west dirt road and Medical Center Drive along a small bench.

Due to the small number of artifacts found in the above areas, they are not considered significant archaeological sites. All three areas are located in portions of the project site that have been disrupted by plowing and dumping.

4.5.2 Impacts

Because the three archaeological areas are located in highly disturbed portions of the project site, the cultural integrity of the areas has been undermined. Development of the project site will not impact any significant cultural resources.

4.5.3 Mitigation Measures

Due to the absence of significant impacts on cultural resources, no mitigation measures are proposed.

4.5.4 Analysis of Significance

The limited archaeological resources on the project site are not considered to be significant. Therefore, project development will not significantly impact any cultural resources and no mitigation measures are necessary.

4.6 GEOLOGY/SOILS

Detailed preliminary geotechnical investigation of the Rancho del Sur project was conducted by Geocon, Inc. (1986) (see Appendix C); findings, conclusions, and recommendations with regard to site planning and development are summarized below.

4.6.1 Existing Conditions

The project site is situated within the Coastal Plains Physiographic Province which consists generally of a series of gently westward sloping, deeply dissected terraces. Elevations range from a high of approximately 400 feet (MSL) within the eastern portion of the property to a low of approximately 250 feet (MSL) at the property's northwestern corner.

Three geologic formations and two surficial soil types were encountered on the site. Formational deposits include the Otay Formation, San Diego Formation, and Lindavista Formation. The surficial deposits consist of alluvium/colluvium and topsoil. Each of the geologic formations and surficial units is discussed below in order of

increasing age. Following these descriptions is a discussion of onsite geological constraints.

Topsoil. The majority of the site is overlain by a loose topsoil layer of variable composition. In general, the topsoils consist of highly expansive, potentially compressible, silty sandy clays that average two to three feet in thickness.

Colluvium/Alluvium. The colluvial deposits are typically composed of soft to stiff silty, sandy clay and clayey sand that has accumulated near the base of slopes or along canyon bottoms. Stream-deposited alluvial sediments were encountered to depths in excess of 16 feet along the major natural drainages which dissect the property. These sediments are generally poorly consolidated and susceptible to settlement when subjected to an increase in vertical loads as might result from the placement of fill or structures. It should be anticipated that unmapped minor tributary ravines and natural swales also contain some alluvial and colluvial soils.

Lindavista Formation

Sediments of the Quaternary Lindavista Formation are found unconformably overlying the San Diego Formation at an elevation of approximately 320 feet MSL. Sediments generally associated with this formation consist of cobble-gravel-sand mixtures with some minor clay lenses and locally cemented zones.

The soils of the Lindavista Formation typically possess excellent shear strength and low compressibility characteristics in either an undisturbed or properly compacted condition. Cut and fill slopes constructed at 2:1 inclinations are generally stable to heights in excess of 50 feet.

San Diego Formation. Soils of the Pliocene San Diego Formation are typically massively bedded, well sorted, very fine- to medium-grained sandstones with occasional gravel lenses. In general, the sediments of the San Diego Formation possess excellent shear strength, low compressibility, and low expansive characteristics in either an undisturbed or properly compacted condition, and, hence, should provide suitable foundation support. Grain-size distribution and low cohesion render the formation susceptible to erosion, particularly within fill slopes.

Otay Formation. The Otay Formation of the Oligocene Age is exposed in the northeast corner of the site along Telegraph Canyon Road at elevations between 280 and 300 feet. Where exposed, the formation consists of friable clayey, fine- to medium-grained sandstones. The sandier portions of the Otay Formation are typically of low to moderate expansive potential and possess suitable shear strength for

foundation and slope stability. Because of the limited exposure and topographically low position, this unit will probably not be encountered during grading.

Faulting and Seismicity. The project site is considered to be a seismically active area with the most significant local fault systems being the La Nacion Fault zone, the Rose Canyon Fault zone and the offshore Coronado Bank and San Diego Trough Fault zones. The La Nacion zone is located within the project site. The Rose Canyon Fault zone has been inferred approximately 4 miles west of the site beneath San Diego Bay, based upon the results of accoustical profiling (Kennedy and Welday 1980 in Geocon 1986). The Coronado Bank Fault zone and the San Diego Trough Fault zone have been mapped approximately 10 and 25 miles west of the project site, respectively (Kennedy et al. 1980 in Geocon 1986).

Active fault systems present within 100 miles of the site have the potential for inducing ground accelerations at the site. The Elsinore Fault zone, the San Jacinto Fault zone, and the San Andreas Fault zone are located approximately 45 miles, 65 miles, and 90 miles, respectively, to the northeast. Additionally, the San Miguel Fault zone is mapped approximately 25 miles southeast of the site in Baja California. Peak horizontal bedrock acceleration, should the maximum credible earthquake occur on any of southern California's active faults, is estimated to be on the order of 0.1 to 0.15 g. In the unlikely event of an earthquake of this magnitude, the Mercalli Intensity Scale indicates that small slides and caving in along sand or gravel banks could occur, as could some masonry and other structural damage to buildings.

Liquefaction. Based on the density and gradation of soils underlying the project site, liquefaction potential is very low and does not present a significant geologic hazard to the site.

Groundwater. Although groundwater or seeps were not observed during the reconnaissance, each of the geologic units, as well as the surficial deposits observed on the site, have permeability characteristics that could be susceptible under certain conditions to water seepage. Perched water conditions are likely to develop during the wet season within the drainage areas.

Unsurveyed Area

At the time of the Geocon survey, the survey did not include an approximately 10-acre parcel that extends as part of Unit 3 along the southern border of the project site (refer to Figure 2-3). It does not appear that there are significant geotechnical constraints in this area (Farkas 1987); however, prior to recordation of the final map, a geologic reconnaissance of this area will be required.

4.6.2 Impacts

Based on the collection and review of geotechnical data, it has been determined that proposed residential development on the site is feasible from a geotechnical standpoint (Geocon 1986). There appear to be no significant geotechnical constraints onsite that cannot be mitigated by proper planning, design, and construction practices. Potential geotechnical concerns associated with the site are discussed below.

- Surficial Soils
Some expansive soils may be encountered during grading within the surficial deposits. Relatively loose colluvium and alluvium deposits present along the bottom of canyons could result in settlement problems.
- San Diego Formation
Grain-size distribution and low cohesion render this formation susceptible to erosion, particularly within fill slopes.
- Faulting and Seismicity
A major strand of the La Nacion Fault zone crosses the eastern portion of the property and other fault zones are located in the local area. Although the maximum probable event along the La Nacion Fault zone is estimated to be Richter Magnitude 5 to 5.5, the probability of a seismic event of this magnitude occurring during the lifetime of the project is considered remote since the fault does not cut Holocene sediment (Hart 1974 in Geocon 1986). Major seismic activity from other fault zones in the area is equally unlikely.
- Groundwater
Due to the susceptibility of the geologic units identified on the site to develop seepage problems and perched water conditions, adequate site drainage and moisture protection of supporting soils must be provided and maintained.

4.6.3 Mitigation Measures

Mitigation measures addressing geologic concerns associated with the proposed project are described in detail in Appendix C. Mitigation measures are outlined for grading, slope stability, foundations, faulting and seismicity, and site drainage.

It is recommended that the grading plans be reviewed by a qualified geologist prior to finalizing. It will also be necessary for a qualified geologist to review

the project site plans, including the incorporation of setbacks associated with development in the vicinity of the La Nacion Fault zone. The need for additional comments and/or analysis can be determined at that time. It is probable that additional subsurface investigation will be necessary once the location of cut and fill slopes are known. In addition, a geologic survey of the previously unsurveyed 10-acre portion along the southern border of the site is required.

4.6.4 Analysis of Significance

Contingent on results from the additional geologic reconnaissance of the unsurveyed 10-acre portion of the project site, available geologic data indicates that there are no major geologic constraints on the project site to preclude development. Potential identified impacts include settlement problems associated with expansive surficial soils, erosion within fill slopes, seismic activity, seepage problems and perched water conditions. Assuming that all pertinent mitigation measures are complied with (see Appendix C), no significant geotechnical impacts are anticipated from the proposed project development.

4.7 WATER QUALITY/DRAINAGE

Preliminary hydrologic data is included in a geotechnical report of the project site prepared by Geocon, Inc. (1986). This information is summarized below and the complete geotechnical report is included in this document as Appendix C. Additionally, this section incorporates data from the State Water Resources (SWR) and Regional Water Quality Control (RWQC) Boards (1975), Lawrence et al. (1964), the County of San Diego Department of Sanitation and Flood Control (1975), and Wigington et al. (1983).

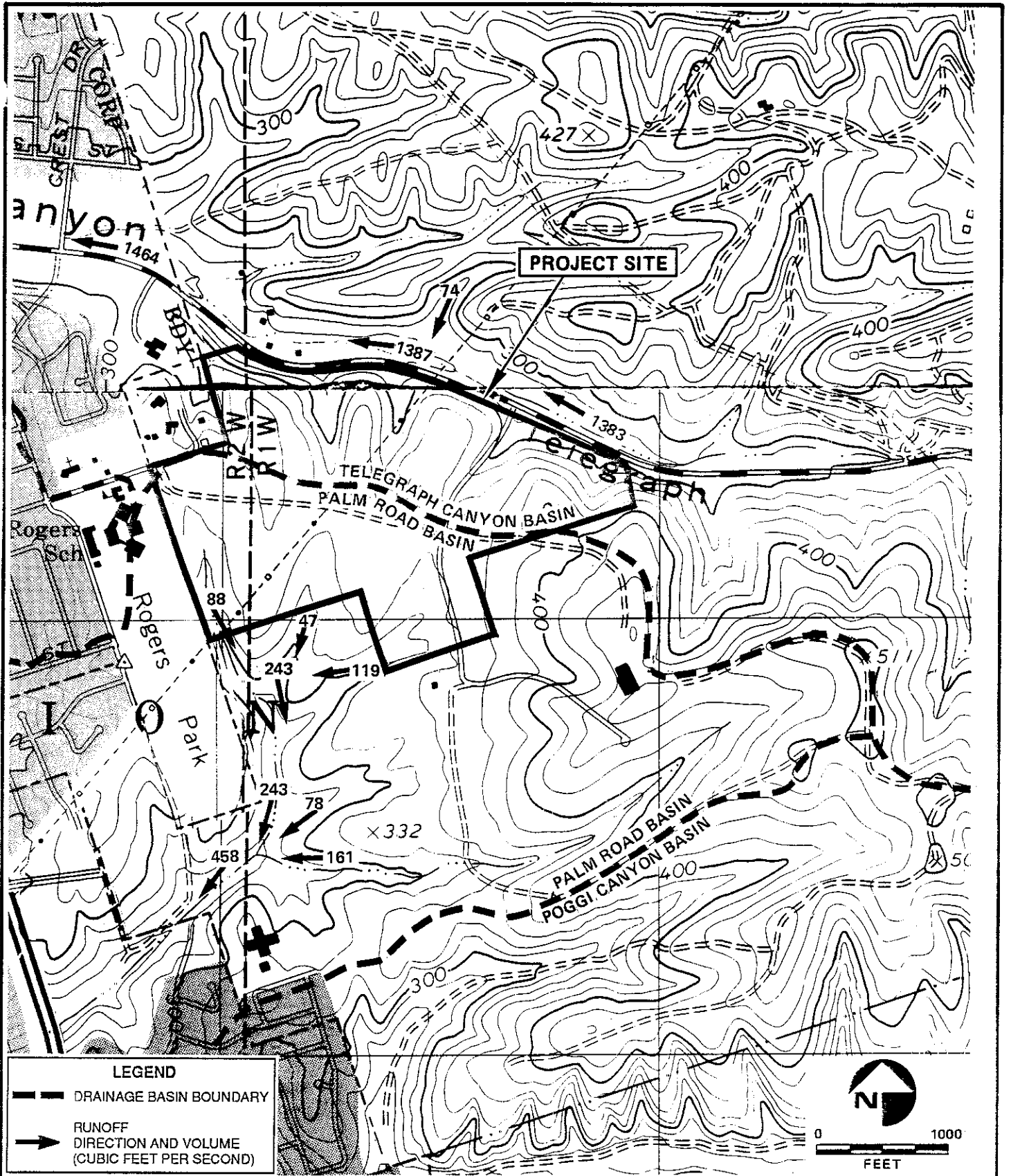
4.7.1 Existing Conditions

The project site incorporates portions of the Otay River and Telegraph Canyon watersheds, with surface runoff draining primarily north and south. Runoff moving northerly is derived from approximately the northern one-half of the project site, which flows into the Telegraph Canyon drainage from a series of storm drains and channels along the canyon boundaries. These do not include erosion control facilities along the project area border; this portion of the watershed is essentially undeveloped and not subject to significant erosion. Runoff moving offsite from the southwestern portion of the project area moves through a retention basin associated with the Foxhill Run development and then into Poggi Canyon. Runoff from the southeastern project site also flows into Poggi Canyon, but does not pass through the Foxhill Run retention basin. Figure 4-8 displays the local drainage patterns and basins, as well as the existing runoff volumes for a 50-year storm.

The project site is not subject to flooding due to its location and topography. No major drainages occur onsite, and the northern boundary with Telegraph Canyon is marked by a relatively steep incline (Figure 4-8). Downstream areas of both Telegraph Canyon and the Otay River are subject to flooding. The following problems are due primarily to reduced capacity of culverts at street crossings. The City of Chula Vista has undertaken a public works project to increase the capacity of the Telegraph Canyon Channel between 4th Avenue and I-5 to a capacity equal to the 100-year flood under ultimate buildout conditions. Additional improvements in the form of retention basins or other channel modifications are likely to be made as development in the tributary area continues (WESTEC 1985). The project site is located within Zones 3 and 4 of the San Diego County Flood Control District. No major county flood control facilities exist or are proposed within the site itself or the immediate area (San Diego County Department of Sanitation and Flood Control 1975; Soloman 1987). However, a flood channel improvement proposed by the City of Chula Vista is located approximately 1 mile southwest of the project site, near the intersection of Oleander and Orange Avenues. This would consist of an 11-foot diameter spiral-ribbed pipeline, connecting with an existing 12-foot line to the west (Thomas 1987).

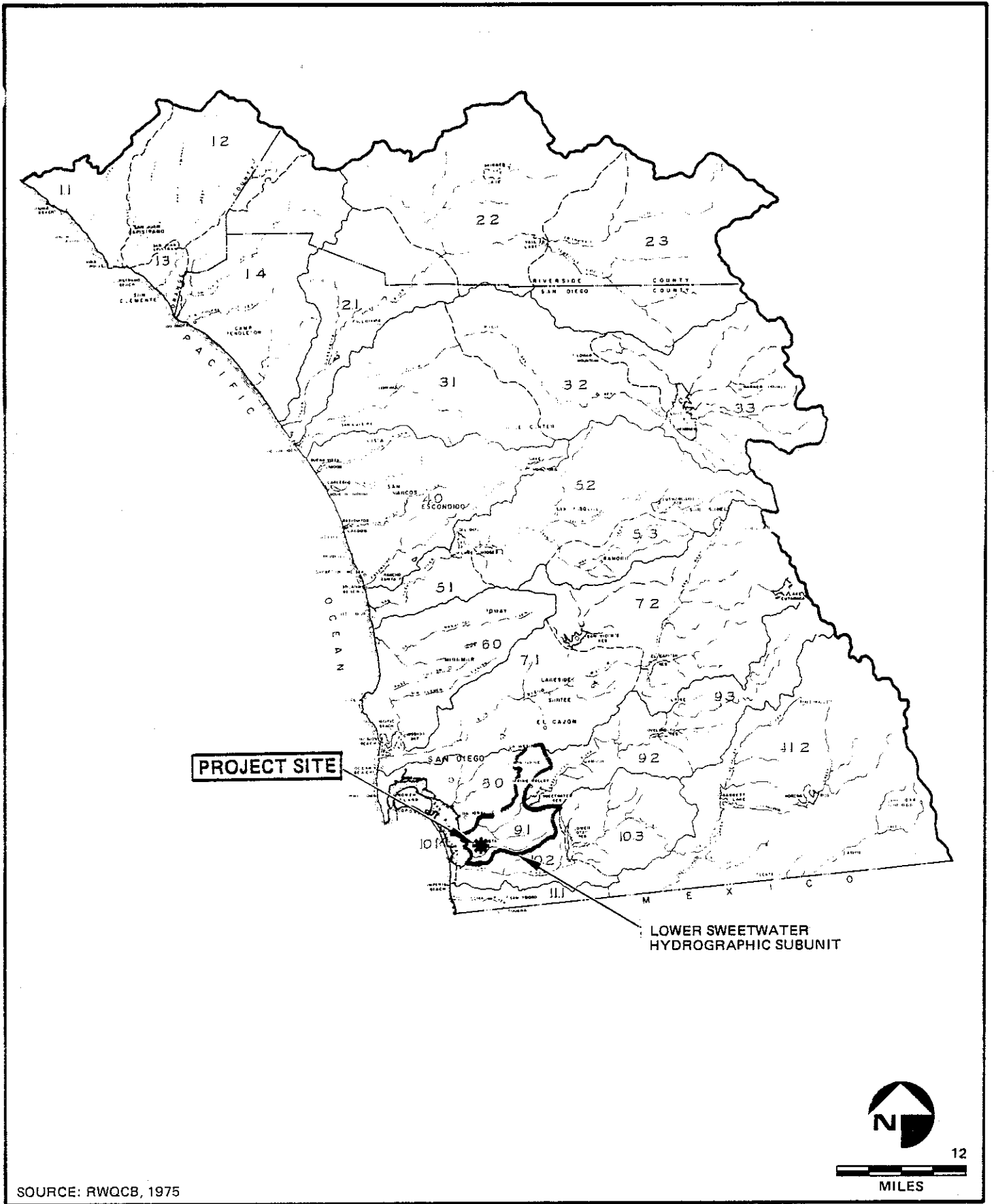
Runoff within the project site is likely to be of good quality due to the lack of development, although no known water analysis has occurred there. Runoff leaving the project site traverses heavily developed urban areas via Poggi and Telegraph Canyons, and likely experiences a decrease in water quality. Urban development generally increases the potential for runoff contamination over nonurban areas, with urban runoff commonly contributing bacteria, pesticides, nutrients, organics, solids, and metals to downstream waters (Wigington et al. 1983). This is due to the interception of airborne pollutants by precipitation, and the accumulation of contaminants in runoff on the surface or in drainage structures. A summary comparison of average runoff wasteloads for various urban land uses is shown in Table 4-4.

The project site is located in the Lower Sweetwater subunit of the Sweetwater Hydrographic unit (Figure 4-9). Annual precipitation within the subunit varies from approximately 11 to 14 inches. Groundwater is generally of poor quality, with little or none used for domestic or agricultural purposes. Existing beneficial uses for groundwater in the Lower Sweetwater Subunit were identified by the State Water Resources and Regional Water Quality Control boards (1978) as municipal and domestic supply, agricultural supply, and industrial service supply. Potential additional future



Existing Drainage Basin Boundaries and Runoff Volumes

FIGURE 4-8



Lower Sweetwater Subunit of The Sweetwater Hydrographic Unit

**FIGURE
4-9**

Table 4-4

URBAN SURFACE RUNOFF COEFFICIENTS

<u>Land Use</u>	<u>Total Dissolved Solids (TDS) (lb/acre yr)</u>	<u>Biochemical Oxygen Demand (BOD) (lb/acre yr)</u>	<u>Total Nitrogen (lb/acre yr)</u>	<u>Total Phosphorus (lb/acre yr)</u>
Residential	400	30	12	2.0
Commercial and Included Non Water Service	500	40	12	1.0
Industrial	550	30	12	1.2
Public Recreation and Similar	250	18	15	0.5

Source: SWR, RWQC 1975

use for groundwater in the subunit consists of groundwater recharge (SWR, RWQC 1978). These designations are regional, however, and do not reflect site-specific conditions throughout the subunit. A number of locations within the Lower Sweetwater Subunit were previously rated as inferior for domestic and irrigation uses (SWR, RWQC 1975). These ratings were based on observed levels of bacteria, various salts, boron, fluoride, and chlorine. The concentrations are attributed to the migration of connate waters into local valleys and previous intrusions of sea water. During the geotechnical investigation of the property by Geocon (1986), a number of exploratory borings and trenches were excavated to various depths not exceeding 83 feet. No groundwater was encountered during this investigation, although Geocon concluded that all observed surface and subsurface materials could be susceptible to water seepage under certain conditions. This is due to the fractured, permeable nature of much of the underlying bedrock.

4.7.2 Impacts

The proposed development would result in significant grading, infilling of drainages and construction of impervious surfaces to accommodate the planned residential community. This would produce changes to both the nature and quantity of

runoff within the site. Surface grading and infilling of drainages would change the direction and velocity of runoff, as well as increasing the potential for erosion by removing vegetation and creating artificial slopes. Onsite soils generally have a high erosional potential due to their granular, cohesionless nature (U.S. Soil Conservation Service 1973). Uncontrolled runoff could create erosional gullies, affecting slope stability and creating a build-up of silt in natural drainages, storm drains, and at the toe of slopes. The construction of impervious surfaces would result in a decrease of infiltration from precipitation and runoff, and an overall increase in the quantity of runoff. Such an increase would magnify the potential for erosional and flooding problems downstream from the site.

An increase in onsite runoff and/or erosion could impact surface water quality both within the project area and downstream, by increasing the dissolved and suspended streamloads. Additionally, the establishment of an urban development onsite could affect water quality by increasing the discharge of bacteria, pesticides, etc., as previously discussed.

Based on the field investigation by Geocon (1986), it is unlikely that groundwater would be encountered during construction of the proposed project. The geologic units and surficial deposits observed could be susceptible to water seepage, and perched water conditions would be likely to develop in drainage areas during the wet season (Geocon 1986).

The proposed project includes an onsite drainage system consisting of a series of underground storm-drains, curb inlets and catch basins designed for the expected runoff of a 10-year storm, consistent with the City of Chula Vista's policy for local drainage basins.

4.7.3 Mitigation Measures

A preliminary geotechnical report was prepared for the project by Geocon, Inc. (1986). This report contains a number of recommendations to provide adequate surface and subsurface drainage and temporary and permanent erosion control that should be incorporated into the project design. Recommended measures include, but are not limited to, the following:

- All grading should be performed in accordance with guidelines contained in the geotechnical report and requirements in the City of Chula Vista Grading Ordinance. The geotechnical consultant should review the project grading plans prior to finalization and, if necessary, conduct additional field investigation.

- After appropriate alluvial/colluvial materials have been removed from drainages, subdrains should be installed prior to backfilling. The specifications, location, and depth of subdrains should be determined by the geotechnical consultant after review of the grading plans.
- All cut-and-fill slopes should be designed to meet the recommendations outlined in the geotechnical report for providing slope stability.
- Appropriate wall drainage and water proofing specifications should be provided by the project architect and implemented during construction.
- Grading should be performed so that surface drainage is directed away from structures and into swales or other controlled drainage facilities.
- An appropriate revegetation plan acceptable to the City of Chula Vista should be prepared by a qualified landscape architect for all disturbed slopes. Implementation of this plan should begin immediately after completion of grading.
- Construction of an onsite drainage system which is designed to contain expected 10-year storm runoff would be required.
- All drainage facilities should be maintained to provide proper flow directions and velocities.

4.7.4 Analysis of Significance

No significant, unmitigable impacts to hydrology or drainage would result from project implementation if recommendations contained in the preliminary geotechnical report and in any subsequent geotechnical reports are implemented, and if drainage system plans are approved by the City of Chula Vista's Department of Public Works.

4.8 MINERAL RESOURCES

4.8.1 Existing Conditions

A geotechnical investigation of the Rancho del Sur project site was conducted by Geocon, Inc. (1986). The field survey included geologic mapping and excavation of five large-diameter exploratory borings, two exploratory trenches and five test pits. Representative soil samples from test borings were also analyzed in the laboratory. Based on the results of the Geocon survey, there is no evidence of mineral deposits on the project site. It is unlikely that the geologic formations which make up the majority of the site (particularly the San Diego and Lindavista formations) would

contain significant mineral resources (Farkas 1987). In addition, the large amount of topsoil on the project site would make further mineral exploration cost-prohibitive.

4.8.2 Impacts

The geologic survey of the project site revealed no evidence of mineral deposits; therefore, project development will have no impact on mineral resources in the area.

4.8.3 Mitigation Measures

No impacts on mineral resources were identified; therefore no mitigation measures are proposed.

4.8.4 Analysis of Significance

The geologic survey of the Rancho del Sur project site discovered no evidence of mineral resources onsite; therefore, no impacts are identified and no mitigation is necessary.

4.9 LANDFORM ALTERATION/VISUAL QUALITY

4.9.1 Existing Conditions

The topography of the 108.3-acre Rancho del Sur project site is comprised of north-south trending, gently to steeply sloping hillsides and shallow ravines (Figure 2-2). Along Telegraph Canyon Road, the predominant hillside and knoll on the east and west sides of Medical Center Drive are fairly steep with a gradient of approximately 15 to 35 percent. The elevations onsite range from 245 MSL along the northern property boundary adjacent to Telegraph Canyon to approximately 400 MSL at the top of the knoll, east of Medical Center Drive. The northerly half of the site drains to the north toward Telegraph Canyon through the northerly trending network of ravines that run between the hillsides, and the southerly half drains to the south toward Poggi Canyon through tributary drainage. For more drainage details, see Section 4.7.

The vegetation onsite is comprised mainly of low-lying coastal chaparral along the steeper portions of the site with native grasses covering the tops of ridges, and a few trees in the lowest portions of the ravines. More vegetation details are contained within Section 4.4.

The site is primarily undeveloped; Medical Center Drive crosses the easterly portion of the site, however, while a number of dirt access roads traverse the site. A 250-foot SDG&E easement runs northeast-southwest across the central portion of the project site and contains a 230-kV transmission line and towers. An additional 12 kv line runs at an angle to the easement. Some onsite disturbance occurred in the

southwest portion of the site as a result of recent grading performed during the development of the Foxhill Run residential project adjacent to the site.

The majority of the site can be seen from the hospital and medical buildings to the southeast. In addition, motorists travelling along Medical Center Drive to the hospital facility travel through the easterly portion of the project area and can view most of the site. The residences to the west, particularly the Foxhill Run development, can view the central portion of the site, and visitors to Greg Rogers Park near the western property boundary can view the southern portion of the site from the northernmost portion of the park. From the residences on the north side of Telegraph Canyon, the northern slopes and ridgetops of the site are visible, though some views are partially screened by landscaping. Motorists on Telegraph Canyon Road can view only the outer slopes of the site and therefore, most grading and development would not be seen. The most significant views of the site are from the residences and Greg Rogers Park visitors to the west, the medical facility to the southeast, and the motorists travelling north and southbound on Medical Center Drive.

Short-range views from the site are of the adjacent single-family residences to the north and west, the medical facilities and hospital to the southeast, and Rogers Elementary School to the west. Otherwise, lands to the south and east are currently undeveloped. Long-range views from the higher onsite elevations offer sights of Mexico to the south, the Pacific Ocean and San Diego Bay to the west, and local mountains to the north and east. The northern portion of the Greg Rogers Park is also visible from the southern portion of the site, though the Foxhill Run development partially shields the view.

Telegraph Canyon Road is designated as a Scenic Highway according to the Scenic Highways Element of the General Plan (1974). This designation mandates special consideration of the aesthetic quality of any development visible from these roadways. Scenic highway policies address design review, beautification of scenic routes, landscaping, and maintenance requirements. To implement the policies, it is recommended that developers create "pleasing" streetscapes through landscaping techniques and varied building setbacks, or create open-space areas adjacent to scenic routes through the use of clustering or innovative concepts.

4.9.2 Impacts

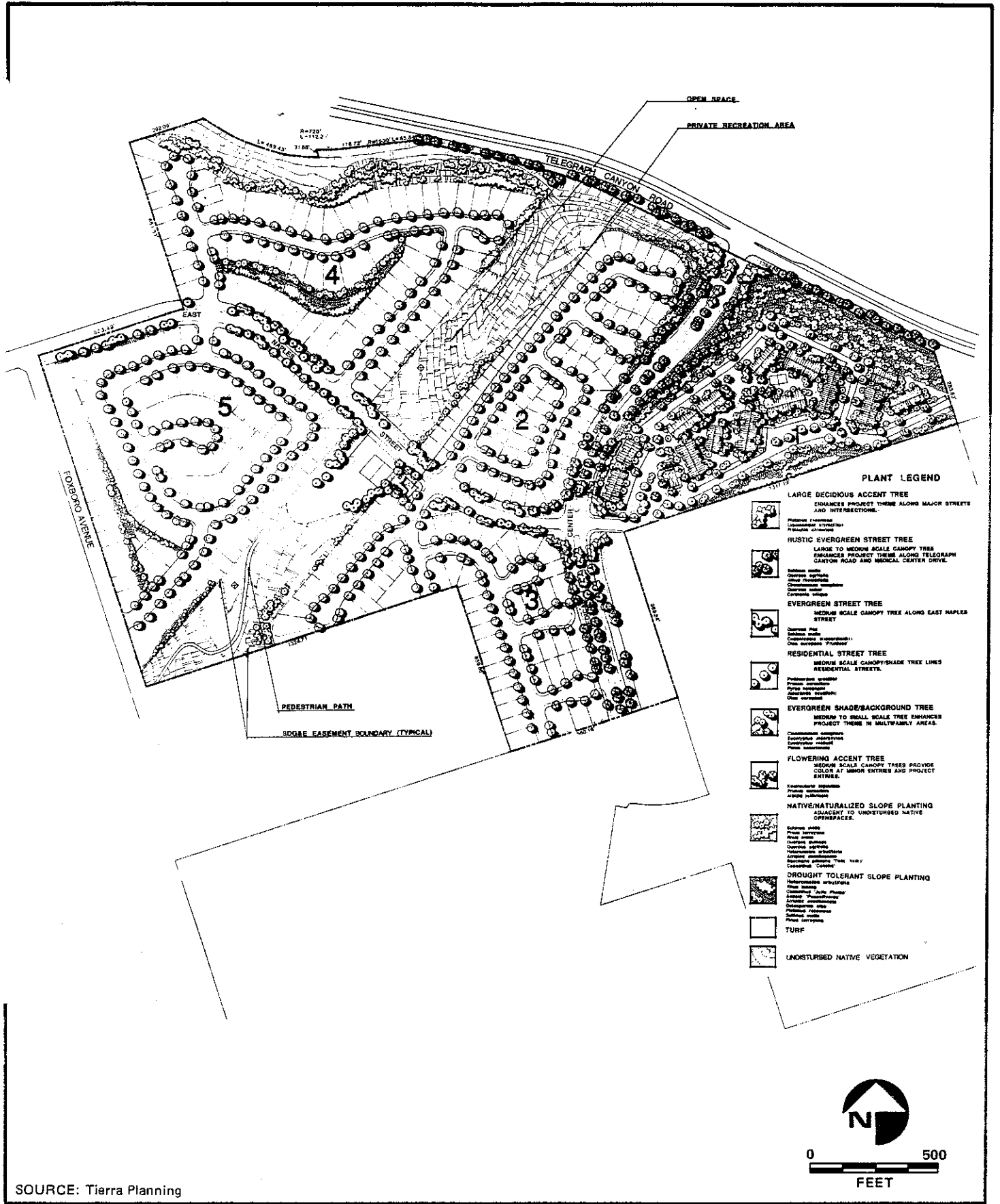
The proposed grading plan establishes Medical Center Drive and East Naples Street as the primary roadways through the project site. East Naples would be extended east through the central portion of the site across Medical Center Drive. The

proposed development plans place 302 single-family building pads, ranging in size from 3750 to 7000 square feet, west of Medical Center Drive and a 220-unit apartment building pad to the east of Medical Center Drive atop the knoll. Some of the residences would be sited along the hilltops above the ravines to take advantage of the views from the property's higher elevations, including the multi-family units which are located on the knoll site. The grading within the SDG&E easement would be for the construction of the East Naples Street extension, the recreation area and pedestrian trail, and support slopes for residences adjacent to the easement. Otherwise, the easement would be left as natural open space (Figure 2-3).

Approximately 85 percent of the site would be graded to implement the proposed project. This would entail approximately 800,000 cubic yards of balanced cut and fill, and 300,000 cubic yards of remedial grading. The maximum cut slope would be 50 feet, located along the knoll top to the east, while the maximum fill slope would be 70 feet, located along Telegraph Canyon Road; both would be constructed at a 2:1 ratio. The majority of the manufactured slopes (both cut-and fill-slopes) would be located along Telegraph Canyon Road in the northern portion of the project site, and would be visible from residences north of the site and to motorists travelling on Telegraph Canyon Road. Grading within the project site would be subject to Chapter 15.04 - Excavation, Grading and Fills - of the Municipal Code. Specific grading designs, discussed in the Mitigation Measures, would reduce the landform alteration impacts.

The landscape concept features theme trees along the community's roadways, with accent trees at entries and intersections to create a parkway effect, to unify the community, and to buffer residences from the roadways (Figures 4-10 and 4-11). Slopes adjacent to the undisturbed open space would be planted with native and/or naturalized species, while manufactured slopes would be planted with drought-tolerant species to stabilize, soften, and screen them from view. Manufacture slopes would be hydro-seeded to reduce erosion. A large portion of the SDG&E easement would be retained in its natural state, the exception being the neighborhood park and recreation area on the south side of East Naples Street where playing fields would be sited. Hiking and pedestrian trails from Greg Rogers Park would also traverse through the southern half of the easement.

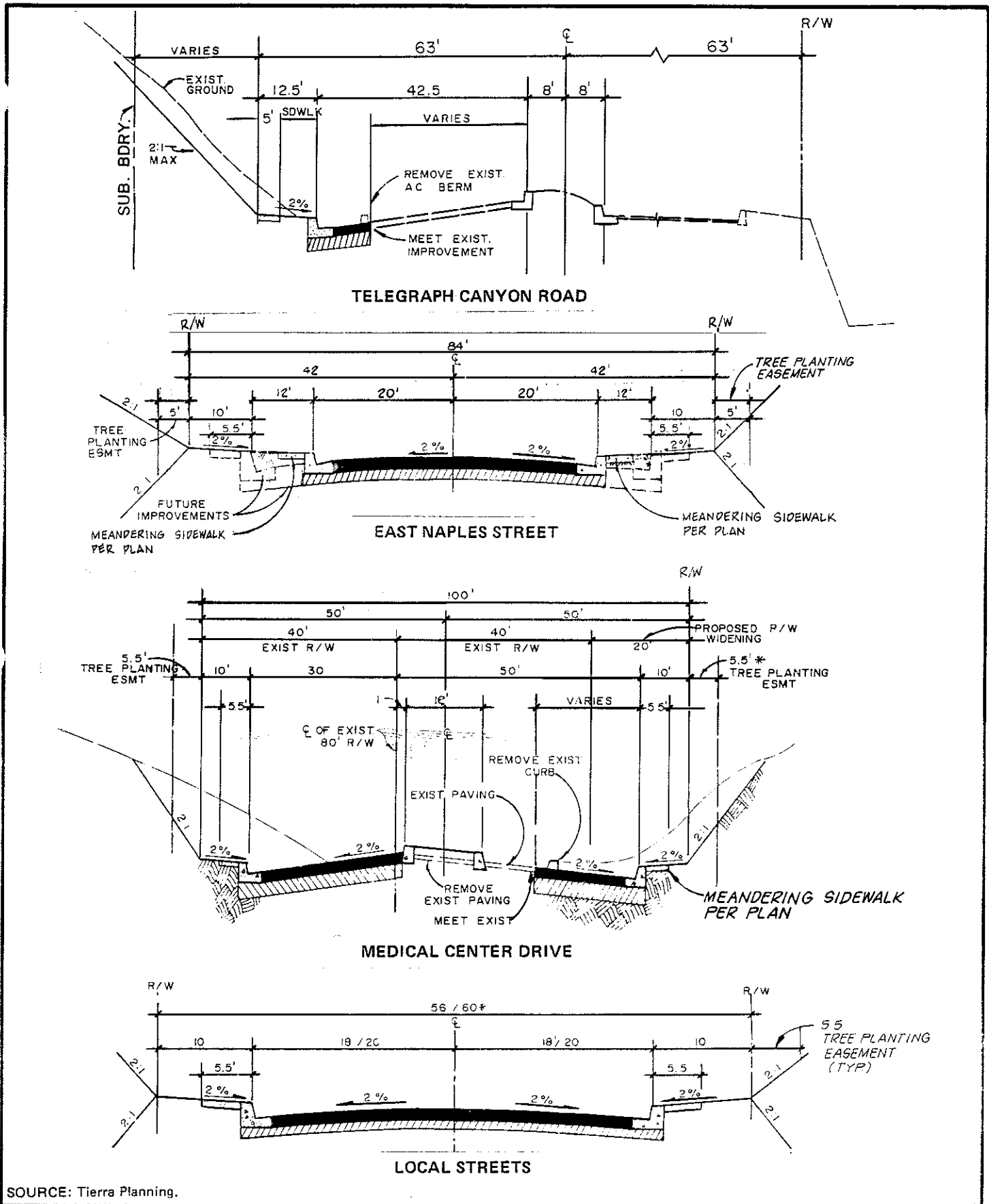
The proposed landscaping would preserve the scenic qualities of the Telegraph Canyon scenic highway landscape corridor and reduce any visual impacts. Some of the existing slopes would be preserved and new slopes adjacent to the roadway would be planted with native and/or naturalized vegetation and drought-tolerant species to soften them, allowing them to blend into the open space. In addition, residences would



SOURCE: Tierra Planning

Proposed Landscape Plan

**FIGURE
4-10**



SOURCE: Tierra Planning.

Typical Street Sections

**FIGURE
4-11**

be sited along the top of the hillsides and knoll, removing the development from the corridor. Because the views to the site from Telegraph Canyon Road are extremely sensitive to changes within the corridor, the landscaping and design concepts proposed reduce the potential visual impacts associated with development along the scenic highway to a level of insignificance.

The homes to the north and west, the hospital facilities to the southwest, and the motorists along Medical Center Drive would be most sensitive to the changes in landform and vegetation onsite. Since the existing topographic relief on the project site is relatively low, the degree of landform alteration proposed would create an adverse but not significant impact for the sensitive views to the site. The landscape plan would buffer and screen many views into the project, thus reducing the visual and landform impacts associated with the Rancho del Sur development.

Possible exception to the reduced visual impact would be the residences located adjacent to the SDG&E easement. In addition to the existing towers and lines, there is the potential for future electrical lines within the easement as a result of the growth in the project vicinity. This would increase the adverse impact on the residences. The design guidelines contained within the Precise Plan feature a wrought-iron view fence along the easement corridor. This would reduce the visual impacts of the transmission lines. Proper orientation of the affected residences combined with landscaping would screen the views and reduce the impact.

In summary, the landform alteration proposed for the implementation of the Rancho del Sur development would represent an adverse impact to viewers within the project vicinity. Implementation of the proposed landscape plan and some additional grading and design guidelines would reduce the impact to a level of insignificance.

4.9.3 Mitigation Measures

The landform alterations proposed for the Rancho del Sur project, though extensive in area, would not be significant because the topography of the site currently has little relief. Certain grading and design criteria should be incorporated into the project to mitigate the landform and visual impacts to a level of insignificance. These could include:

- Contour grading using variable heights and gradients, and rounded slope toes and tops should blend with the natural landform.
- Contour planting using variable heights of shrubs and trees should blend with the natural landform.
- A variety of housing setbacks, lot orientations, and site designs should be utilized whenever possible.

- Innovative building and roof designs varying shape, sizes, and colors should be incorporated.
- Landscaping should provide buffers and transitions between land uses.

In addition, the lots adjacent to the SDG&E easement and transmission lines should be properly oriented and landscaped to minimize the adverse impact associated with the transmission lines.

4.9.4 Analysis of Significance

Development of the project site would entail extensive grading to be performed onsite. The landform and visual impacts associated with development of the Rancho del Sur project site would be adverse, yet not significant because the current topography of the site has little relief. The incorporation of the proposed landscape and design guidelines would reduce the impacts, to a level of significance.

4.10 NOISE

An acoustical analysis addressing traffic noise impacts was prepared by WESTEC Services (February 1987) and the technical report is included as Appendix D.

4.10.1 Existing Conditions

The City of Chula Vista requires that noise levels of exterior living areas (yards and patios) for residential land uses not exceed 65 dB(A) Community Noise Equivalent Level (CNEL). In addition, for multi-family residential projects, the California Noise Insulation Standard (California Administrative Code, Title 25, Chapter 1, Subchapter 1, Article 4) requires that interior noise levels in multi-family residential living spaces not exceed a CNEL of 45 dB(A). The City of Chula Vista also applies this interior noise standard to single-family residential homes. With windows closed, typical residential units can be expected to attenuate up to 20 dB(A).

The primary source of noise in the vicinity of the project site is vehicular traffic along Telegraph Canyon Road and Medical Center Drive. The vehicular traffic noise analysis was conducted utilizing the Stamina 2.0 noise prediction model (Federal Highway Administration Report Number DF-81/001a). The model was used to estimate existing noise levels generated by traffic on Telegraph Canyon Road and Medical Center Drive. The average daily traffic (ADT) volumes along Telegraph Canyon Road and Medical Center Drive in the vicinity of the project are approximately 16,200 and 4600 ADT respectively (JHK 1987). Noise modeling of the calculated traffic volumes and unaltered topography indicates that onsite noise levels are generally less than 65 dB(A) CNEL. Noise levels approximately 160 feet from the center line of Telegraph Canyon Road are 65 dB(A) CNEL. Ambient noise levels at portions of the site would be

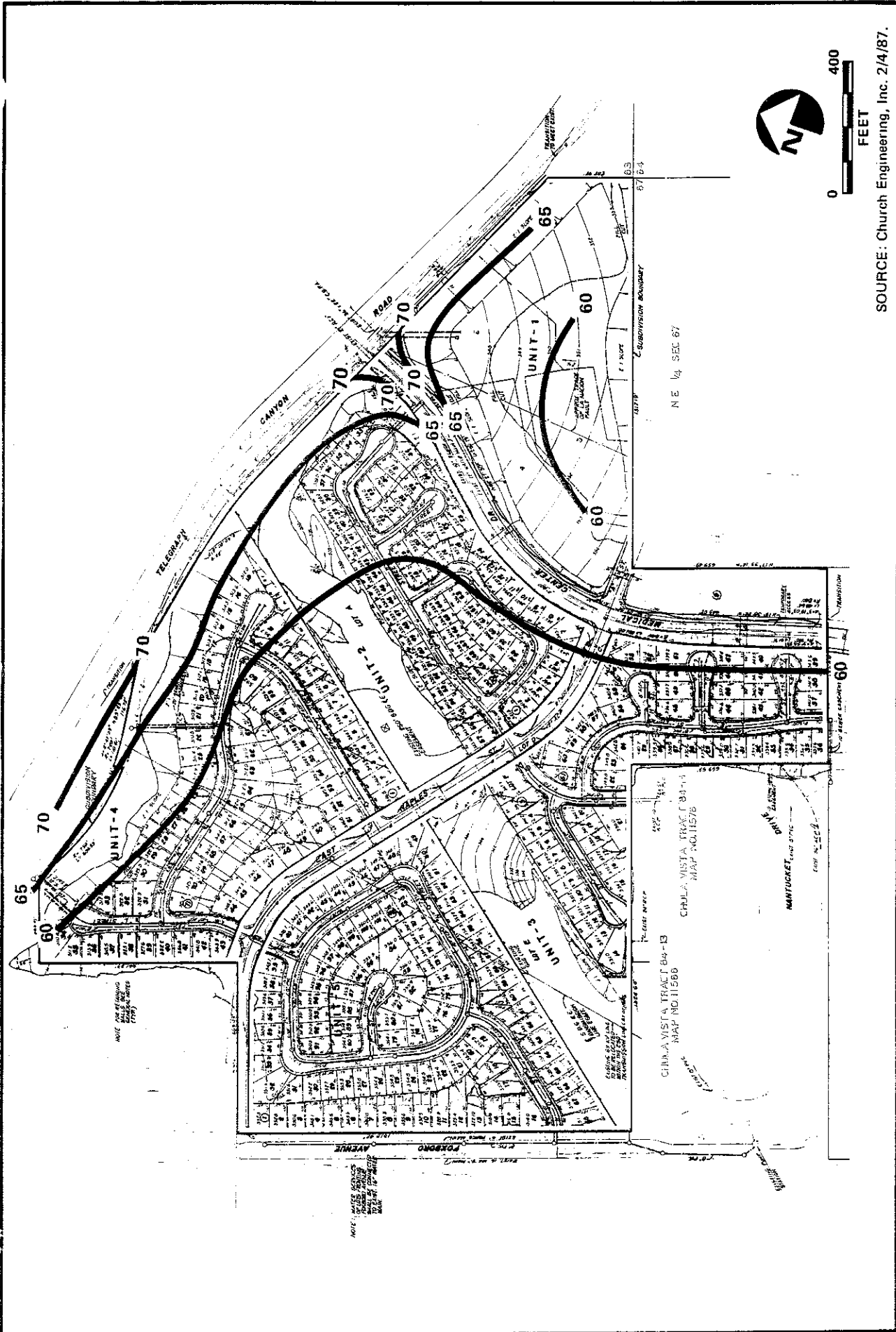
lower, however, as the effects of topographic shielding are not taken into account. Figure 4-12 shows existing onsite noise levels.

A potential secondary source of noise could be from helicopters and ambulances, as an emergency helipad is in operation adjacent to Community Hospital of Chula Vista, approximately 1125 feet southeast of the Rancho del Sur property boundary (Figure 4-2). According to hospital staff, the helipad is utilized for emergency use only and operates fewer than one flight per month. Future operations are not expected to change (Baker 1987). The eastern approach and departure zone is the primary path utilized, while the southern zone is used infrequently. Helicopters that land at Community Hospital range from "Life Flight" helicopters, which are the smallest, to military (Coast Guard and Navy) crafts. Ambulances travel to the hospital via Telegraph Canyon Road and Medical Center Drive.

4.10.2 Impacts

Future noise levels were calculated in a manner similar to the existing noise conditions, using the FHWA Stamina 2.0 noise model. To determine the maximum noise levels that could be experienced onsite, community buildout traffic volumes, provided by the City's Traffic Engineering Department, were used for Telegraph Canyon Road and Medical Center Drive (i.e., 50,000 and 26,000 ADT respectively). Future community buildout traffic volumes along East Naples Street have not been adequately projected (Glass 1987). East Naples Street is expected to be constructed ultimately as a four-lane collector street, and therefore, for the purposes of this noise analysis, future traffic volumes along East Naples Street were based on the design capacity of a four-lane collector street (i.e., 10,000 ADT). Traffic speeds along East Naples Street were assumed to be 35 mph. The analysis of future conditions utilized the proposed finish grade elevations of the project, which are different from the existing elevations.

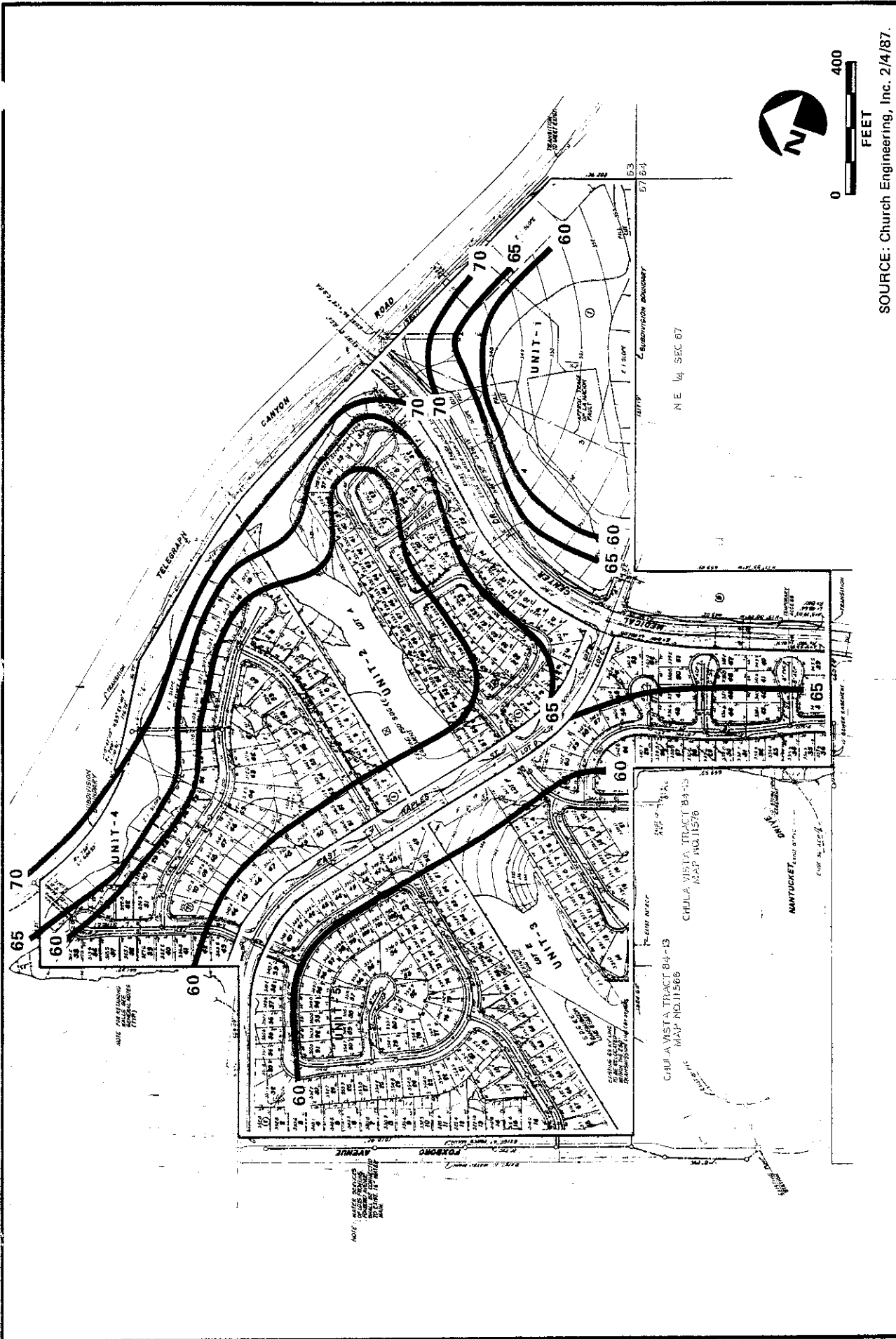
Noise modeling of future site conditions indicated that noise levels at the facades of the buildings adjacent to portions of Medical Center Drive and East Naples Street would exceed 65 dB(A) CNEL. Noise levels would range up to 69 dB(A) CNEL at the intersection of Medical Center Drive and East Naples Street. The contour intervals which would result if the model did not include noise attenuation resulting from building shielding for first floor levels are depicted in Figure 4-13. Noise levels resulting from traffic would therefore exceed the City's guidelines (by up to 4 dB(A)) for residential land uses. If mitigation measures are not implemented to reduce the excessive exterior noise levels, then a significant noise impact would occur.



SOURCE: Church Engineering, Inc. 2/4/87.

FIGURE 4-12

Existing Noise Levels (in CNEL)



SOURCE: Church Engineering, Inc. 2/4/87.

FIGURE 4-13

Future Unmitigated Noise Levels (in CNEL)

A detailed site plan is not available for the multi-family planning area. Based on the preliminary grading plan, projected exterior noise levels at portions of the multi-family area could exceed 65 dB(A) CNEL. The majority of the multi-family area would likely be set back and grade-separated from the adjacent roadways and therefore would not be subject to noise impacts. If development is proposed in those areas of the site in which noise levels exceed 65dB(A) CNEL, a significant impact would result, unless mitigation measures are implemented.

Because the Community Hospital is located southeast of the Rancho del Sur development, a concern exists that helicopter and ambulance operations may produce an adverse noise impact on future residences within the development, particularly during nighttime operations. The criteria used to assess the potential for sleep disturbance was taken from a paper entitled "Noise and Sleep: A Literature Review and a Proposed Criterion for Assessing Effect" by Dr. Jerome L. Lukas (1975). The criteria are based on the combined effect of the loudness of a noise and its duration. The technical term for the combination of these two factors is the sound exposure level. The sound exposure level, or SEL, can be thought of as a 1-second noise exposure with the noise level equal to the SEL. The following table shows the percentage of the population who would be expected to be awakened or to have their sleep shifted from a deeper stage to a lighter stage for a given SEL. The SELs given in the table would represent the level measured inside a bedroom. The relationship between the indoor and outdoor SEL depends on whether the windows are closed, the type of windows, the exterior wall construction, and the presence of any other penetrations in the wall.

<u>Indoor SEL</u>	<u>% of Subjects Experiencing Sleep Disturbance</u>
66 dBA	20
69 dBA	30
72 dBA	40
75 dBA	50
78 dBA	60
82 dBA	70
85 dBA	80

These data should not be considered as absolute. The data do, however, provide a good indication of the potential for sleep disturbance due to individual events.

The noise generated by the helipad operations at the hospital would not affect significantly the ambient noise levels onsite. Momentary single-event noise

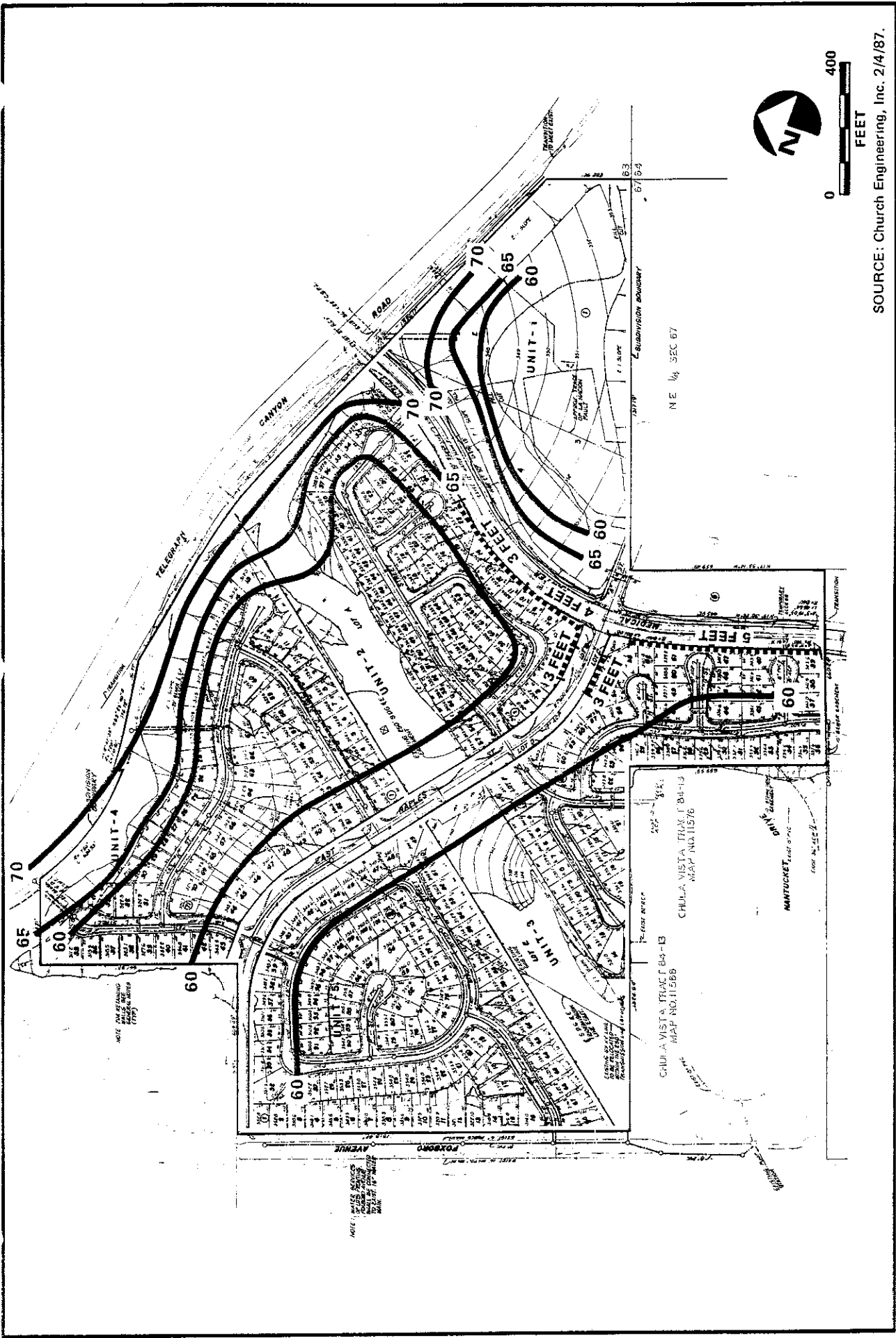
would be the primary potential impact to nearby development. Because the residences proposed for the Rancho del Sur development are at least 1125 feet from the helipad, and the flight paths do not cross over the property, the noise generated by the helipad operations would be insignificant. Additionally, the relative infrequency of helicopter flights (one per month) would further minimize the noise impacts. Helicopter-generated noise impacts are, therefore, considered insignificant.

The noise generated by ambulance operations at the hospital would, also, not significantly affect the ambient noise levels onsite. Ambulance sirens generate approximately 95 dB(A) at 100 feet. Currently, the hospital receives approximately three emergency ambulance trips per day (over a 24-hour period), while operating at 76 percent capacity (Formanski, 1987). The typical distribution of the trips over the 24-hour period was not available, because it varies. Ambulances typically only use their sirens at intersections; therefore, the site currently does not experience significant single-event noise. In the future, the project proposes to construct the East Naples/Medical Center Drive intersection. Ambulances would then be required to use their sirens at the new intersection. If the hospital operates at 100 percent capacity, the hospital may then receive approximately four to five ambulance trips per day. Assuming that standard building shell construction attenuates approximately 20 dB(A), then indoor noise levels would be estimated to be 75 dB(A); according to the previous table this noise level would disturb only 50 percent of the residents directly adjacent to Medical Center Drive, if the ambulance would come at night. Due to the relative infrequency of ambulance trips, the single-event noise impact onsite would be insignificant.

4.10.3 Mitigation Measures

To mitigate the projected significant exterior noise impacts resulting from traffic, the Stamina 2.0 model was used to determine the effectiveness of proposed structures, walls or berms in reducing noise exposure to acceptable levels. Various barrier heights and lengths were evaluated to determine the most effective method to reduce onsite noise levels.

Masonry walls and/or berms located along portions of Medical Center Drive and East Naples Street, in conjunction with the actual construction of the proposed structures, would reduce projected first floor exterior levels to 65 dB(A) CNEL. Figure 4-14 depicts the location and heights of the barriers which would be required to effectively attenuate noise to acceptable levels for the project to conform with the City's exterior noise requirement.



SOURCE: Church Engineering, Inc. 2/4/87.

FIGURE 4-14

Future Mitigated Noise Levels (in CNEL)

Standard building shell construction normally attenuates up to 20 dB(A). Subsequent to construction of the proposed barriers, projected noise levels on the project site would be less than 65 dB(A), and interior noise levels are therefore not expected to exceed 45 dB(A) CNEL. However, to comply with Title 25, acoustical engineering studies will be required to assure that the appropriate design and use of building materials have been incorporated, thereby reducing interior noise levels to 45 dB(A) CNEL.

The project applicant has agreed to incorporate these conditions as part of its Tentative Map. Upon completion of construction of the barriers, any projected future noise impacts would be mitigated to a level of insignificance. Future noise studies for the multi-family development area will need to be completed prior to submittal of site development plans to determine if acoustical barriers would be necessary.

No significant helicopter- or ambulance-generated noise impacts associated with helipad and ambulance operations at Community Hospital are anticipated; no mitigation measures would be required.

4.10.4 Analysis of Significance

Traffic-generated noise levels would exceed 65dB(A) CNEL, the City of Chula Vista's guidelines for residential development; significant impacts were therefore identified. These significant impacts to the single-family residences can be mitigated by the incorporation of noise attenuation barriers (e.g., walls or berms). An acoustical analysis will be required for the multi-family development because noise levels could exceed the City's guidelines; there are no plans available at this time to ascertain the impacts.

4.11 AIR QUALITY

4.11.1 Existing Conditions

Meteorology/Climate: The climate of the project area and all of San Diego County is dominated by a semi-permanent high-pressure cell located over the Pacific Ocean. This cell influences the direction of the prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. It also creates two types of temperature inversions that act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air, associated with the Pacific high-pressure cell, comes into contact with cool marine air. The boundary between the two layers of air represents a temperature inversion which traps pollutants. The radiation inversion develops on winter nights when air near the

ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses can trap vehicular pollutants, such as carbon monoxide and oxides of nitrogen. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce oxidants, commonly known as smog.

The closest and most representative weather monitoring station to the project site is the Chula Vista station, located approximately 2 miles west of the site. The mean temperature in Chula Vista is 60°F; the mean minimum temperature is 53°F. Precipitation in the vicinity of the study area averages 10 inches annually, the majority of which falls between November and April.

Description of Pollutants: Photochemical oxidants, commonly known as smog, are composed mostly of hydrocarbons (HC) and reactive hydrocarbons (RHC) which are produced from photochemical interaction with nitrogen oxides (NO_x). Photochemical oxidants, expressed and measured as ozone (O_3), are considered a major problem in San Diego County. Significant concentrations of oxidants are often recorded at locations far from the primary emission source. For example, ozone formed in the Los Angeles area will sometimes be transported over the ocean into San Diego County.

Carbon monoxide (CO) is a colorless, odorless gas produced largely by the incomplete burning of fuel in internal combustion engines. Concentrations of CO occur close to heavily traveled streets, especially at locations where vehicles idle for prolonged periods (e.g., parking lots, drive-through facilities, and congested intersections). CO levels are related directly to vehicle speeds. These areas of high CO buildup are generally referred to a CO "hotspots."

Since CO buildup typically occurs at locations where traffic is congested, CO concentrations are correlated with levels of service at intersections. Significant concentrations of carbon monoxide sometimes occur (depending on temperature, wind speed, and other variables) where an intersection's level of service (LOS) is D or worse.

Health Effects of Air Pollutants: Air pollutants are recognized to have a variety of health effects on humans. Hazardous health effects are especially pronounced for "sensitive receptors:" (1) children under 5 years of age, (2) individuals with respiratory and cardiovascular problems, and (3) persons over 65. Effects range from eye irritation to respiratory diseases such as emphysema. Carbon monoxide, ozone and nitrogen oxides, when absorbed into the bloodstream, reduce the oxygen-carrying ability of hemoglobin. Suspended particulate matter, sulfur dioxide, nitrogen dioxide and ozone can trigger respiratory diseases such as asthma, bronchitis, and lung

cancer. Death may even result from short-term exposure to high pollutant dosages, but the urban population is usually exposed to low levels over long periods of time.

Regulatory Framework: Ambient Air Quality Standards (AAQS) represent the maximum level of background pollution considered safe, i.e., with an adequate margin of safety to protect the public health and welfare. The five primary pollutants of concern for which standards have been established are sulfur dioxide, carbon monoxide, nitrogen oxides, ozone, and suspended particulate matter. National Ambient Air Quality Standards (NAAQS) were promulgated by the Environmental Protection Agency (EPA) in 1971 with states retaining the option to develop different (more stringent) standards. Due to unique air quality problems in California, the California Air Resources Board (ARB) has developed additional AAQS. The currently applicable state and federal standards are presented in Figure 4-15.

In San Diego County, it is the responsibility of the Air Pollution Control District (APCD) to ensure that state and national air quality standards are achieved. APCD's current air quality plan, the 1982 State Implementation Plan (SIP) Revision, documents the necessary overall strategy and individual tactics by which the San Diego air basin can meet its attainment goal. The SIP Revisions state that, if necessary, emission reductions are enacted and if regional growth does not exceed anticipated levels, then the basin will no longer experience unhealthy air quality due to emissions generated in the basin. The current SIP Revisions employed the SANDAG Series V growth forecasts to project regional growth. The SANDAG Series V growth forecasts are based on Community and General Plan land use designations. Development that seriously departs from the forecasts could generate emissions in excess of what is necessary to attain State and Federal standards. Future SIP Revisions will employ SANDAG's most recent growth projections, the Series VI forecasts.

For a development such as the proposed project to not interfere with the attainment schedule, any increase in air pollutant emissions attributable to the project must be correctly anticipated by the SANDAG growth projections. SANDAG's Series V and Series VI growth projections designated the project site for residential development (Carnevale 1987). The Series VI designation for the project site will be incorporated into the next redraft of the SIP Revisions.

Ambient Air Quality Summary: The closest APCD air quality monitoring station operating in the vicinity of the project site is the Chula Vista monitoring station. In the absence of site-specific air quality data for the project area, data from this station are assumed to be representative of the study area. Table 4-5 summarizes

POLLUTANT	AVERAGING TIME	CALIFORNIA STANDARDS		NATIONAL STANDARDS			
		CONCENTRATION	METHOD	PRIMARY	SECONDARY	METHOD	
OXIDANT	1 HOUR	0.10 ppm ₃ (200 ug/m ³)	ULTRAVIOLET PHOTOMETRY	-	-	-	
OZONE	1 HOUR	-	-	240 ug/m ³ (0.12 ppm)	SAME AS PRIMARY STANDARDS	CHEMILUMINESCENT METHOD	
CARBON MONOXIDE	8 HOUR	9 ppm (10 mg/m ³)	NON-DISPERSIVE INFRARED SPECTROSCOPY	10 mg/m ³ (9 ppm)	SAME AS PRIMARY STANDARDS	NON-DISPERSIVE INFRARED SPECTROSCOPY	
	1 HOUR	20 ppm (23 mg/m ³)		40 mg/m ³ (35 ppm)			
NITROGEN DIOXIDE	ANNUAL AVERAGE	-	SALTZMAN METHOD	100 ug/m ³ (0.05 ppm)	SAME AS PRIMARY STANDARDS	GAS PHASE CHEMILUMINESCENCE	
	1 HOUR	0.25 ppm (470 ug/m ³)		-			
SULFUR DIOXIDE	ANNUAL AVERAGE	-	CONDUCTIMETRIC METHOD	80 ug/m ³ (0.03 ppm)	-	PARAOSANILINE METHOD	
	24 HOUR	0.05 ppm (131 ug/m ³)		365 ug/m ³ (0.14 ppm)			
	3 HOUR	-		-			1300 ug/m ³ (0.5 ppm)
	1 HOUR	0.25 ppm (655 ug/m ³)		-			-
SUSPENDED PARTICULATE MATTER	ANNUAL GEOMETRIC MEAN	PM - 10 30 ug/m ³	HIGH VOLUME SAMPLING	TSP 75 ug/m ³	60 ug/m ³	HIGH VOLUME SAMPLING	
	24 HOUR	PM - 10 50 ug/m ³		TSP 260 ug/m ³	150 ug/m ³		
SULFATES	24 HOUR	25 ug/m ³	AIHL METHOD NO. 61	-	-	-	
LEAD	30 DAY AVERAGE	1.5 ug/m ³	AIHL METHOD NO. 54	-	-	-	
	CALENDAR QUARTER	-	-	1.5 ug/m ³	1.5 ug/m ³	ATOMIC ABSORPTION	
HYDROGEN SULFIDE	1 HOUR	0.03 ppm (42 ug/m ³)	CADMIUM HYDROXIDE STRACTAN METHOD	-	-	-	
VINYL CHLORIDE (CHLOROETHENE)	24 HOUR	0.010 ppm (26 ug/m ³)	GAS CHROMATOGRAPHY	-	-	-	
ETHYLENE	8 HOUR	0.1 ppm	-	-	-	-	
	1 HOUR	0.5 ppm					
VISIBILITY REDUCING PARTICLES	ONE OBSERVATION	IN SUFFICIENT AMOUNT TO REDUCE THE PREVAILING VISIBILITY TO LESS THAN 10 MILES WHEN THE RELATIVE HUMIDITY IS LESS THAN 70%		-	-	-	

ppm - PARTS PER MILLION
ug/m³ - MICROGRAMS PER CUBIC METER
mg/m³ - MILLIGRAMS PER CUBIC METER

California and Federal Ambient Air Quality Standards

**FIGURE
4-15**



Table 4-5

AMBIENT AIR QUALITY SUMMARY
CHULA VISTA MONITORING STATION

Pollutant	Average Time	California Air Quality Standards	Federal Primary Standards	Maximum 1 hr Concentrations (ppm)			Number of Days Exceeding State Standard				
				1982	1983	1984	1982	1983	1984	1985	
Oxidants (Ozone)	1 hr	0.10 ppm	0.12 ppm	0.20	0.21	0.15	0.20	23	20	18	28
Carbon Monoxide	8 hrs/	9 ppm	9 ppm	4.1	4.4	4.6	3.9	0	0	0	0
	1 hr	20 ppm	35 ppm	9.0	13.0	7.0	7.0	0	0	0	0
Nitrogen Dioxide	1 hr	0.25 ppm	---	0.18	0.18	0.20	0.16	0	0	0	0
Sulfur Dioxide	1 hr	0.25 ppm	---	0.13	0.07	0.07	0.08	0	0	0	0
Total Suspended Particulates	24 hrs	---	260 $\mu\text{g}/\text{m}^3$	112*	103*	88*	96*	---	---	---	---

* = Maximum 24-hour sample (in $\mu\text{g}/\text{m}^3$)

** = Percent of samples taken

ppm = Parts per million

$\mu\text{g}/\text{m}^3$ = Micrograms per cubic meter

Source: San Diego County APCD 1983, 1984

California Air Resources Board 1982, 1985

ambient air quality data at the Chula Vista monitoring station from 1982 through 1985 and as can be seen from these data, standards for ozone are sometimes exceeded in the region.

4.11.2 Impacts

Short-term Emissions: Short-term impacts to localized air quality would result from construction of the proposed development; these impacts are generally not significant on a regional basis. Impacts result from construction vehicular emissions and from fugitive dust from clearing and grading activities.

Clearing, grading, utility excavation, and vehicle travel on unpaved roadways creates large quantities of fugitive dust from soil disturbance. The California ARB and APCD estimate that each acre under construction generates about 80 pounds of dust per day, if no dust control measures are implemented. Dust control measures, such as frequent watering, paving of access roadways, and periodic street washing in construction areas, as required by APCD rules, can reduce the dust generation rate by approximately 50 percent. Construction-related dust is comprised mainly of large-diameter particles readily filtered by human breathing passages. The California ARB and the U.S. EPA have both recognized that total suspended particulates, especially large-diameter, inert soil particles, are not a good indicator of any potential health effects of airborne dust exposure. Consequently, new standards for inhalable particulates have been promulgated at the state level and proposed as a new national standard. Large-diameter construction dust, which settles out on nearby parked cars, foliage, and other surfaces, is more of a soiling nuisance rather than a potential health impact. Typically, any observable air quality effects from construction combustion sources are occasional diesel exhaust odor or soot from equipment operating close to occupied areas. As with the fugitive dust, such impacts are more a temporary nuisance than an adverse health impact.

Long-term vehicular emissions: Potential air quality degradation resulting from the proposed project would emanate primarily from vehicular travel. Vehicular traffic contributes a significant amount of carbon monoxide, nitrogen oxides and hydrocarbons to the local airshed. The level of pollutants emitted from vehicles depends on several factors, including trip generation rates, trip lengths, vehicle mix and smog abatement equipment. With the exception of carbon monoxide, the emissions from vehicles are independent of the way traffic is distributed on the roadways.

Land use at the project site has been designated residential in SANDAG's Series V and VI growth forecasts, with densities of four dwelling units/acre. Potential

air quality impacts would be the same for these two scenarios. The proposed project includes 522 dwelling units on approximately 108 gross acres. SANDAG's Series V and VI growth forecasts assumed 432 dwelling units for the site. The project would exceed SANDAG's growth projections by 90 dwelling units.

The project proposes a more intensive land use than SANDAG's Series V and VI growth forecasts had anticipated. The project would have an adverse cumulative effect on the region's air quality. However, because the project would not contribute substantially to air quality impacts and would not expose sensitive receptors to substantial pollutant concentrations, no significant air quality impact would result.

4.11.3 Mitigation

Although the proposed project would not represent a significant air quality impact, it would generate pollutant emissions which would have a cumulative effect on the region's air quality. The following measures are therefore recommended to reduce pollutant emissions:

- Construction areas should be sprinkled once a day or as necessary to minimize dust generation. Trucks hauling fill material should be properly covered.
- During site preparation and grading, access roads should be cleaned daily or as necessary by a street-sweeper.
- Disturbed areas should be hydroseeded, landscaped, or developed as soon as possible to reduce dust.

4.11.4 Analysis of Significance

The proposed project exceeds SANDAG's forecasts for density by 90 dwelling units. The project will thus have an adverse cumulative effect on the region's air quality. No significant impacts to sensitive receptors or substantial pollutant concentrations were identified. Mitigation measures are proposed to reduce construction-related impacts.

4.12 FISCAL ANALYSIS/COMMUNITY/SOCIAL CONCERNS

The information contained in this section has been summarized from a fiscal impact analysis report prepared by Public Affairs Consultants, Inc. (1987). The report is attached to this document as Appendix E.

4.12.1 Existing Conditions

The Rancho del Sur project is proposed to be built out in the first year of development. For purposes of this analysis, it has been assumed that the first year of full buildout will be in fiscal year 1989. The analysis takes into consideration all city

operating costs and revenues that might be attributable to the development of Rancho del Sur. In addition, the analysis covers the known capital revenues associated with the development.

City operating costs were projected based on a computer model that took into consideration the fiscal year 1986-1987 budget of the City of Chula Vista and input received from the various city operating departments. The model includes an allocation of indirect and overhead costs to 15 direct service activities of the city. The 15 activities and associated 1986-1987 direct service budgeted expenditures are as follows:

<u>Activity/Department</u>	<u>1986-87 Full Cost</u>
General Government and Non-Departmental	\$ 1,666,216
Planning	1,151,829
Community Development	667,920
Police/Animal Regulation	10,809,812
Fire Protection	4,936,792
Building & Housing	1,280,232
Public Works/Engineering	
Public Works	
Street Maintenance	1,331,200
Street Tree Maintenance	448,033
Traffic Operations	281,033
Traffic Signal & Street Light Maintenance	928,497
Sewer Systems Maintenance	570,222
Pump Station Maintenance	125,198
Engineering	2,801,322
Parks & Recreation	3,018,043
Library	2,046,242
TOTAL	<u>\$32,062,589</u>

Revenue projections were based on the existing revenue sources of the city. Computer modelling of the relationship of individual revenue accounts to population, land use and other factors was developed to simulate the changes in revenue that could be expected over the development of this project. A separate model of assessed valuation/property tax changes was developed to project the effect on City property tax revenues based on the developer's projection of buildout rate and produce pricing.

According to CIC Research, Inc. (1986), the total estimated population in 1986 is 6,668 for the area within a one-mile radius of the project site. The 1991 projected population size for this area is 7,903. The 1986 estimate of number of

households within a one-mile radius of the project area is 1,982, with the 1991 projection being 2,428 households.

4.12.2 Impacts

The effect of the Rancho del Sur project on City operating expenditure activities is as follows:

<u>No Impact</u>	<u>One-time Impact</u>	<u>On-going Impact</u>
Legislative & Administrative* Community Development	Planning Building Inspection Engineering Fire Prevention	Park & Recreation Public Works Operations Police Library Operations Fire Suppression

*Approximately \$3,275,610 of Legislative & Administrative costs have been allocated as overhead to other activities.

It has been determined that the proposed project will create minimal fiscal impacts to the "Legislative and Administrative" and "Community Development" activities. The Planning Department will experience a one-time impact as the plans for the development of the Rancho del Sur area are formalized and processed. It is not now possible to quantify the cost of this impact to the current planning activity. However, Chula Vista's planning fees have been established at a level intended to recover the full cost of the Planning Department's processing, resulting in no net cost to the City.

The building inspection activity will experience a one-time impact as the construction on the site takes place; neither the magnitude nor the cost of this activity can be estimated without specific construction plans for the site. The full costs for these services are recovered through the levying of fees upon the subject construction. As a result, no net costs are assumed to be incurred by the city for the services of the building inspection activity during the buildout of Rancho del Sur. There would also be a one-time impact upon engineering services during the development of the property. Because there are no specific plans for development, it is not possible to project the cost of this impact at this time. The City's engineering fees have been established on a full cost recovery basis, however, thereby assuring that the costs incurred by the city for engineering services will be fully offset. Fire prevention would experience one-time costs for fire inspections of the building plans for all structures proposed for the

property. The costs for these inspection services cannot be estimated at this time due to the lack of specific building plans for the property.

On-going impacts will occur to the Parks and Recreation, Public Works, Police, Library and Fire Departments. Projected on-going costs at buildout of Rancho del Sur for the impacted activities are as follows:

Public Works	
Street Operation	\$ 22,041
Street Tree Maintenance	4,397
Traffic Signal/Street Light Maintenance	9,112
Traffic Operations	4,653
Sewer System Maintenance	6,681
Pump Station Maintenance	1,467
Parks & Recreation	
Recreation	18,499
Park Maintenance	0
Open Space	529
Police	148,644
Fire	0
Library Operations	<u>28,649</u>
Total General Fund	\$244,672
Sewer Service Fund	<u>30,721</u>
Grand Total	\$275,393

The bases for these projected City operating costs are discussed more fully in the fiscal report in Appendix E (PAC 1987).

The City receives one-time revenues associated with the processing of land development projects. Fees for building, plumbing, electrical, housing and sewer connection permits along with charges for environmental reviews, plan checks, zoning and engineering fees, etc., have been established by the City to recover costs incurred for these activities. The one-time revenues from these sources are expected to offset the City's expenditures resulting in no net cost to the City. Services and amount of on-going revenues projected at buildout of Rancho del Sur are as follows:

GENERAL FUND

Property Tax	\$ 77,500
Sales & Use Tax	58,102
Franchise Tax	11,408
Property Transfer	1,456
Utility Users Tax	12,787
Business Licenses	0
Bicycle Licenses	52
Animal Licenses	588
Other Taxes	6,001
Motor Vehicle In-lieu	49,607
Cigarette Tax	2,545
Fines, Forfeitures & Penalties	1,818
Swimming Pools	1,774
Recreation Program	655
Other Income	288
Investment Earnings	<u>0</u>
General Fund Total	\$224,582

SPECIAL FUNDS

Traffic Safety	\$ 5,460
State Library Act	2,138
Sewer Service	34,150
Special Gas Tax	21,080
Open Space Maintenance	<u>529</u>
Total Special Funds	<u>\$ 63,358</u>
Grand Total All Funds	\$287,940

Projected combined operating funds costs and revenues at Rancho del Sur buildout are as follows:

REVENUE

General Fund	\$224,582
Special Funds	<u>63,358</u>
Total Revenue	\$287,940

COSTS	
General Fund	\$244,672
Special Funds	<u>30,721</u>
Total Costs	\$275,393
NET IMPACT	\$ 12,546

As can be seen from the above figures, operating revenues are projected to exceed operating costs. The Rancho del Sur project is therefore expected to have an overall positive fiscal impact on the City of Chula Vista. The development is expected to have a neutral effect on the City's capital expenditures and revenues, in that the development will provide contributions to the financing of public facilities that serve the project, or will provide for the developer of the property or the property itself to be obligated to provide the financing for such facilities through the use of public debt mechanisms tied to the property.

4.12.3 Mitigation Measures

The Rancho del Sur project would not result in any significant adverse fiscal impacts to the City of Chula Vista; therefore no mitigation is necessary.

4.12.4 Analysis of Significance

Implementation of the Rancho del Sur project is expected to result in a positive fiscal impact to the City of Chula Vista. Since no adverse fiscal impacts are expected, no mitigation measures are recommended.

SECTION 5
REQUIRED CEQA SECTIONS

5.1 GROWTH INDUCEMENT

The Chula Vista General Plan (1983) estimates that by 1990 nearly half of the city's population will be living in new communities located on the mesas and foothills east of Interstate 805. The city desires to maintain control over the pace and quality of development in order to assure that growth is orderly and meets city standards.

The proposed Rancho del Sur project consists of a residential community with associated recreational facilities. To the west of the development lies the Foxhill Run residential neighborhood, Parkview and Greg Rogers elementary schools, and additional single family residences. To the north, across Telegraph Canyon Road, are single-family residences. Land immediately to the east and south is largely undeveloped, with the exception of Community and Vista Hill hospitals and associated medical buildings to the southeast of the project.

The development of Rancho del Sur calls for a maximum of 522 dwelling units resulting in approximately 1389 residents. The new community would require facilities, improvements, and extensions to provide urban levels of service including water, sewer, educational facilities, circulation, law enforcement, and fire protection.

The extension of the water system to Rancho del Sur may have potential for growth inducement in areas immediately east and south of the project site. Proposed improvements feature pipeline installation; connections to these existing facilities could allow future growth for developments to the east and south.

Initial development of the Rancho del Sur sewage system may present a significant growth-inducing impact, as, at present, there is no available capacity within the existing 15-inch Telegraph Canyon trunk sewer to accommodate additional flow without the construction of either additional sewer lines or a separate treatment facility. Such improvements would facilitate future growth for additional developments in surrounding areas. This project would not represent a growth induction since other previous projects contributing to the line have already caused the system to exceed capacity and upgrades are currently needed.

The extension of East Naples Street to Medical Center Drive would provide and improve access to many on- and off-site areas. This would not represent a growth inducing impact because the areas can be reached by the existing circulation system.

The City of Chula Vista has been developing and refining a growth management plan for the past several years. The plan's intent throughout its many revisions has been to direct growth in and around the city in an orderly fashion, to avoid leapfrog development, to protect and preserve the city's amenities, and to guide growth in a general west to east direction, and adjacent to existing development. Development will be allowed only if onsite and offsite public facilities required to serve the development are in place or will be provided in conjunction with the development. The proposed growth management plan is intended to supplement and complement the city's General Plan, and to provide a more specific approach to the direction of growth.

The city's policy is intended to promote incremental growth from west to east, but to remain flexible to allow consideration of topographic, economic, social, and other factors relative to new development when necessary. Provision of public facilities concurrent with growth is considered an important guide, as is the idea of urban in-filling as opposed to "leapfrog" development. Preservation of open space and greenbelts by methods such as dedication of land, purchasing of development rights, clustering, and zoning practices is recommended as part of growth management in Chula Vista.

The proposed project incorporates some of these measures. Dedicated open space, parks, and recreation facilities would be provided for residents' use. The pedestrian and hiking trails connecting Greg Rogers Community Park to the development would further enhance their use. The public facilities planned are readily available within the project vicinity.

Implementation of the proposed project fulfills the city's goal of west to east development, since it is an extension of public services that currently exist adjacent to the site. There is substantial development farther east of the project (i.e., EastLake), and although Rancho del Sur may encourage development on lands immediately south and east, it would not represent a significant growth inducement within the City of Chula Vista since much of the project site is surrounded by land zoned for urban growth, i.e., and development of Rancho del Sur would not conflict with the City of Chula Vista goals for directing growth. The growth management plan was designed with the intent of directing area growth in an orderly fashion from a west to east direction. Development of Rancho del Sur as an urban community in an area projected primarily for future urban growth does not present a significant adverse growth-inducing impact.

5.2 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The Rancho del Sur project would provide a number of land uses including residential, open space, and recreational uses in an area within the rapidly growing City of Chula Vista. The project would result in increased housing for the city, and in a net gain of public use funds. This development would, however, have certain other long-term effects on the environment.

The following discussion is a summary of the project-related impacts that may be significant on a cumulative basis, i.e., when combined with other existing, approved, and reasonably foreseeable future projects, and that may affect the overall maintenance and enhancement of the long-term productivity of the area. A more detailed impacts analysis for each issue is included in Section 4.0 of this EIR.

Transportation and Circulation: Development of the Rancho del Sur project, in conjunction with the expected high rate of growth in the area, is predicted to adversely impact traffic volumes at the intersection of the northbound I-805 off- and on-ramps at Telegraph Canyon Road. A change in lane assignments, and possibly the addition of another lane, will be necessary to mitigate this impact and maintain an acceptable level of service. Geometric improvements, and possibly signalization, may also be necessary at the unsignalized intersection of Oleander Avenue and East Naples Street. As a result of this and additional proposed development in the project area, traffic volumes along Telegraph Canyon Road on the east side of I-805 are predicted to increase to 40-45,000 vehicles per day by the year 2005. The entrance to the site from Medical Center Drive will likely require improvement at that time to at least a four-lane roadway. Access to the project site from different locations along Oleander Avenue will probably be proposed. As volumes along Oleander increase, widening may be required, along with the signalization of intersections such as the one in East Naples Street. An extension of Orange Avenue is currently planned as part of the long-term transportation plan for Chula Vista, and this would provide access to the development from both the north and south ends and would likely distribute volumes enough so that no one roadway would become overloaded.

Water Availability: The proposed project would increase incrementally regional water consumption, although implementation of the Rancho del Sur development would represent an insignificant impact on current water availability. Implementation of the conservation measures contained within the mitigation measures would

reduce water requirements. Regional water supply impacts, however, are potential with any proposed development unless a solution to the loss of California's imported Colorado River supply is found.

Sewer Services: Development of Rancho del Sur would reduce incrementally the capacity at the Point Loma Metro Sewer System; because of the large area served by the system and the comparatively small increase generated by Rancho del Sur, the project would not represent a significant impact to regional sewer services. When combined with similar projects within the vicinity, a significant impact would occur on the City of Chula Vista's sewer infrastructure if not mitigated through the construction of additional facilities. These facilities would require additional maintenance.

Water Quality/Drainage: Development of the project site could aggravate existing downstream drainage. As a condition of project development, engineering and design features would be required to insure that the volume and rate of runoff does not exceed existing, predevelopment levels. With these features, the project would not contribute to cumulative, offsite drainage impacts. The project would, however, require the maintenance of additional drainage facilities onsite, that were not previously necessary.

Air Quality: The project would generate additional air pollutants in the San Diego area. This could have a significant adverse effect on the maintenance and enhancement of the long-term productivity of San Diego County.

Summary: Considering the existing and proposed land use designations on the site, planned urban development is considered an appropriate and productive long-term use of the project site. In addition, the proposed development contains both local and regional beneficial impacts, including increased economic opportunities. However, the proposed uses of the site would have indirect, adverse effects on the long-term enhancement of the area as well.

5.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Visual resources on the project site would be altered substantially by the proposed development. The provisions contained in the Precise Plan would not, however, conflict with an urban zone classification. Grading of the project site for development would permanently alter the existing site topography.

Energy and water resources would be committed in site-preparation activities (grading and construction) and as part of future site usage. Energy sources, i.e., natural gas, electricity and fossil fuels consumed during construction, are irreplaceable. A permanent loss of natural resources used for building materials and support of urban land uses would also occur.

Ambient noise levels in the project vicinity would increase because of higher traffic volumes and other noise sources associated with urban activities. Incorporation of the mitigation measures would reduce onsite noise to acceptable levels.

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SECTION 6 ALTERNATIVES

The California Environmental Quality Act (CEQA) requires that an EIR include a discussion of reasonable project alternatives, including a No Project alternative. This discussion is to focus on alternatives "capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance" (CEQA Section 15126 (d) (3)).

This EIR has analyzed potential impacts of the proposed Rancho del Sur development. No significant, unmitigable environmental impacts have been found to be associated with the proposed project. The following alternative discussion presents a No Project alternative, as required by CEQA, an alternative to mitigate potential impacts related to the provision of parklands, and a reduced density alternative.

6.1 NO PROJECT ALTERNATIVE

Under the No Project alternative, the site would remain in its present condition and no development would occur. As a result, East Naples Street would not be extended east to Medical Center Drive and the zoning of the project site would remain R-1-P-4, as per the City of Chula Vista zoning ordinance.

Land Use

No significant land use impacts were identified for the proposed action; development of this intensity could, however, create impacts related to lot size compatibility (10,000 square foot lots adjacent to 3750 square foot lots). The No Project alternative would retain the site as undeveloped and eliminate any potential land use impacts.

Transportation

The eastern extension of East Naples Street would not be constructed under the No Project alternative. The No Project alternative would eliminate generation of the project-related ADT (approximately 4400 ADT). Improvements to the circulation network proposed with the project or funds to be contributed for regional improvements would not be implemented under the No Project alternative.

Services/Utilities

No extension of public services or utilities to the site would be necessary with implementation of a No Project alternative, although improvements to water and sewer facilities would still be necessary to upgrade service to existing and planned developments nearby. Extension of natural gas and electricity lines could be delayed until

development occurs to the south and east of the project. The construction of additional fire stations and the provision of additional fire and police staff would occur even with the No Project alternative implemented.

The No Project alternative would reduce the number of public parks in the area, but because the parkland allocated within the project is deficient as proposed, this would not represent a significant impact. The No Project alternative would also eliminate the students generated by the Rancho del Sur project, thus restoring additional capacity to the Chula Vista Elementary and Sweetwater Union High School districts. No adverse impact would be associated with the implementation of this alternative.

Biological Resources

Implementation of the No Project alternative would eliminate the incremental reduction of the two sensitive habitats onsite, native grassland and coastal sage scrub. In addition, though insignificant due to low populations, the sensitive plant species and the California black-tailed gnatcatchers would remain undisturbed. The cumulative, yet insignificant impact associated with development of the proposed project would be eliminated with the No Project alternative; no adverse biological impacts would result.

Cultural Resources

No significant cultural resources were found onsite; implementation of the No Project alternative would therefore not affect any cultural resources.

Geology/Soils/Groundwater

The site would remain in its present state with no disturbance to subsurface soils or geologic formations and features. No adverse impacts would occur.

Water Quality/Drainage

The adverse though insignificant impacts to water quality due to increased erosion from the proposed Rancho Del Sur project would be eliminated with the No Project alternative. The site would continue to drain in its present drainage pattern with no change in the quantity of runoff. Erosion would continue to occur at its present rate. No impacts would result.

Mineral Resources

No resources were encountered onsite; the No Project alternative therefore, would not affect any impacts.

Landform Alteration/Visual Quality

The project site would remain vacant and undeveloped, retaining its existing topography. The No Project alternative would eliminate the adverse impacts to sensitive viewers, and thus no impacts would occur.

Noise

Noise levels on the site would be reduced because traffic generation rates would be lower and East Naples would not be constructed. Even with implementation of the No Project alternative, ambient noise onsite would likely increase over existing levels, because of increased development in the vicinity. However, because no sensitive receptors would be located on the project site, no impact would occur.

Air Quality

The No Project alternative would reduce the predicted ADT onsite by approximately 4400 and the cumulative impacts to the regional air quality would be reduced. Because SANDAG has included residential development onsite, the No Project alternative would create a positive impact to the regional air quality. Air pollutants expected to be generated onsite and therefore included in the forecasts would be removed, and the air quality would be improved if no development was implemented.

Fiscal Analysis/Community/Social

The No Project Alternative would represent an estimated net loss of \$275,901 in future annual revenues for the City of Chula Vista and substantial loss in infrastructure contributions and improvements. This would result in an adverse fiscal impact to the city.

Summary

The No Project alternative would result in negative fiscal impacts to the city and beneficial impacts to the regional air quality and biological resources. Traffic generated by the proposed development would not occur. The No Project alternative would result in no significant adverse impacts to the other resources and the existing conditions, as outlined in the proposed action, would be retained. The project site is privately owned and is planned and zoned for residential development, and the No Project alternative would only temporarily retain the property undeveloped. Future development plans would likely be proposed.

6.2 ADDITIONAL PARKLAND ALTERNATIVE

Based on the analysis contained within this EIR (Section 4.3.2), the project did not provide sufficient public parkland acreage to comply with standards of the City of Chula Vista's Parks and Recreation Department. The project is currently proposing a 5.71-acre public neighborhood park located largely within the SDG&E easement. This dedication in and of itself is not sufficient to meet City of Chula Vista standards because of the park's location within the SDG&E easement.

Subsequently, the developer has revised the site plan to provide additional parklands. The Parks and Recreation Department has agreed with the revised proposal. See Comments and Responses, Section 10, Comment 3.

This alternative would provide for additional onsite parkland dedication outside the SDG&E easement, payment of in-lieu fees and/or provision of improvements to nearby Greg Rogers Park. The developer has agreed to meet the additional parkland requirements as determined by the Parks and Recreation Department.

If additional parklands are required, then this alternative could possibly alter the proposed grading plan and reduce the proposed number of dwelling units. Because this project is currently in Tentative Map form, any alteration to grading or number of dwelling units would require environmental review before the approval process.

No adverse impacts to other environmental issues are likely to occur as a result of this alternative.

6.3 REDUCED DENSITY ALTERNATIVE

This alternative addresses the potential impacts related to development at the densities previously designated on the site (i.e., 4 DU/ac) by the City of Chula Vista and County of San Diego. Under this zoning, the project site encompassing 108.3 acres would permit over 433 single-family dwelling units.

Land Use

No significant impacts were identified for the proposed action, nor would there be any significant impacts to land use resulting from implementation of this project.

Transportation

A single-family dwelling unit generates 10 ADT. A project including 433 dwelling units would therefore generate 4330 ADT. The proposed action is projected to generate 4400 ADT; 70 more than this alternative. Impacts and improvements to the circulation network would be essentially the same as reported for the proposed action. This project would contribute to an existing significant impact and would be required to contribute to regional and site improvements.

Service/Utilities

This alternative would generate approximately 130 elementary students (0.3 students/DU) and 130 high school students (0.3 students/DU). The proposed action is estimated to generate 314 students, overall, compared to 260 for this alternative. As required by state law, this alternative would be required to pay development fees up to \$1.50 per square foot of development.

The alternative would also be required to provide parklands, contribute to regional improvements or pay in-lieu fees in accordance with Municipal Code.

Impacts to fire and police services would be similar in nature to those anticipated to occur. Increased demand for fire and police protection services would be required if the site was developed. The alternative would generate a demand for 1.4 additional police officers, compared to 1.7 for the proposed action. Development fees would be assessed to contribute to new facilities for fire protection and new staff.

Water consumption and sewage generation would be approximately 17% less than the proposed action; however, regional improvements would still be required. Under this alternative development, fees would be required. Energy consumption for natural gas and electricity would be reduced by approximately 17% if this project was implemented when compared to implementing the proposed action. The alternative would consume 1046 gallons of fuel per day, contrasted to 1063 gallons consumed for the proposed action.

Biology

The biological impacts are identical to those reported for the proposed action. Impacts of either project would be adverse, but not considered significant.

Cultural Resources

The absence of significant cultural resources on the project site results in no significant impacts resulting from any development on the subject property.

Geology/Soils

Some geotechnical concerns were identified for the project site, including expansive soils, erosion susceptibility, La Nacion Fault and groundwater. The geotechnical reconnaissance reviewed these issues and determined that all geotechnical issues can be resolved through use of appropriate engineering standards for grading, slope stability, foundations, faulting and seismicity and site drainage. The alternative would be required to implement the same measures as identified for the proposed action.

Water Quality/Drainage

No significant hydrological or drainage issues were identified for the site for implementation of the proposed project; development of the alternative would also not result in any unmitigable impacts.

Mineral Resources

No mineral resources were located on the project; therefore, development or retention of the site would not affect any mineral resources.

Landform Alteration

The project site does not have substantial topographic relief. Development of a reduced density project would result in similar, not significant, impacts as identified for the proposed action. Grading and design criteria would be required.

Noise

Noise levels would exceed the City of Chula Vista guidelines and would require appropriate mitigation; i.e., barriers.

Air Quality

This alternative meets the growth forecasts identified for this site. Short-term construction impacts would occur; however, no long-term cumulative impacts would result.

Fiscal Analysis/Community/Social Concerns

No fiscal impact study was prepared for this alternative and cannot be determined without a thorough analysis.

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SECTION 8

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County Water Authority

Charles Rhodes

SECTION 9

CONSULTANT IDENTIFICATION

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I hereby affirm that to the best of our knowledge and belief, the statements and information herein contained are in all respects true and correct and that all known information concerning the potentially significant environmental effects of the project has been included and fully evaluated in this EIR.


Betty Dehoney
Project Manager

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SECTION 10
COMMENTS AND RESPONSES

The Rancho del Sur EIR was issued for public review in April 1987, with the public review period ending on May 13, 1987. Two comments were received from Caltrans District 11 and from the City of Chula Vista Parks and Recreation Department.

A Planning Commission Meeting was held on May 13, 1987. Public testimony was heard and input from the Planning Commission has resulted in revisions to transportation, services/utilities, noise, and alternatives sections. CEQA requires that an EIR include a discussion of reasonable project alternatives, including a No Project alternative. This discussion is to focus on alternatives "capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance" (CEQA Section 15126 (d)(3)). As requested by Planning Department staff, the draft EIR analyzed the No Project and Additional Parkland alternatives. As requested by the Planning Commission, another alternative was evaluated in the final EIR that included development at the previously designated land use density, 4 dwelling units per acre.

Further developments since the issuance of the draft EIR include the completion of all annexation procedures whereas the site is currently designated as R-1-P-4, permitting single family residential development at 4 dwelling units per acre.

In summary, the analysis in the EIR has determined that there are no significant, unmitigable impacts resulting from project implementation. The letters of comment from Caltrans and the City of Chula Vista Parks and Recreation Department, as well as comments from the Planning Commission, follow with responses.

Memorandum

To : STATE CLEARINGHOUSE
ATTENTION GLENN TODD

Date : May 11, 1987
File No.: 11-SU-805
6.1

District 11
From : DEPARTMENT OF TRANSPORTATION

Subject: Rancho del Sur - SCH 087040118

California District 11 comments on the DEIR are as follows:

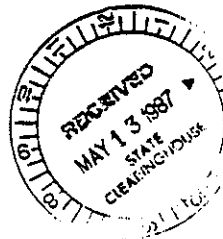
1. Page 1-9 - We recommend two through lanes and two left-turn lanes for eastbound Telegraph Canyon Road at Interstate Route 805. Straight through/left-turn option lanes are not recommended.

2. Signalization of the southbound off-ramp to westbound Telegraph Canyon Road should be considered.

Our contact person for traffic operations information is Sheldon Craig, District Traffic Operations Engineer, (619) 337-6881.

[Signature]
JAMES T. CHESHIRE, Chief
Environmental Planning Branch

MO:ec



1 To alleviate long-term impacts at the I-805/Telegraph Canyon Road interchange, two through lanes and two left turn lanes for the eastbound approach to I-805 North will be required to maintain an acceptable level of service at this intersection. Refer to Section 4.2.3 in the Rancho del Sur Environmental Impact Report for a discussion of the mitigation measures and impact analyses.

2. Traffic counts were not taken at the southbound I-805 off-ramp to westbound Telegraph Canyon Road as part of the traffic study for this project; therefore, no signal warrant analysis for this intersection was made. Further analysis would be necessary to determine if signalization was required. The project would be contributing funds to the FBA for regional transportation improvements, based upon the project's contribution to traffic conditions in the project vicinity.

PAV-4

RECEIVED MAY 19 1987



CITY OF
CHULA VISTA

PARKS AND RECREATION DEPARTMENT

May 18, 1987

Mr. R. John Ochsner, Vice President
Great American Development Co.
600 B Street Ste. 700
San Diego, CA 92101

Dear Mr. Ochsner:

Subject: Rancho del Sur Park

I met with the landscape architect for Rancho del Sur Park on May 12, 1987 and approved the latest design plan for the park. This park plan, which contains three lighted tennis courts, a tot lot, turf play field, D. G. jogging track, picnic tables, benches and a cabana, is acceptable to the Department and will be submitted to the City's Parks and Recreation Commission for review and approval at its May 21st meeting.

Further discussions will be needed to discuss the issue of park credits. Should you have any questions regarding this matter, please contact me at your convenience.

Sincerely,

Manuel A. Mollinedo, Director
Department of Parks and Recreation

MAN/cs

cc: Nick DeLorenzo

3. Comment noted; no response is necessary. The applicant has provided additional parkland that is not designated on the site plans that are included in the EIR.

EXTRACT OF COMMENTS BY PLANNING COMMISSIONERS AT MEETING OF 5/8/87

I. PUBLIC HEARING: Draft EIR-87-3 Rancho del Sur (All Commissioners present)

Tugenberg: Mr. Chairman, I have a question to ask. Is it CEQA that requires Alternatives?

Reid: Yes, that's correct.

Tugenberg: Do they require a specific number of alternatives?

Reid: No

Tugenberg: Who establishes what alternatives are to be used?

Reid: It is a process that is set up between the staff, the project proponent, the environmental consultant; we try to establish what reasonable alternatives can be examined in the EIR, and I would also like to point out that the depth of the analysis that goes into review of the alternatives is not as great as in the primary project.

Tugenberg: I recall that during the closing of Fifth Avenue we had three or four, possibly five alternatives, and I just wondered why there were no alternatives made on the basis of the City's land designated use and density instead of just no project whatsoever; in other words, do an alternative based on 4 du/ac instead of 7.2.

Reid: That can be done. I think the results are fairly obvious. The population related impacts would be...

Tugenberg: I don't think a project and then no project gives you a realistic alternative. Next - noise level - was any consideration given to the number of ambulances that traverse Medical Center Drive and the future Maples? I don't know how you can really mitigate those kind of noises on the second floors -- that a 3- or a 4-foot wall is going to mitigate the sound of ambulances going up and down on those streets particularly on the second stories.

Dehoney: The area that would be in conflict with the ambulances is primarily a single-family residential development along the Medical Center and the Telegraph Canyon -- the multi-family is located at the southeast portion - corner - of Medical Center Drive. As far as the noise analysis, it did not specifically address ambulances driving along the Medical Center Drive. The acoustical analysis evaluated traffic generation, speeds associated with that and the traffic volumes.

Tugenberg: I would suggest that on something like this that a traffic analysis should be made on the EIR for ambulances that are going to frequent that street. One more thing and that is this, on page 4.1.2, it says that, "The residential uses proposed for Rancho del Sur project site are compatible with the existing and planned residential uses in the vicinity of the project." What planned uses? The planned uses for the land to the east and the south, or what?

Dehoney: It is our understanding that the proposed residential developments are in the undeveloped portions surrounding the proposed project site. As for the existing, it would be the single-family residential developments in the vicinity that are currently built out.

4. CEQA requires that an EIR include a discussion of reasonable alternatives, including a No Project alternative. This discussion is to focus on alternatives "capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance" (CEQA Section 15126(d)(3)). The gross density of the proposed development is 4.8 dwelling units per acre. In response to this comment, another alternative has been included in the EIR which addresses a reduction in the density to the level previously designated on this site, 4 dwelling units per acre.

5. The noise analysis has been expanded to include an analysis of ambulance-related noise. The analysis has indicated that the impacts related to single-event noise levels are not considered significant due to the infrequency of the noise and limited duration. The applicant has agreed to provide additional acoustical attenuation for buildings fronting Medical Center Drive.

Chayman
Shipe:

Any other questions or communication with staff?

Then, I will open the public hearing. Anyone wish to address the Commission on this item? I have one proponent and one opponent. Request to speak in favor - Mr. John Oschner. Mr. Oschner. Good evening, Mr. Oschner.

Oschner:

Good evening. Mr. Chairman and Honorable Commissioners, my name is John Oschner. I am with Great American Development, 600 "B" Street, San Diego. We are the developers and the project proponents here to night. We do agree with the EIR this evening. I wanted to let you know that I'm here tonight with our project planner, Tom Davis, of Tierra Planning; also, our Traffic Engineer, BBI. If there is any technical information that we can add, we would be happy to do that. Basically, I just have a few comments I would like to give you and will keep it real short. If you have any questions, we would be happy to address them.

With respect to the traffic generation, I think there are some concerns about the level of service at the intersection of Interstate 805 and Telegraph Canyon Road. Our Engineering conditions of approval that staff has given us are going to make us agree to join in a facility benefits district area. We are now working with the other major land owners to the east of us including United Enterprises to alleviate not only the intersection but also the traffic capacities along the whole length of Telegraph Canyon Road.

An issue seems to be made of the helipad that is at Chula Vista Community Hospital. In my discussions, personally, with Bob Hansen, who is the Executive Director there, that helipad is used for LIFE FLIGHT services only. It has one to two flights per month into that helipad, so it is not something that is frequently used; and the flight paths are not over our Phase I right now at this time.

Acoustic considerations were brought to our attention this evening. I share the concerns there. The question was raised, "How do you mitigate second-floor noise levels to the 65 CNEI?" Normally, what we do is double-glazing in that area or reinforce the insulation on those outside walls; so there are several ways we can handle it; but we would like to handle it at the building permit process level instead of at this time because we don't have specific designs for our buildings.

Finally, a question was raised about what the planned uses are. We are in an unusual situation here. Our Phase I is within the Sphere of Influence of the City of Chula Vista. It was easy for us to go ahead with the annexations and we've done that and now we are before you tonight with the EIR in Phase I. Given a choice, we would have had the remaining 600 acres of the project before you tonight also. But, because of having to take that process through a different route through LAFCO, we can't bring any formal plans to you. But we do want to let you know that our plans are in harmony with Chula Vista's General Plan now which designates the whole area as a planned residential - a minimum of four and a maximum of twelve dwelling units per acre - across the whole property.

6. Comments noted; no response is necessary.

If there are any questions, we would be happy to entertain them now or at a later time.

Chairman:

Any questions for Mr. Oschner? Thank you, Mr. Oschner. I have a request to speak as an opponent from Mr. Peter Watry. Mr. Watry. Good evening, Mr. Watry.

Watry:

Good evening. My name is Peter Watry, 81 Second Avenue, Chula Vista. I am not speaking in opposition to the project tonight. I just have two concerns about the EIR.

One concern is there are several references in the EIR that the project is compatible with those in the vicinity and it specifically mention Fox Hill Run several times, which is right next door to it. Fox Hill Run is an unusual development. It has substandard streets and substandard sidewalks and substandard setbacks and substandard lot sizes. So, whatever reason they had for approving Fox Hill Run - it is certainly a unique project. It gives the zoning for Fox Hill Run but not in a way that the average person can understand it, including myself. So, I think, I would like to have the EIR, somewhere in it, explain to the reader when Fox Hill Run is. When the EIR says this project is compatible with the Fox Hill Run, they will know what that means. Because, as it is now, it isn't clear at all.

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My second concern is a more general concern and I think everybody in San Diego has this same concern. The pace of private development tends to outspeed the pace of governmental units of schools and roads and so forth and that is happening all over San Diego. And there are many examples in this EIR of just that happening. When it comes to mentioning schools, it mentions the children in school; what school they will attend initially has not yet been determined. Which is kind of a shocking statement since it is right next door to Greg Rogers school. And, of course, the answer is that Greg Rogers School is impacted.

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They also mention - there is quite a bit of space in the EIR devoted to 805 off-ramps and on-ramps. It makes clear that that is going to be an unacceptable level of service even without this project. It is already -- it's going to be a mess.

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They mention water and there the crunch is yet to come. At one point in the EIR, it must be a standard paragraph, it says that 90 percent of the water in San Diego is imported. But, in this case, this development is in Otay Water District which is 100 percent imported. I think that the reader ought to know that the Otay Water Company has no reservoirs or anything else and entirely depends upon imported water and when Arizona takes their share of our Colorado water, Otay is at the end of the pipeline.

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Now, these are all current problems the EIR talks about without this project. This project will exacerbate or aggravate these problems and some of the suggested mitigating suggestions are mostly hopeful wishing. In addition, this project would create some new infrastructure problems by not building its share of on-site neighborhood parklands, perhaps having traffic congestion

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7. It is assumed that this response is referring to the land use section of the EIR. The land use analysis evaluated impacts related to existing and proposed land uses on the project site and in the vicinity. This analysis was not intended to compare the relative merits of one development to another. The conclusion of the land use analysis is that the proposed land use, residential development, does not conflict with the surrounding land uses.

8. Conversations with the school district representatives regarding potential impacts of the development on the schools, indicated that the project is being incorporated into the long-range plans and that the school district will be able to service the development. The development will be required to pay development fees in accordance with State Law.

9. The traffic analysis has indicated that if roadway improvements are not implemented, a significant adverse impact will result with or without the project.

10. The Otay Water District has indicated that it has sufficient capacity to service this development. To service future growth, the District is evaluating several alternatives.

11. Subsequent to the preparation of the EIR, the developer has reached an agreement with the City's Parks and Recreation Department concerning parkland requirements; please see comment 3. The traffic analysis for the Naples and Oleander intersection indicates that in the future this intersection may warrant a traffic signal. The developer will be required to contribute to the signalization if it is determined to be necessary.

at Naples and Oleander. Now these may all be good reasons to postpone this development until the infrastructure catches up. That's not the subject for tonight. What is germane is the fact that this proposal, I believe, will create new concerns and/or exacerbate already existing concerns unnecessarily. By unnecessarily, I mean that the proposed development exceeds the proper zoning for the land; that the EIR describes or compares the proposed zoning with the County zoning, the City zoning and SANDAG's forecast, whatever that is. In all three cases, the proposed density exceeds all three of those standards. In the case of the County comparison, City comparison, I couldn't make out how much that excess is. In the case of the SANDAG comparison, it is fairly easy. This project has 522 proposed dwelling units instead of 432 which SANDAG would have proposed, which is 21 percent excess of the SANDAG forecast. I didn't know how to make the comparison with the City and the County. So, what I'm going to say in a few minutes, I'm going to use the SANDAG because that's the one I could figure out.

I would like to see what the environmental impact would be if this project did not exceed current zoning. What would the environmental impact be if this project had its share of neighborhood parkland. If this project conformed with the current zoning and all the other City standards, how much less impact would there be if it conformed to the current zoning. How much less impact would there be on traffic, on schools, on water and so forth. How much less impact would there be? I can't tell by looking at the EIR.

And, as long as we are looking at an environmental impact report of this project which is 21 percent over the existing standard, I would like to see one that would show what the impact would be at 21 percent under the standard. What would that impact be? It would be very useful when we come to the approval stage. It would be very useful to see these other alternatives and see how much difference that makes in the environmental impact of this project at different levels. Now to me, that is what the EIR ought to be. It ought to show you all the alternatives, what the different impacts are; can you weigh them; is it significant; and the EIR just doesn't have all that information.

To summarize, I make two requests:

1. that a description be included in the EIR that will inform the general reader of the exceptional characteristics of the neighboring Fox Hill Run development so that the reader will understand the phrase, "compatible with land uses and projects in the vicinity" means; and
2. that two more alternatives be examined. One with a density and characteristics in conformance with present zoning laws and a second one with a 21 percent less density than the present zoning laws.

Thank you.

Chairman:

Any questions of Mr. Matry. Thank you, Mr. Matry, you are just as eloquent a speaker as you were 12 or 13 years ago when I took your economics course at Southwestern College and you only gave me a B. Is there anyone else who would like to address the Commission

12. An alternative has been included that addresses the impacts related to development under the previous land use designation, 4 dwelling units per acre. Please refer to Table 1-1 for a summary of the impacts for all alternatives.

13. See response 4.

14. See responses 7 and 12.

on this item? Mr. Oschner.

Oschner.

Mr. Shipe, I would like to come back just to clarify a few of the items that were just brought to our attention. I think some good points were raised and perhaps there is some confusion. I would like to hit three of the quickly.

One, there is not just one but there are three elementary schools directly adjacent to our project. They are Greg Rogers, Park View and Kellogg. I personally have been in discussions with both John Lynn of Chula Vista City School District and Andy Campbell of Sweetwater Union High School District. The High School District currently has a 38-acre site as an island within our project. They wish to sell it because they have no need for a school there. In our future development, we are providing for one, or perhaps two elementary schools at the direction of the City School District.

There has been some confusion with regard to City parks. We wanted to provide a park within the project of the neighborhood variety. But if you talk to Mr. Mollinedo, your Parks Department, he will tell you, "We really don't like neighborhood parks. They're hard for us to maintain. We would rather have the fees." It will be before you within a couple of weeks, but, in this case, we are planning to provide a neighborhood with lighted tennis court facilities and we are doing that as both park dedication and making the improvements ourselves. We hope that some of our costs will be reimbursed to us through the City's fee program.

Our traffic generation has been run with the Series 6 SANDAG modeling so, we feel, it does represent up-to-date information. We understand that since the time the EIR was completed, SANDAG has now come out with a Series 7 projection but it was not available at that time and we feel it is in line with what SANDAG is saying is the future growth for the area. I believe those are all the comments that I have. Thank you.

Chairman:

Thank you, Mr. Oschner. Would anyone else like to address the Commission on this item. If not, I'll close the public hearing. What is the will of the Commission? Any discussion?

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