Salt Creek I
General Plan Amendment Zone Change
Sectional Planning Area (SPA) Plan Amendment
Tentative Tract Map 89-9
Conceptual Site Plan

Final Supplemental
Environmental Impact Report

EIR-89-6
SCH No. 89062106

Prepared for:
City of Chula Vista
Environmental Review Coordinator
276 Fourth Avenue
Chula Vista, California 92010

Prepared by:
ERC Environmental and Energy Services Co.
5510 Morehouse Drive
San Diego, California 92121

Project No. 39054000

August 1989

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I. INTRODUCTION AND SUMMARY

A. INTRODUCTION

General Purpose and Environmental Procedures

This Supplemental Environmental Impact Report (SEIR), prepared for the City of Chula Vista, addresses potential environmental consequences of the Salt Creek I project (formerly known as Unit 4 of the EastLake Business Center, and briefly as Peppercreek) in eastern Chula Vista. The 124.2 acre site is located in the EastLake Business Center neighborhood of the EastLake Planned Community. The proposed project consists of a General Plan Amendment (General Development Plan), Planned Community District Regulations (PC) Amendment, Sectional Planning Area (SPA) Plan Amendment, Tentative Tract Map approval, and Precise Plan approval for the southern portion attached residential parcels.

Required under the California Environmental Quality Act (CEQA) of 1970, this SEIR is an informational document intended to inform public decisionmakers, other responsible or interested agencies, and the general public of the environmental effects of the proposed project. The document evaluates potential environmental impacts, methods to reduce or eliminate adverse impacts, and alternatives to the proposal.

Pursuant to CEQA (Public Resources Code Section 21000, *et seq.*), the state CEQA Guidelines (Administrative Code 1500, *et seq.*) and the City of Chula Vista environmental regulations, this document will be used in consideration of the project's approval by the Lead Agency, the City of Chula Vista (contact: Mr. Douglas Reid, 619-691-5104).

A Supplemental EIR (SEIR) is required under CEQA (Section 21166) when one or more of the following events occurs:

(a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report.

(b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report.

(c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

The project, subject to the above criteria, is most appropriately defined as a Supplemental EIR since major changes in the project have occurred and circumstances have changed since Final EIR 84-1 certification in 1984.

Previous Environmental Documentation and Effects Found to Be Insignificant

A Master EIR (MEIR) was prepared for the EastLake project (3073 acres encompassing the project site) and certified in February 1982. The certified Final MEIR 81-03 addressed environmental impacts of the EastLake Planned Community's annexation to the City, General Plan Amendment/General Development Plan (GDP) and prezoning Planned Community (PC) District

Regulations. Subsequent to that approval, in 1984 a Sectional Planning Area (SPA) Plan was created for EastLake I (1,268 acres of the EastLake PC). EIR 84-1, prepared for the EastLake I SPA Plan, was certified in September 1984. EIR 84-1 was identified as a Supplemental EIR, intended to provide subsequent environmental analysis at a more detailed (SPA Plan) level than the GPA. The SPA Plan and EIR 84-1 constitute the regulating documents for the project site.

Final MEIR 81-03 (State Clearinghouse No. 80121007, certified in February 1982) and Final EIR 84-1 (State Clearinghouse No. 84022206) are hereby incorporated by reference into this document, as authorized under CEQA Section 15150. In most sections of this SEIR, a completely new analysis of the proposed project is conducted. References to FEIR 81-03 and FEIR 84-1 are cited throughout the document, and, where appropriate, information from the previous documents is utilized and incorporated, and so noted. Copies of FEIR 81-03 and FEIR 84-1 are on file at the City of Chula Vista Planning Department.

In light of the time that has elapsed since FEIR 84-1 certification in 1984 and the proposed changes involved, this document analyzes the full scope of environmental effects of the proposed project, with the exception of two topics which have been found to be adequately addressed in FEIR 81-03: Agricultural Resources and Mineral Resources. Agricultural resource loss was determined to be an unmitigable adverse impact for which overriding considerations were created, and no mineral resource impacts were identified in FEIR 81-03. These conclusions of FEIR 81-03 are hereby noted and incorporated by reference.

B. SUMMARY OF IMPACTS

This summary presents, by environmental topic, the impacts found herein to be potentially significant, an overview of mitigation proposed, and level of impact significance after mitigation (i.e., whether the impact is mitigated to a level of insignificance or if it is determined to be unmitigable/unavoidable). Each topic is analyzed in detail in Section III of this SEIR. It should be noted that during preparation of the Draft SEIR, a Design Alternative was created to avoid or lessen many impacts identified. Section I.C provides a summary comparison of the project to these alternatives; each alternative is described and evaluated in Section V of the report.

Land Use

Potentially significant land use impacts involve project consistency with existing land use plans; consistency with the City General Plan Update; and land use compatibility with surrounding existing and proposed uses. Important to note is that the impact of conversion of the site from open space to urban uses was previously analyzed (EIR 81-03; EIR 84-1) and that development approval occurred in 1982 (EastLake I GDP) and 1984 (EastLake I SPA Plan). The project as proposed is found to be partially inconsistent with the existing SPA Plan and General Plan Update, specifically the northern project area which now proposes single-family residential use in comparison to that area's designated employment park and open space uses (see Table 3-1 and Figures 2-4 and 2-5). This inconsistency with open space designations can be partially mitigated by an increase in open space in the north or implementation of the Design Alternative (Alternative D, Section V). The project's compatibility with adjacent land uses can be insured by implementation of mitigation measures identified herein, specifically

adherence to regulating documents and sensitive design and edge treatment. No further land use impacts are identified.

Aesthetics/Visual Resources

Aesthetic and visual impacts of the site's development have been previously analyzed in EIR 81-03 and EIR 84-1. The proposed amendment's visual impacts can be partially mitigated through sensitive grading, edge treatment, landscaping and compliance with design standards. Grading proposed for the residential uses may be more sensitive to existing topography than previously designated commercial pads. Onsite and adjacent roadways now required and incorporated into the project (not in the existing SPA Plan) will require extensive grading which will result in visual impacts. It should be noted that these roads are included in the General Plan Update.

A significant project aesthetic impact has been identified in the northern project area due to its current open space designation. Development proposed in that area would create aesthetic/visual impacts previously unanticipated. Additional open space in the northern area and/or implementation of Design Alternative D could partially reduce this impact but not to a level of insignificance. Other potential impacts regarding City designated scenic resources and development lighting are mitigated by project design and measures herein to a level of insignificance.

Geology/Soils

Geologic constraints onsite include minor landslides, soil expansion and settlement, slope stability and seismicity. These conditions and potential impacts can be mitigated to a level of insignificance by mitigation measures proposed herein, including subsequent site specific earthwork analysis, sensitive grading and standard grading/site preparation procedures.

Hydrology/Water Quality

Project development will increase drainage exiting the site at the north and west boundaries. Since the site is at the drainage headwaters, the project's increased runoff will constitute a contribution to a cumulative increase in flows. Although accommodation of these increased flows has not yet been approved, this impact is mitigable by installation of flood control devices and provision of drainage plans (required as mitigation). Project and cumulative water quality impacts from urban land uses proposed can be mitigated also to a level of insignificance by adherence to State regulations and sedimentation/pollution runoff control devices.

Biological Resources

The project, as proposed, will directly impact various biological resources onsite identified as significant (see Figure 3-7 and Table 3-2). Mitigation proposes offsite coastal sage scrub habitat preservation, onsite revegetation, landscaping and retention of permanent onsite open space in a portion of the northern site area. The selection of Design Alternative D (which proposes additional open space in the northwest area as illustration on Figures 5-1 through 5-5) would mitigate project specific impacts to a level of insignificance. The project will, however, in combination with other development in the area, unavoidably contribute to a cumulatively significant incremental loss of valuable biological habitat in the region.

Cultural Resources

Two loci of one prehistoric archaeological site will be impacted by project development. Paleontological resources have a high potential to exist onsite within the Otay and Sweetwater formations. These impacts can be mitigated to an insignificant level by mitigation provided herein.

Traffic and Circulation

The project amendment will generate less traffic than employment park uses previously approved, thus the project will result in a less significant traffic increase than the existing SPA Plan, constituting a comparatively positive project impact. From a cumulative standpoint, the proposed project has been incorporated into traffic/land use projections of the General Plan (GP) Update. Further, additional roadways identified as critical to serve projected City development (in the GP Update traffic projections) are now included in project site design. Specifically, San Miguel Road and Proctor Valley Road have been added to the proposed site design pursuant to City direction (note that these roads were not incorporated in the existing SPA Plan). These circulation improvements and mitigation measures in this SEIR will mitigate all project and cumulative traffic impacts to an insignificant level.

Noise

Noise impacts identified include unacceptable onsite noise attributed to future cumulative traffic volumes on East "H" Street and SR-125. Exterior noise barriers and interior noise attenuation measures (for residential areas exceeding acceptable noise levels) are proposed as mitigation for onsite noise impacts. These measures will ensure noise impacts are mitigated to an insignificant level.

Air Quality

In comparison to the previously approved existing SPA Plan, the proposed amendment will generate less air pollutants due to lower traffic volumes. However, project development was not incorporated into adopted SANDAG air quality attainment growth projections for the San Diego region, thus a finding of project inconsistency must be made for which there is currently no mitigation. The project will, therefore, contribute to a cumulative impact on the region's air quality.

Fiscal Analysis

The project will result in a net negative fiscal impact on the City of Chula Vista. This fiscal impact is acknowledged but is not considered to create an adverse environmental impact, requiring neither mitigation nor findings pursuant to CEQA.

Parks, Recreation and Open Space

The project proposes 14.9 acres of open space onsite and provides private recreational amenities. Public parkland requirements will be satisfied by payment of in-lieu fees established by the City (mitigation included herein). The single significant impact identified here involves the project open space in comparison to existing SPA Plan onsite designated open space (56.8 acres). The majority of this open space difference is attributed to the proposed single-family lots in the northern site area; a portion of the acreage difference is due to roadways now included (per

General Plan Update) in site design which were not previously included in the EastLake I SPA Plan, specifically San Miguel Road and Proctor Valley Road. The open space impact may be mitigated by provision of additional permanent open space (to the satisfaction of the City) and/or selection of Design Alternative D, which could mitigate impacts to a level of insignificance.

Public Services and Utilities

Identified impacts to all public services and utilities can be mitigated by adherence to the City's Threshold policies and implementation of mitigation measures provided herein, with the exception of two unmitigable cumulative impacts. The project's resulting unavoidable increase in demand for water and non-renewable energy resources represents a contribution to cumulative impacts on the region's limited water supply and energy resources, in combination with other ongoing development in the region.

C. SUMMARY COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

Five alternatives to the proposed project were analyzed. Alternative D is considered the preferred alternative; it is determined to avoid or reduce adverse project impacts while generally satisfying objectives of the proposed project.

Environmental Topic	A-Existing SPA Plan	B-Lower Density	C-Higher Density	D-Design Alternative	E-Alternative Site
A. Land Use	Similar impacts except inconsistency impact eliminated	Similar impacts	Similar impacts; may be inconsistent with GP Update.	Less impacts (inconsistency in north area less significant)	Indeterminable
B. Aesthetics/ Visual Resources	Potentially greater grading impacts; Lesser impacts in north portion of site.	Similar impacts	Similar or greater impacts	Less impacts, especially in northwest portion of site.	Indeterminable
C. Geology/ Soils	Similar impacts	Similar impacts	Similar impacts	Similar impacts	Indeterminable
D. Hydrology/ Water Quality	Similar impacts	Similar impacts	Similar or greater impacts	Similar impacts	Indeterminable
E. Biological Resources	Less impacts, due to retainment of open space in north area	Similar or potentially slightly lesser impacts	Similar or greater impacts	Less impacts, specifically regarding sage scrub in northwest.	Indeterminable
F. Cultural Resources	Similar impacts	Similar impacts	Similar impacts	Similar impacts	Indeterminable

Environmental Topic	A-Existing SPA Plan	B-Lower Density	C-Higher Density	D-Design Alternative	E-Alternative Site
G. Traffic and Circulation	Greater impacts (more trips generated; no provision of needed roads)	Potentially slightly lesser impacts (less trips)	Potentially slightly greater impacts (more trips)	Similar impacts	Similar impacts likely
H. Noise	Slightly greater impacts	Similar impacts	Similar impacts	Similar impacts	Similar impacts likely; onsite impacts indeterminable
I. Air Quality	Slightly greater impacts	Similar impacts	Similar impacts	Similar impacts	Similar impacts
J. Fiscal[1] Analysis	Potentially slightly lesser impacts	Similar impacts	Similar impacts	Similar impacts	Similar impacts
K. Parks, Recreation and Open Space	Less open space impacts (open space in north site area)	Similar impacts	Similar or slightly greater impacts	Less impacts due to additional open space	Similar impacts likely
L. Public Services and Utilities	Less school impacts; others similar	Similar impacts	Similar or slightly greater impacts	Similar impacts	Similar impacts likely

[1]Note: Not required topic under CEQA.

CHULA VISTA CITY SCHOOL DISTRICT

84 EAST "J" STREET • CHULA VISTA, CALIFORNIA 92010 • 619 425-9600

EACH CHILD IS AN INDIVIDUAL OF GREAT WORTH

RECEIVED

June 28, 1989

JUL 3 1989

Mr. Doug Reid
Environmental Review Coordinator
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010

RE: Subdivision Name - Salt Creek One
C.V. Tract - 89-9
Deposit Acct. No. - DP663
Located - NW ptn. of EastLake I Planned Community

Dear Mr. Reid:

1 This correspondence is in response to your notice of submittal of a tentative subdivision map for the Salt Creek One project.

This property is located within the EastLake Planned Community and as such is subject to the terms and conditions of the District's agreement with EastLake Development Company for the formation of Community Facilities District No. 1.

This agreement provides for participation in Community Facilities District No. 1 and payment of developer fees. Currently these fees are $630.37, and are adjusted annually (in July) for inflation.

If you have any questions, please contact this office.

Sincerely,

Kate Shurson

Kate Shurson
Director of Planning

KS:dp

1 Thank you for providing this updated information. It has been incorporated into the text (page 3-70).

DEPARTMENTAL CORRESPONDENCE

DATE: June 28, 1989

TO: Doug Reid, Planning Department

FROM: Keith Hawkins, Police Department

SUBJECT: Review of E.I.R. for Salt Creek I

I've reviewed Section 3.L.2, page 3-105, (Police) of the E.I.R. and find the material basically factual except that the Threshold for Police Services has been modified as follows:

1) Respond to 84% of Priority I calls within 7 minutes and maintain an average response time to all Priority I emergency calls of 4.5 minutes or less.

2

2) Respond to 62.10% of Priority II calls within 7 minutes and maintain an average response time to all Priority II calls of 7 minutes or less.

2

Thank you for providing this updated information. It has been incorporated into the text (page 3-71).

KH/amh

Response to Comments 2

COMMENTS AND RESPONSES

The Salt Creek I Draft Supplemental Environmental Impact Report was issued for public review June 19, 1989, with final public comments received during the City of Chula Vista Planning Commission meeting of July 26, 1989.

Two comments were received and are responded to on the following pages. Changes to the text in response to these comments are indicated by striking through the old text (~~strike through~~) and by underlining (underlining) the new text. Changes to the text that are minor (e.g., the addition or deletion of a comma, correction of a typographical error) have also been made but are not so indicated.

The comments and responses thereto and the revised Draft Supplemental Environmental Impact Report comprise the Final Supplemental Environmental Impact Report for the Salt Creek I General Plan Amendment, Zone Change, Sectional Planning Area (SPA) Plan Amendment, Tentative Tract Map 89-9, and Conceptual Site Plan.

II. PROJECT DESCRIPTION

A. LOCATION

The project site is located in the northern portion of the EastLake I Sectional Planning Area (SPA) in the rolling hills of eastern Chula Vista (Figures 2-1 and 2-2 for regional location and vicinity). The property lies approximately 8 miles east of downtown Chula Vista and 8 miles north of the US/Mexican border.

The site is roughly triangular in shape, with the EastLake Business Center bordering to the south, the proposed Salt Creek Ranch site to the east, and undeveloped hills to the north. The EastLake Greens SPA is farther to the south, and the remainder of Chula Vista and EastLake residential neighborhoods lie farther to the west and south.

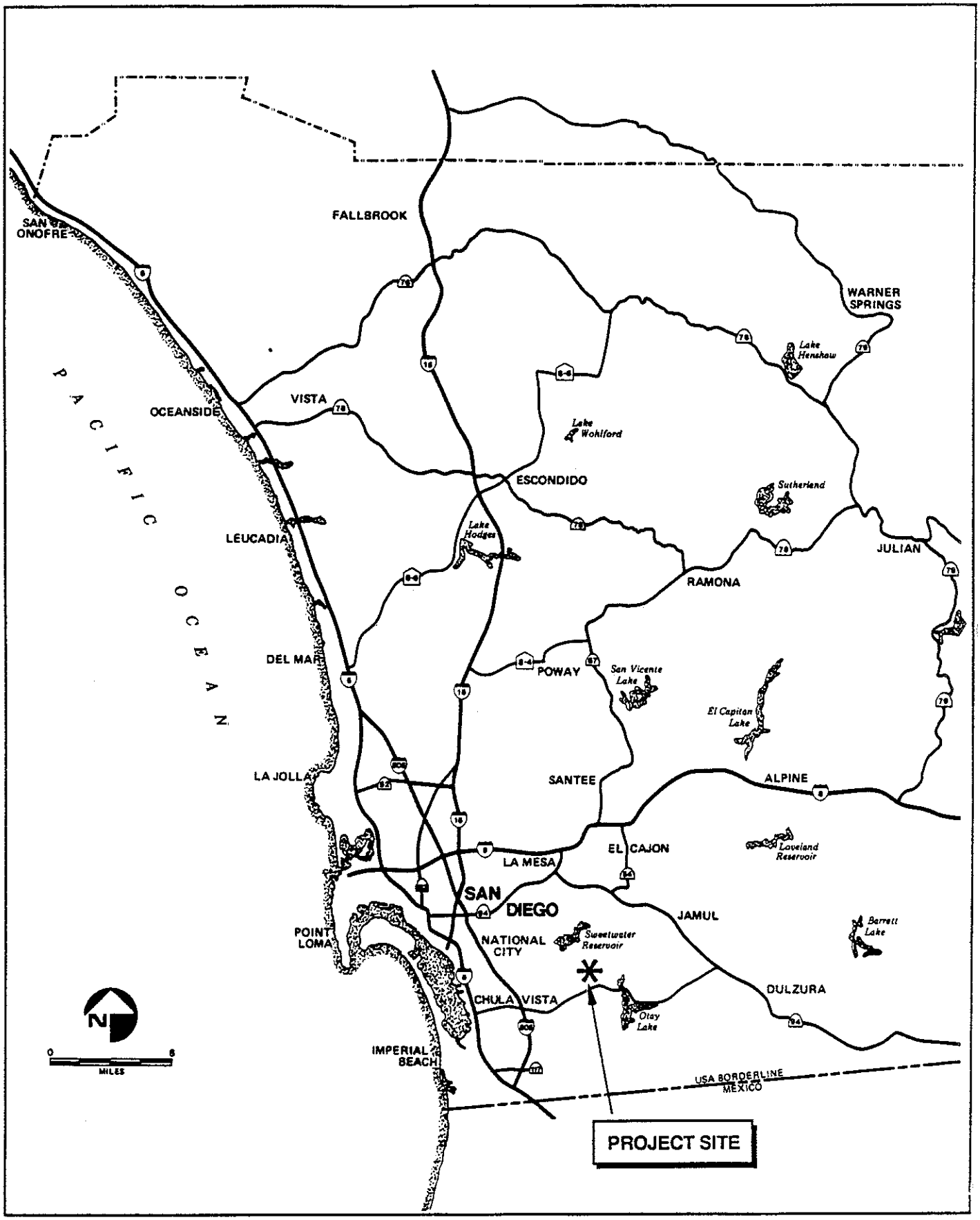
The property is within City of Chula Vista incorporated boundaries. County of San Diego jurisdiction borders to the site's north and east, although these areas are within Chula Vista's Sphere of Influence. The site's southwest boundary is the proposed alignment of the future State Route (SR) 125 Freeway extension; the site is bisected by the proposed extension of East "H" Street which runs in a southwest to east/northeast direction through the site towards the Salt Creek Ranch property.

B. PROJECT BACKGROUND

The property was originally included in the EastLake I SPA Plan, approved in September 1984. The EastLake I SPA Plan designates the site for employment park use, as does the EastLake I General Development Plan (GDP). It should be noted that the EastLake I GDP serves as the General Plan designation of the property. The Planned Community (PC) Zone and accompanying PC text/regulations were approved in 1982, establishing direction for the SPA Plan. The property was at that time envisioned as a component of the EastLake Business Center, portions of which are now built or under construction.

In 1988, new development strategies generated planning and entitlement activities on the Salt Creek Ranch property to the site's east. These activities have initiated efforts to incorporate the project site (as residential use) into the Salt Creek Ranch Planned Community concept. (The Salt Creek Ranch Draft EIR is under preparation as of May 1989.) For various reasons, including geographic orientation and circulation configurations (SR-125 and East "H" Street), the subject site has been redesigned for residential use. The property has been purchased from EastLake Development Company by the Baldwin Company, the proposed developer of Salt Creek Ranch.

City of Chula Vista staff and both developers have met over the past months to discuss these activities and to obtain City direction regarding Salt Creek I entitlement-to-use and other procedures. During this time, the City prepared a General Plan Update. Various alternatives of the General Plan have been considered and, after review, "Scenario IV" of the General Plan Update has been recommended and is now under public review. Scenario IV of the General Plan update reflects a residential and open space configuration on the Salt Creek I site. The General Plan Update is expected to be reviewed and heard by the City Council in Summer 1989.



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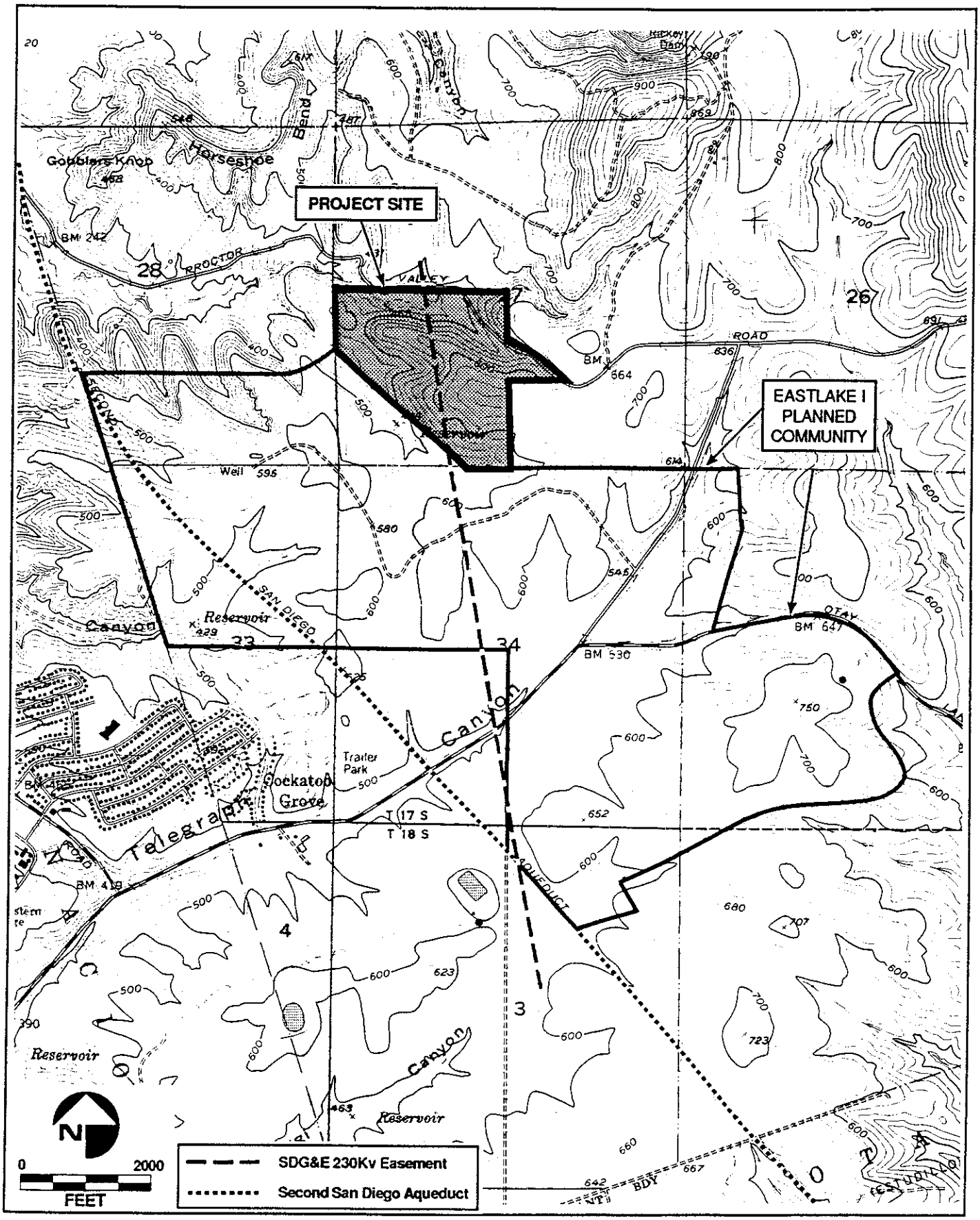
Regional Location of Project Site

FIGURE 2-1



ERC Environmental and Energy Services Co.

Vicinity Map

FIGURE 2-2

The Salt Creek I project is technically subject to current General Plan consistency review as documented in this SEIR, until such time as the General Plan Update is formally adopted. Consequently, throughout this document analyses of "current" General Plan as well as or "proposed" or General Plan Update consistencies are made. This is important to note in light of the project's unique entitlement and procedural timing. Technically, and in conformance with CEQA requirements, this project is analyzed herein for consistency with existing regulatory documents.

C. PROJECT OBJECTIVES

The project proposes to satisfy a demand for a variety of housing types in the growing community of Chula Vista. The amendments analyzed in this SEIR are a product of analysis of market demands and perceived needs of the community. The project has been discussed extensively with City staff, thus the incorporation of the project concept into the recommended "Scenario IV" General Plan Update document (currently under public review).

This SEIR involves the environmental evaluation of the proposed uses of the site (employment park vs. residential), including consideration of land use compatibility, aesthetics, traffic, noise, fiscal and other factors. These factors and resulting impacts will influence the City's discretionary decision regarding the project's conformance with City and community objectives, in consideration of project approval.

D. PROJECT COMPONENTS AND DISCRETIONARY ACTIONS

The Salt Creek I project proposes to redesignate the 124.2 acre site from employment park and open space to residential and open space uses, and requests subdivision of the site for single-family and multi-family uses. Further, Precise Plan-level approval is requested for the multi-family portion of the proposed project. These discretionary actions are analyzed in this SEIR and are described below.

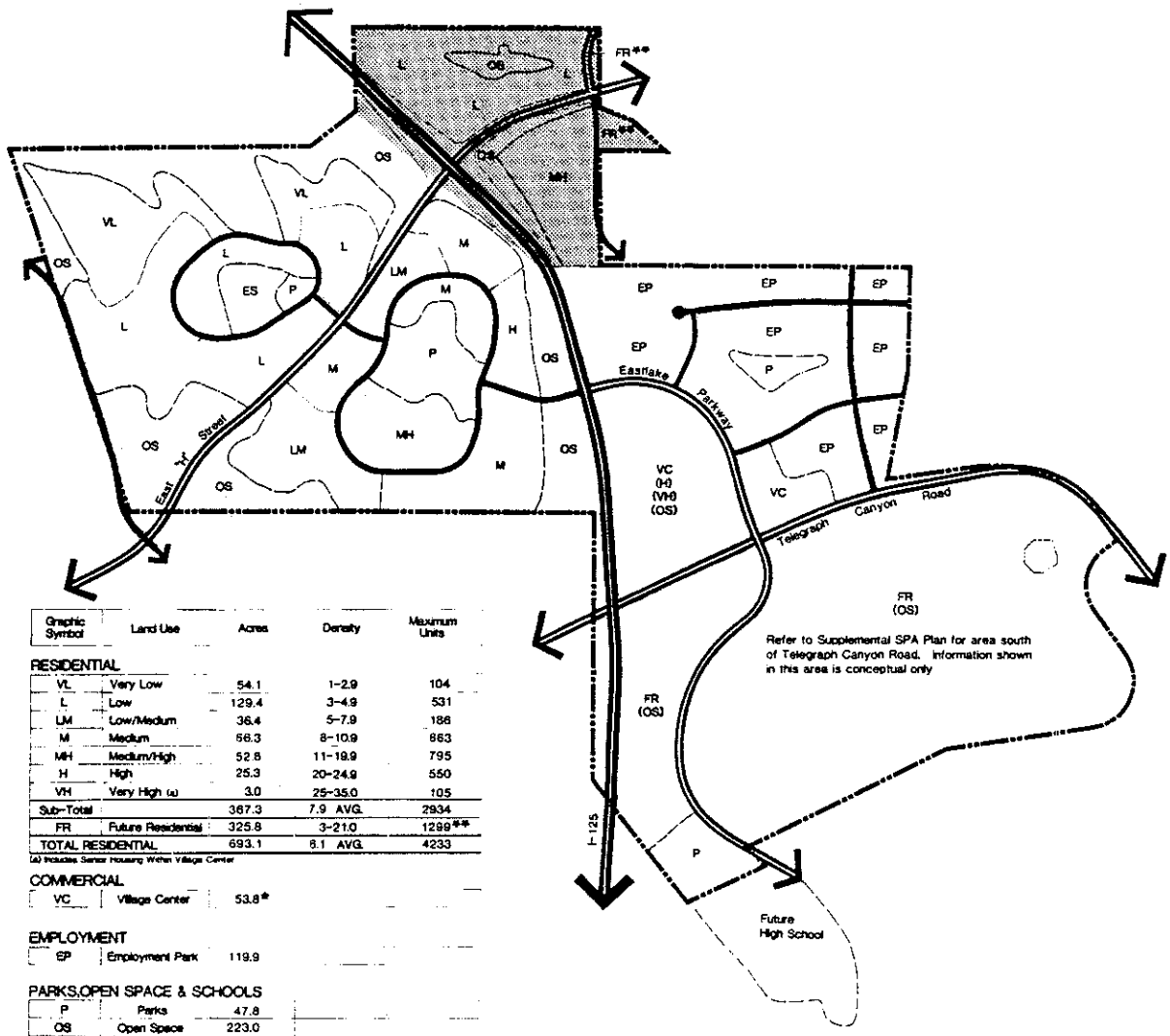
General Plan Amendment

The EastLake I General Development Plan (GDP) currently functions as the General Plan for land use purposes within the EastLake I Sectional Planning Area (SPA). Project approval necessitates a General Plan Amendment via an amendment to the GDP. The proposed GDP Amendment is illustrated in Figure 2-3a.

As mentioned previously, the City of Chula Vista is currently updating its General Plan. The update will establish General Plan land use categories independent of the EastLake I GDP. The Scenario IV land use plan of the General Plan Update is recommended for approval and provides the general basis for this project's residential concept. Scenario IV designates the site RM - Medium Density Residential (6 to 11 units/acre) and open space, with a target density of 8.5 dwelling units (du)/acre. The Land Use Section of this SEIR further discusses land use acreages, residential densities and categories.

Zone Change

The proposed project site is currently zoned in the OS-1, OS-2, and BC-2 Districts of the EastLake Planned Community. Areas within the OS Districts are designated



Graphic Symbol	Land Use	Acres	Density	Maximum Units
RESIDENTIAL				
VL	Very Low	54.1	1-2.9	104
L	Low	129.4	3-4.9	531
LM	Low/Medium	36.4	5-7.9	186
M	Medium	56.3	8-10.9	863
MH	Medium/High	52.8	11-19.9	795
H	High	25.3	20-24.9	550
VH	Very High (a)	3.0	25-35.0	105
Sub-Total		367.3	7.9 AVG.	2934
FR	Future Residential	325.8	3-21.0	1299**
TOTAL RESIDENTIAL		693.1	6.1 AVG.	4233
COMMERCIAL				
VC	Village Center	53.8*		
EMPLOYMENT				
EP	Employment Park	119.9		
PARKS,OPEN SPACE & SCHOOLS				
P	Parks	47.8		
OS	Open Space	223.0		
ES	Elementary School	10.0		
TOTAL		280.8		
CIRCULATION				
	Streets & Highways (Major)	139.9		
PROJECT TOTAL		1267.9	3.3 AVG.	4233

(a) Includes Senior Housing Within Village Center

* Includes 18.8 acres of Open Space

** Units to be determined, not included in FR unit count

TRANSPORTATION CORRIDOR
182' R.O.W. Reserve

MAJOR
4 lane divided

COLLECTOR
2 lane undivided

N

0 2000

FEET

SOURCE: Cinti & Associates, 1989.

ERC Environmental and Energy Services Co.

Proposed General Development Plan Amendment

FIGURE 2-3a

for open space uses, while the BC-2 District is intended for business community light industrial and limited service commercial uses.

The proposed zoning districts are the RS-7 single family residential district, RC-22 for residential condominiums, and RM-25 for multi-family residential uses, along with designated open space areas in the OS-1 and OS-2 districts. Land Use districts proposed are illustrated in Figure 2-3b.

Sectional Planning Area (SPA) Plan Amendment

The current EastLake I SPA Plan (Figure 2-4) shows SPA plan designations onsite, which include parcels OS-9, OS-15, a portion of parcel OS-8, all of employment parcel E-11, and a portion of employment parcel E-1.

Figure 2-5 shows the proposed SPA Plan, which designate three residential parcels, five open space parcels and two "Future Urban" parcels. The Future Urban parcels are included in the project site boundary but will be incorporated into another residential project's future environmental assessment, unknown at this time. In effect, the future urban parcels are not considered as integral to this project (i.e., not included in project residential unit statistics) other than designated as future urban residential land uses. (See Land Use section for further discussion.)

Tentative Tract Map (TTM 89-9) Approval

Concurrent with the above amendments, the applicant seeks approval of the entire site's subdivision for residential purposes. Figure 2-6 illustrates the Tentative Tract Map submitted to the City. Tentative Tract 89-9 involves three types of residential uses (described under "Project Characteristics"): single family residential, townhomes and condominiums. The map illustrates lot layouts for the single-family residential portion of the project, street right-of-way and other critical information. The multi-family sites are generally depicted on the map, with Precise Plans submitted separately as described below.

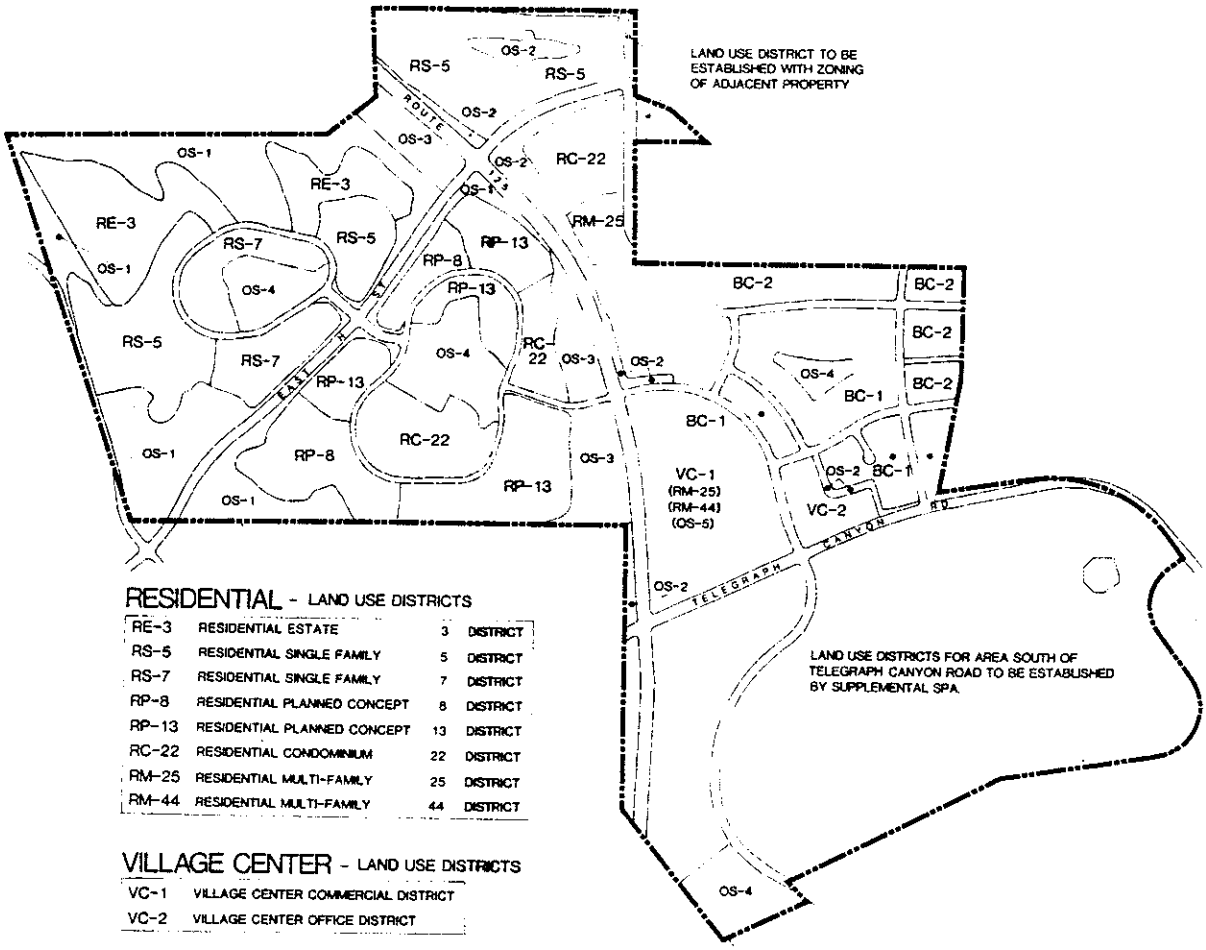
Precise Plan/Site Plan Approval

Figure 2-7a illustrates the Salt Creek I Conceptual Site Plan. Figure 2-7b depicts the proposed Site Plan for the project's townhome site. This area makes up a portion of the site's southern area below East "H" Street. Precise Plan/Site Plan approval in the City of Chula Vista requires adherence to the following criteria:

- Architectural Review
- Landscape Plan
- Park/Recreation, Trail and Open Space requirements
- Parking criteria and circulation system approval
- Scenic highway standards
- Lighting, fencing, signing requirements
- Grading and drainage plan requirements

Future Actions

Should the proposed project be approved, additional approvals listed below would be required subsequent to actions contained in this Project Description and prior to commencement of building. The subsequent actions are subject to the CEQA



RESIDENTIAL - LAND USE DISTRICTS

RE-3	RESIDENTIAL ESTATE	3	DISTRICT
RS-5	RESIDENTIAL SINGLE FAMILY	5	DISTRICT
RS-7	RESIDENTIAL SINGLE FAMILY	7	DISTRICT
RP-8	RESIDENTIAL PLANNED CONCEPT	8	DISTRICT
RP-13	RESIDENTIAL PLANNED CONCEPT	13	DISTRICT
RC-22	RESIDENTIAL CONDOMINIUM	22	DISTRICT
RM-25	RESIDENTIAL MULTI-FAMILY	25	DISTRICT
RM-44	RESIDENTIAL MULTI-FAMILY	44	DISTRICT

VILLAGE CENTER - LAND USE DISTRICTS

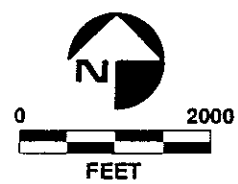
VC-1	VILLAGE CENTER COMMERCIAL DISTRICT
VC-2	VILLAGE CENTER OFFICE DISTRICT

SPECIAL PURPOSE - LAND USE DISTRICTS

OS-1	OPEN SPACE	1	DISTRICT
OS-2	OPEN SPACE	2	DISTRICT
OS-3	OPEN SPACE	3	DISTRICT
OS-4	OPEN SPACE	4	DISTRICT
OS-5	OPEN SPACE	5	DISTRICT

BUSINESS CENTER - LAND USE DISTRICTS

BC-1	BUSINESS CENTER MANUFACTURING PARK
BC-2	DISTRICT BUSINESS CENTER MANUFACTURING SERVICE DISTRICT



SOURCE: Cinti & Associates, 1989.

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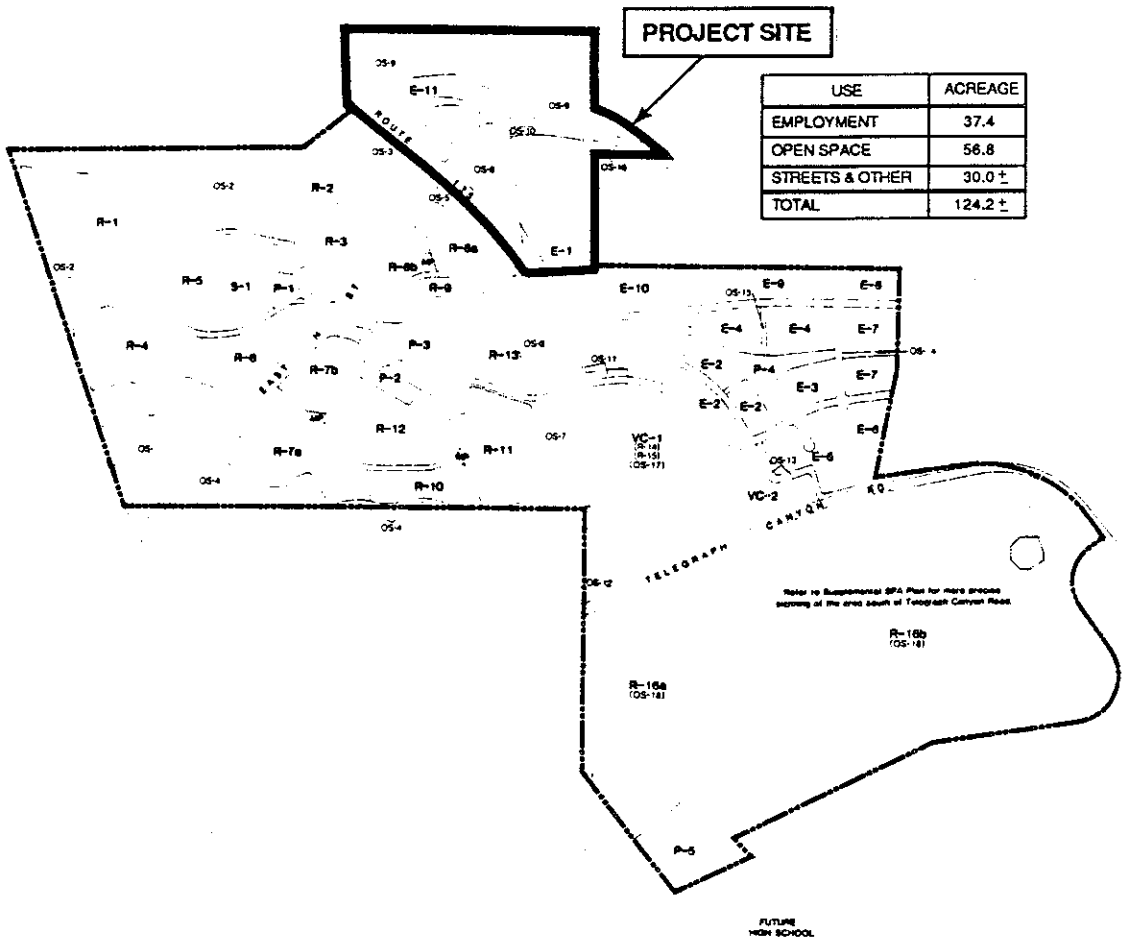
Proposed Amendment - Land Use Districts

FIGURE 2-3b



USE	ACREAGE
EMPLOYMENT	37.4
OPEN SPACE	56.8
STREETS & OTHER	30.0 ±
TOTAL	124.2 ±

RESIDENTIAL

PARCEL NO.	ATTACHED (A) DETACHED (D)	DENSITY RANGE	ACRES	TARGET DENSITY	PERMITTED D.U.
R-1	D	0-5	36.2	2.0	73
R-2	D	0-5	16.6	1.8	31
R-3	D	0-5	14.4	4.0	57
R-4	D	0-5	36.7	3.6	133
R-5	D	0-5	15.7	5.0	78
R-6	D	0-5	17.3	5.0	86
Sub-total			137.1	3.3	458
R-7a	D	5-15	25.8	5.2	134
R-7b	A	5-15	10.8	10.0	108
R-8a	A	5-15	14.5	10.0	145
R-8b	D	5-15	8.7	6.1	53
R-9	A	5-15	11.3	10.0	113
R-10	A	15-25	9.5	18.0	171
R-11	A	5-15	19.9	10.0	199
R-12	A	15-25	24.7	17.0	420
R-13	A	5-15	11.3	12.0	136
Sub-total			136.3	10.7	1479
R-14	A	15-25	15.0	20.0	300
R-15	A	25-35	3.0	35.0	105
Sub-total			18.0	22.5	405
TOTAL (north of Telegraph Canyon Rd.)			291.4	8.0	2342
R-16a	A/D	0-25	42.0	4.1	171
R-16b	A/D	0-25	286.5	4.1	1170
TOTAL (south of Telegraph Canyon Rd.)			328.5	4.1	1341
PROJECT TOTAL			619.9	5.9 avg.	3683

OPEN SPACE/PARKS

PARCEL NO.	LAND USE	ACRES
OS-1	OPEN SPACE	29.4
OS-2	OPEN SPACE	58.0
OS-3	OPEN SPACE	11.1
OS-4	OPEN SPACE	20.9
OS-5	OPEN SPACE	6.5
OS-6	OPEN SPACE	11.2
OS-7	OPEN SPACE	17.4
OS-8	OPEN SPACE	11.7
OS-9	OPEN SPACE	54.7
OS-10	OPEN SPACE	1.6
OS-11	OPEN SPACE	4.0
OS-12	OPEN SPACE	1.8
OS-13	OPEN SPACE	2.5
OS-14	OPEN SPACE	0.8
OS-15	OPEN SPACE	0.7
OS-16	OPEN SPACE	0.9
OS-17	O.S. / PUB. FAC.	20.6
OS-18	O.S. / PUB. FAC.	32.8
TOTAL		264.4
P-1	PARK	2.6
P-2	PARK	3.6
P-3	LAKE/PARK	17.5
P-4	PARK	8.5
P-5	PARK	14.9
TOTAL		47.5
S-1	SCHOOL	10.2

MP MINOR PARK ±0.5 ac. each (acreage included in residential parcels)

EMPLOYMENT

PARCEL NO.	LAND USE	ACRES
E-1	EMPLOYMENT	45.2
E-2	EMPLOYMENT	14.5
E-3	EMPLOYMENT	8.0
E-4	EMPLOYMENT	16.7
E-5	EMPLOYMENT	13.2
E-6	EMPLOYMENT	6.0
E-7	EMPLOYMENT	12.0
E-8	EMPLOYMENT	4.5
E-9	EMPLOYMENT	13.9
E-10	EMPLOYMENT	9.7
E-11	EMPLOYMENT	10.0
TOTAL		153.7

VILLAGE CENTER

VC-1	VILLAGE CENTER	61.0
VC-2	VILLAGE CENTER	11.8
TOTAL		72.8

VILLAGE CNTR BREAKDOWN

Residential (R-14 & R-15)	18.0
Office / Commercial	34.2
O.S./Pub. Fac. (OS-17)	20.6
TOTAL	72.8

0 2000 FEET

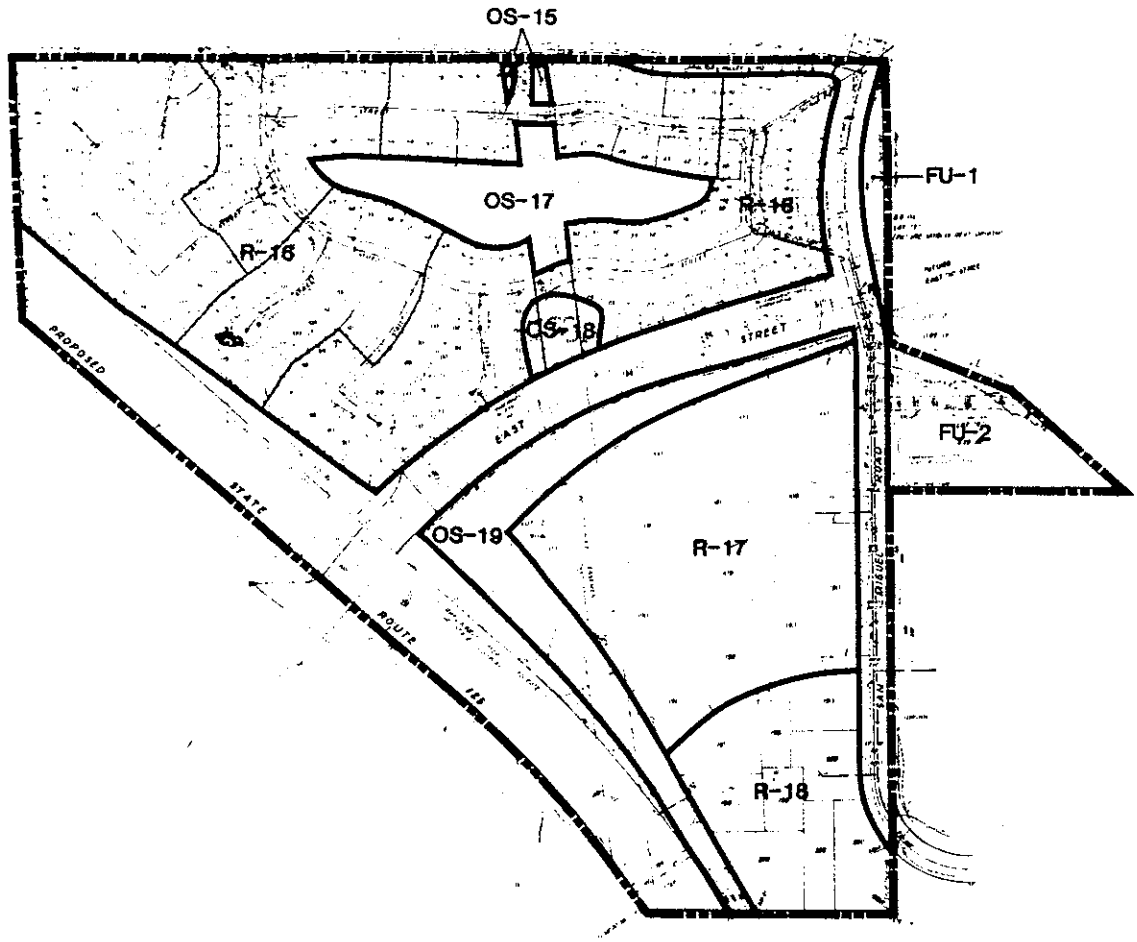
N

SOURCE: Cinti and Associates, 9/4/84

ERC Environmental and Energy Services Co.

Existing SPA Plan: Eastlake I

FIGURE 2-4



RESIDENTIAL

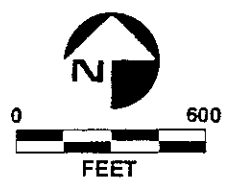
Parcel No.	Attached (A) Detached (D)	Density Range	Acres	Target Density	DU
R-16	D	0-5	37.4	4.8	181
R-17	A	5-15	20.0	11.2	225
R-18	A	15-25	8.5	16.9	144
Total			65.9 ac	8.3 avg.	550

OPEN SPACE

Parcel No.	Land Use	Acres
OS-15	Open Space	2
OS-17	Open Space	5.9
OS-18	Open Space	.7
OS-19	Open Space	8.1
Total		14.9 ac

FUTURE URBAN

Parcel No.	Land Use	Acres
FU-1	Future Urban	8
FU-2	Future Urban	4.3
Total		5.1 ac



SOURCE: Cinti & Associates, 1989.

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Proposed SPA Plan: Salt Creek I

FIGURE 2-5

review process; this SEIR is intended to provide the environmental information base for such subsequent CEQA documentation.

- Site Plan/Precise Plan approval for single-family tract
- Final Map recordation
- Grading permits
- Building permits

E. PROJECT CHARACTERISTICS

As described earlier in this chapter, the project proposes a complete change in land use concept from existing designations. Previously envisioned as an extension of the EastLake Business Park (designated for employment park - light industrial and limited service commercial uses), the proponents foresee a separation of the site from the EastLake Business Park at the SR-125 alignment, and the site's close relationship with the Salt Creek Ranch residential uses proposed immediately to the property's east. The following provides a description of the three residential concepts and associated infrastructure and park/open space uses.

Single-Family Residential

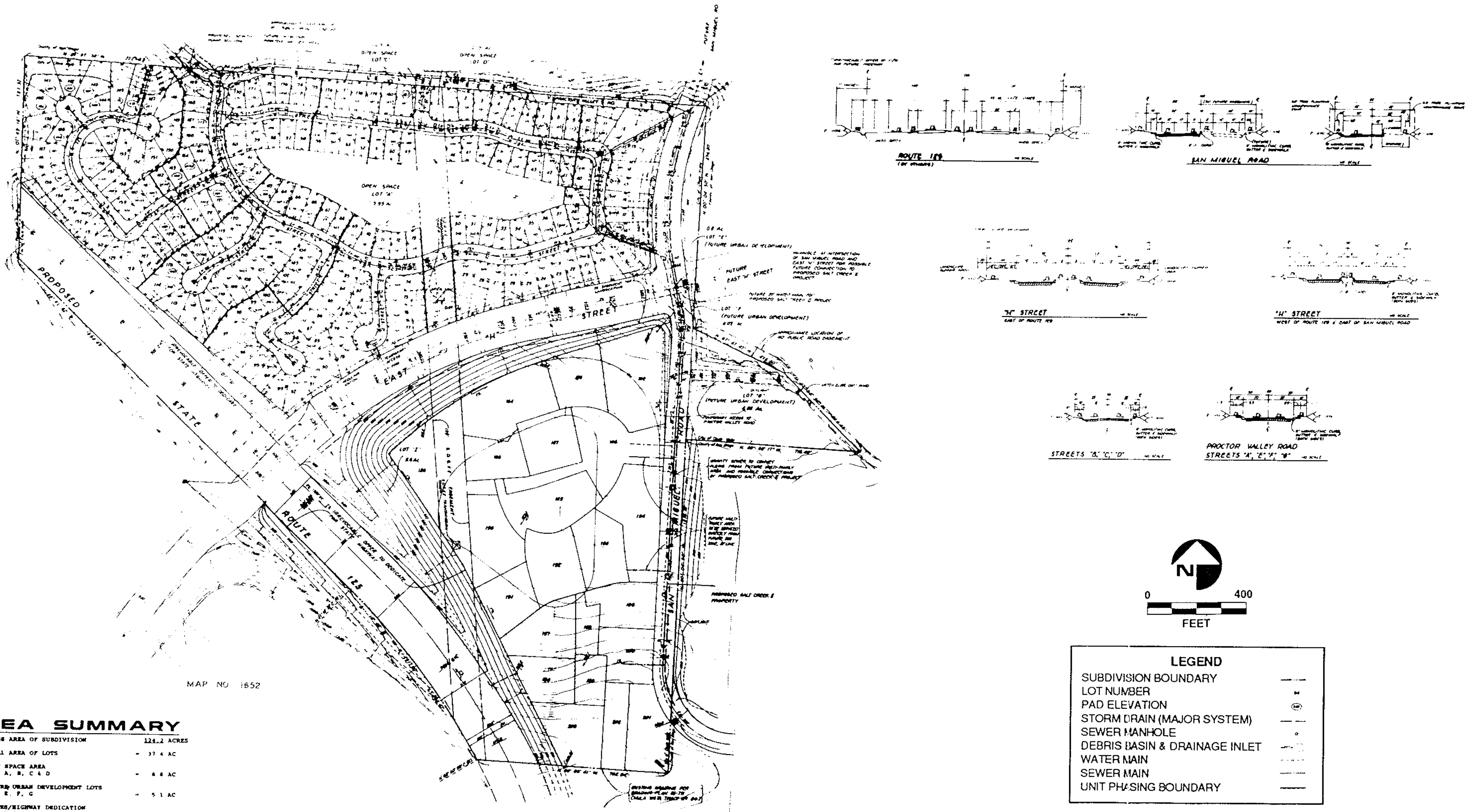
The single-family residential (SFR) area includes 181 single family lots on 37.3 acres of the site, located north of East "H" Street and northeast of the SR-125 alignment (Figure 2-6, Tentative Map). The overall density equates to 4.8 du/ac. Lot sizes range from 6,000 square feet (s.f.) to 18,000 s.f., with an average size of 9,000 s.f.

Emphasis is placed in this area on optimizing views, some of which extend to the ocean. The SFR layout utilizes, in concept, the existing topography of gradual slopes and rolling hills. The circulation concept includes access at two points on the northern project boundary from Proctor Valley Road (Figure 2-6), and an internal loop road with cul-de-sacs extending outward from the loop. The central focus of the SFR area is a 5.95 acre area proposed as open space. The SDG&E easement also provides an open space channel running north-south through the site, culminating at the transmission tower hilltop north of East "H" Street (Lot "B", Figure 2-6, Tentative Map) which overlooks the majority of the site.

Multi-Family Residential

The Tentative Map (Figure 2-6) depicts the general orientation of the multi-family portion of the site as bounded by East "H" Street to the north, SR-125 to the southwest, and San Miguel Road to the east. The Site Plans (Figures 2-7a and 2-7b) show the townhome building footprints, circulation/infrastructure and amenities. The two multi-family parcels are separated by the condominium parking structures.

The townhome project (northern area) involves development of 243 units on 20.5 acres, at an overall density of 11.8 du/ac. Access is from San Miguel Road (east boundary); the internal circulation system is a loop road with building clusters to the interior and exterior of the loop road. Buildings contain 6 or 9 units each (see Site Plan, Figure 2-7b). Exterior parking and enclosed attached garages are provided.



AREA SUMMARY

(a)	GROSS AREA OF SUBDIVISION	124.2 ACRES
(b)	TOTAL AREA OF LOTS	= 37.4 AC
(c)	OPEN SPACE AREA LOTS A, B, C & D	= 6.8 AC
(d)	FUTURE URBAN DEVELOPMENT LOTS LOTS E, F, G	= 5.1 AC
(e)	SLOPES/HIGHWAY DEDICATION LOTS H & I	= 11.1 AC
(f)	AREA OF DEDICATED STREETS	= 35.3 AC
(g)	MULTI-FAMILY LOTS 182 - 203	= 28.5 AC

SOURCE: McIntire Group.

ERC Environmental and Energy Services Co.

Tentative Tract Map 89-9

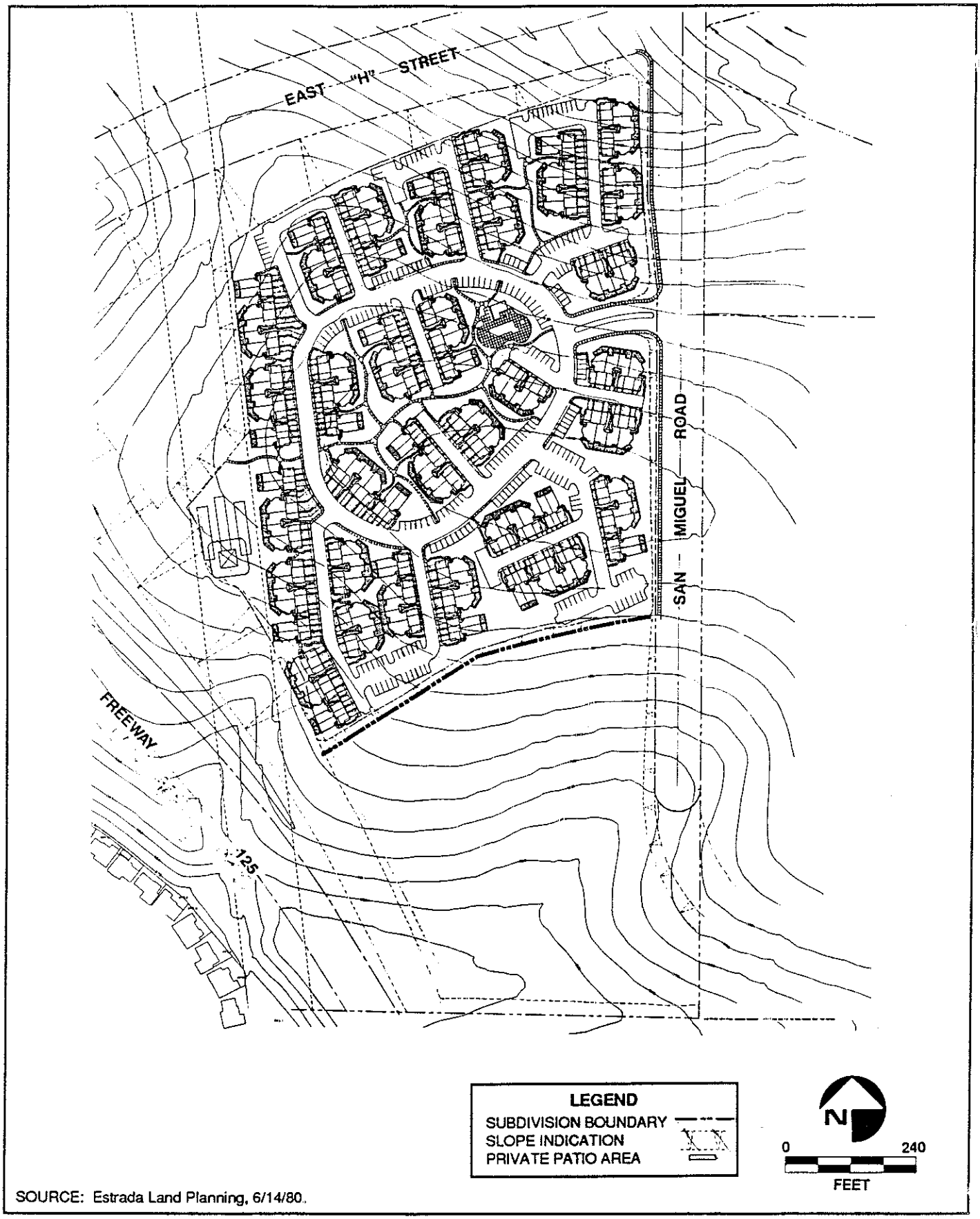
FIGURE 2-6

SOURCE: Estrada Land Planning, 11/26/88

ERC Environmental and Energy Services Co.

Site Plan - Salt Creek I

FIGURE 2-7a



SOURCE: Estrada Land Planning, 6/14/80.

ERC Environmental and Energy Services Co.

Site Plan: Townhome Project

FIGURE 2-7b

Buildings are oriented to optimize views and sun exposure (passive solar heating). The townhome onsite amenities include an open-space/recreation and pool area at the project entrance; a greenbelt/pedestrian walkway extending east-west; and a park/recreation area at the western corner, including three tennis courts (this area is traversed by the SDG&E easement).

The condominium project in the southern area encompasses 9.6 acres. The detailed site plan will be submitted at a later date. Access is from San Miguel Road; the internal circulation system extends around the perimeter of the site, with parking structures and spaces exterior to this street (Figure 2-7a). Amenities include a pool and open space in the central area, extending to the project entrance. A pedestrian walkway system provides internal circulation and access to the central recreation area and two smaller open space areas.

Circulation and Infrastructure

The proposed SR-125 freeway aligns the project's southwestern edge. A cross-section of this and other roadways is shown on Tentative Tract Map, Figure 2-6. SR-125 is proposed as a 6-lane freeway (206 feet wide, with potential widening to 8 lanes) in this area. The right-of-way (R/W) through the project area varies considerably, providing sloped setbacks from proposed residential uses.

The proposed extension of East "H" Street bisects the project site, extending from the EastLake Business Center to Salt Creek Ranch property. East "H" Street will be constructed through the site as part of the project's offsite improvements. The right-of-way has recently been voluntarily increased by the proponent through the project site to 152 feet to accommodate 8 lanes potentially needed in the future (it is currently proposed as a 4-lane facility with future widening planned to 6 or 8 lanes). A substantial sloped setback is also provided on the south side of East "H" Street, varying from approximately 40 to over 100 feet in width, including a 20-foot landscape easement adjacent to the street.

Proposed San Miguel Road aligns the eastern boundary with a 100 foot right-of-way planned. Proctor Valley Road, the project's northern border, will have 2 lanes in a 60-foot right-of-way.

Existing utility facilities onsite include the SDG&E easement which extends north-south, and two SDG&E towers. These will be retained as open space, street or recreation uses onsite. Other future utility improvements include water and sewer line extensions through the site to the east at the south end of the property (to be implemented as determined necessary during development phasing).

F. PROJECT PHASING

The following Table 2-1 illustrates the project's residential product absorption or unit phasing, as estimated by the Baldwin Company.

Table 2-1

PROJECT PHASING[1]

Product	Average Density Du/Ac[2]	89-90	90-91	91-92	92-93	Total
Single Family	4.85	0	37	72	72	181
Townhomes	10.98	0	45	90	90	225
Stacked Flats	15.00	0	28	58	58	144
TOTAL		0	110	220	220	550
CUMULATIVE TOTAL		0	110	330	550	550

[1]Source: John McTighe & Associates, April 1989
[2]Du/Ac = Dwelling Unit per acre

III. ENVIRONMENTAL SETTING AND IMPACT ANALYSIS

A. LAND USE

Existing Conditions

The Salt Creek I property is situated in the rolling hills of eastern Chula Vista. The 124.2 acre project site is located in the northwestern portion of the EastLake I Planned Community (Figure 3-1). The property may be characterized generally as undeveloped, open, rolling hills and grassland (see Figures 3-2, 3-3a and 3-3b, Aesthetics Section). Much of the site and surrounding area have been utilized in agricultural dry farming and/or are disturbed grasslands. Some coastal sage scrub habitat exists along the northern project edge and in offsite locations to the west. Onsite elevations range from about 425 feet to 665 feet above mean sea level. A 120-foot wide, 230 kV SDG&E easement extends north-south through the site, and two towers are located onsite.

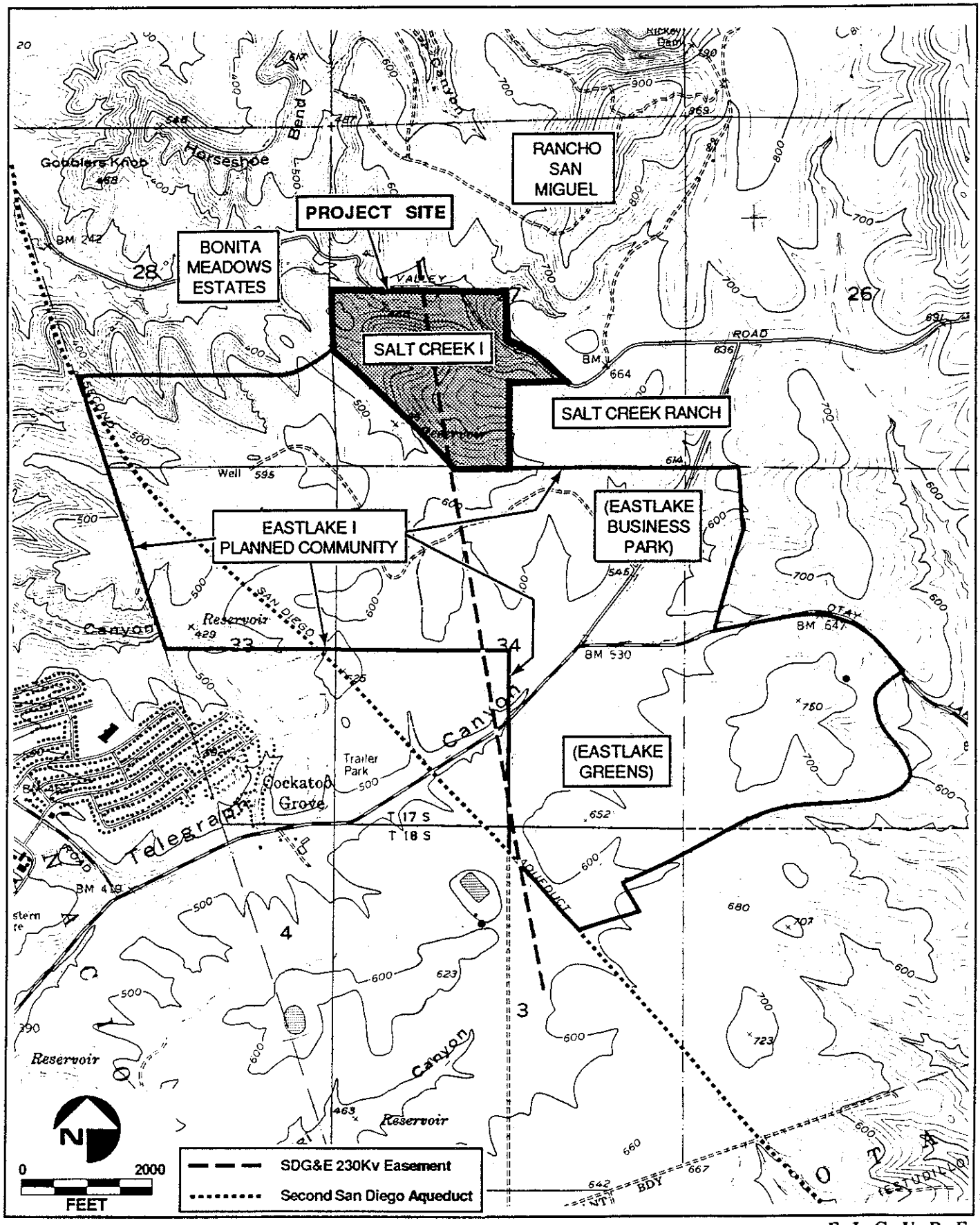
Surrounding land uses and properties are illustrated in Figure 3-1 and may be described as follows: to the north and northeast, currently under county jurisdiction, canyons and hills known as the Rancho San Miguel property exist; to the east along (unpaved) Proctor Valley Road lie the undeveloped Salt Creek Ranch rolling hills of grassland and some agricultural land (also under County jurisdiction); to the south, the developing EastLake Business Center of Chula Vista is in various stages of grading, construction or development; to the southwest and west across the proposed extension of SR-125 are EastLake I residential neighborhoods; and to the northwest lies the undeveloped Bonita Meadows Estates property.

Existing Land Use Plans and Policies. As set forth in the Project Description, the project site is included in the City's EastLake I Planned Community Sectional Planning Area (SPA). The SPA Plan was approved in September 1984 (EIR 84-1). The General Development Plan (GDP constituting the General Plan), Zoning and SPA Plan effectively established land uses for the EastLake I SPA to the tentative map level of approval. The Salt Creek I site, under the SPA Plan (Figure 2-4), was approved for employment park and open space uses. (Note that since the 1984 SPA Plan approval much of EastLake I has been developed, including Business Park areas adjacent to the site. Note also that the EastLake I SPA Plan does not reflect Circulation Element roadways which are now in the General Plan Update - refer to Section III.G for detail.).

Surrounding General Plan land use designations (including City of Chula Vista Sphere of Influence territory to the north and east) include residential uses except for the EastLake Business Park to the southeast.

General Plan policies applicable to EastLake I were analyzed extensively during establishment of the GDP and PC District Regulations in 1982 (EIR 81-3), and further in 1984 with the SPA Plan approval (EIR 84-1). Those documents are incorporated by reference; refer to the two EIR Land Use sections for detailed discussions of existing General Plan policy. The existing EastLake I PC District Regulations and 1984 SPA Plan currently constitute the regulating documents used for consistency comparisons.

City Threshold Standards. Until the General Plan Update is approved, threshold standards have been adopted to preserve the current quality of life of the City while



FIGURE

3-1

ERC Environmental and Energy Services Co.

Surrounding Land Uses and Proposed Projects

the long range documents are being reviewed. It is anticipated that the threshold standards will be included within the new General Plan (described below) as part of the Growth Management Element. Eleven issues were addressed in the policy document which established the thresholds. Each of the eleven issues (traffic, air quality, water, libraries, parks, sewer, police, fire/emergency services, schools, economics and drainage) was addressed in terms of a goal, an objective, a threshold or standard and implementation measures. Two types of implementation measures were adopted - those applied city-wide by a growth management committee on a periodic basis and those applied by staff on a project basis. Each of the threshold standards are addressed in the corresponding section of this EIR.

Proposed Planning: General Plan Update. As mentioned in the Project Description section, the City of Chula Vista is currently in the process of a General Plan (GP) Update. Over past months, the GP has been reevaluated and updated per State requirements. Scenario IV of the Update has been recommended for adoption and, as of this writing, the document is under public review. GP review and adoption by the City Council is expected in Summer 1989.

Throughout this document, references to Scenario IV of the GP Update will be cited. It should be noted that although Scenario IV is expected to be in effect in the near future, it is not yet an official document and is therefore referred to as the "proposed" Scenario IV or GP Update. Legally, this SEIR is required to analyze existing regulations which, in this case, is the existing GP/GDP and SPA Plan for the subject site. Analysis of proposed project consistency with the existing SPA Plan and with proposed Scenario IV of the GP Update, nevertheless, are provided in the Impacts section herein.

Policies of the proposed Scenario IV GP relevant to this site and project are reviewed below.

Land Use Element: Ten goals are set forth in the proposed Land Use Element. They relate to economic base, commercial development, housing and community character, open space, circulation/land use, growth management and other topics. Objectives within each of the ten goals establish direction to attain the Goals. These Goals and Objectives involve a citywide policy framework from which to base future land use decisions.

Other citywide topics of the Land Use Element include 1) Land Use Categories and Uses; 2) the Land Use Diagram (dividing the City geographically into five Community Plan Areas); 3) Policies and Guidelines (i.e., for residential clustering, densities, hillside development, fiscal impact); 4) Community and Urban Design (greenbelts, gateways, etc.); and 5) Scenic Highways.

Eastern Territories Area Plan: The Land Use Diagram mentioned above creates a land use framework for each of the City's five Community Plan Areas, each with its own respective Area Plan. The project site is located in the Eastern Territories Community Plan area. The Eastern Territories Area Plan (ETAP) is intended to be an implementing document for GP Goals and Objectives. There are three major goals in the ETAP: 1) to protect the most important natural resources; 2) to accommodate and regulate new urban development; and 3) to encourage development of the Eastern Urban Center (the area near the intersection of Orange Avenue and SR-125, south of the project site). Project consistency with the Scenario IV GP goals and other relevant guidelines in the ETAP is summarized in the Impacts section below.

Impacts

Important to review is the previous impact analysis of the physical conversion from open space to urban development. The physical conversion of the 124.2 acre site from its existing undeveloped state is analyzed in a broad, planned community scale in two previous EIRs: the 1982 Master EIR 81-03 (for the EastLake I GPA and Zoning/PC Regulations) and the 1984 EIR 84-1 (for the EastLake I SPA Plan). Those land use analyses are hereby incorporated by reference and are briefly summarized below as they pertain to the project site.

The 1982 EastLake Master EIR (MEIR) 81-03 analyzes impacts in Section 3.1.2. As discussed in that document, the conversion of open space and agricultural land in rural, eastern Chula Vista to urban uses represents a permanent loss of that open space, an unavoidable impact. An important qualification is that the GP policy at that time was to retain the (Salt Creek I) project area in agricultural use until approximately 1990, when the area would eventually be converted to urban uses. The EastLake GPA was then approved, based on an anticipated future need for development. The GPA required sensitive design and protection of important resources, and assumed development in phases (which has occurred since the 1982 approval). In other words, because the site has been proposed for eventual urban development, the project will not create an impact; that decision to convert the open space was made in 1982. Consequently, no further impacts regarding conversion are associated with the proposed project amendments.

Land use analysis now must focus on the type, mix, timing and design of development. That type of analysis was conducted on a planned community scale for the EastLake I SPA Plan, which now constitutes the site's regulating document. This SEIR applies the 1984 SPA Plan criteria and standards to this project and site.

Existing Land Use Plans and Policies. The focus of this analysis is on the proposed project's consistency with the existing GDP and SPA Plan. As shown in Table 3-1, the site is designated for 37.4 acres of employment and 56.8 acres of open space. The remaining approximately 30 acres is attributed to road and street rights-of-way. EIR 84-1 concludes on page 3-9 that the 1984 SPA Plan for the project area (EastLake Business Center and EastLake Village Center) complies with the GDP and PC Regulations established in 1982, and that the land use configurations of the SPA Plan (specifically employment and open space on the project site) are even more compatible with surrounding designations and circulation than is the underlying GDP.

Employment uses in the 1984 SPA Plan (Figure 2-4, Project Description Section) were purposely situated in proximity to major roads (e.g., SR-125 Freeway), and open space is located exterior to development focal points. The Salt Creek I proposed project's residential designations along SR-125 are not consistent with the previous intent to develop commercial uses adjacent to major roadways, although this has been minimized in project design by ample setbacks and may be overcome by project design and edge treatments, etc.

Differences between the project and EastLake I SPA Plan are represented numerically in Table 3-1, and graphically by comparing Figure 2-4 with Figure 2-5. The most significant land use impact is that the proposed project northern area is inconsistent with the EastLake I SPA Plan in open space

Table 3-1

LAND USE DESIGNATION COMPARISON

Land Use	Designated Acreages: Proposed Salt Creek I SPA Plan	Designated Acreages: EastLake I SPA Plan
Residential	65.9	0
Employment	0	37.4
Future Urban	5.1	0
Open Space	14.9	56.8
Roadways/Streets[1]	38±	30±

Source: Cinti and Associates, May 1989

[1]Approximate acres estimated from SPA Plan.

designation. This is considered a significant impact. It should be noted that the proposed SPA Plan incorporates a portion of San Miguel Road and Proctor Valley Road which are pursuant to City direction and reflected in the GP Circulation Element Update (see following discussion of GP Update). Proposed roadways onsite account for approximately 38 acres, as opposed to about 30 acres on the EastLake I SPA Plan. The EastLake I 1984 SPA Plan does not show San Miguel or Proctor Valley Roads, but does incorporate other EastLake I Business Park road alignments which have since been refined and moved offsite.

Regarding compatibility of the project with surrounding existing land use designations, the residential uses proposed are generally compatible in density with EastLake residential areas to the south and southwest across SR-125. The project's condominium parcel could be compatible with the adjacent EastLake Employment Park to the southeast, depending on site design and edge treatment of the two adjoining parcels. To the site's east is the 1200 acre Salt Creek Ranch property, currently under County jurisdiction, proposed for residential development and annexation to the City of Chula Vista. This project is under review by the City and is discussed on following pages under "Proposed Planning Consistency." The land use designation of undeveloped property to the north and east (Rancho San Miguel property) as shown on the City's existing GP (Sphere of Influence) is medium density residential, consistent with the proposed project.

Consistency with GP Update and Proposed Plans. This discussion focuses on project consistency with proposed Scenario IV of the GP Update, and evaluates the project's relationship to the adjacent proposed projects. The proposed Salt Creek I project is similar in concept to Scenario IV of the GP Update. Scenario IV shows residential and open space uses on the project site, although it portrays generally less development in the northern area (more open space) than the proposed project. The GP Update does not specify the site's residential and open space acreages; it addresses the property at a conceptual level only. The GP Update also designates the Circulation Element alignments of San Miguel and Proctor Valley Roads onsite. The project is consistent with the road designations and has been designed to accommodate these two alignments, even though the alignments further restrict site developable acreage.

Open space of the proposed Salt Creek I vs. GP Update Scenario IV nevertheless differs, in that the project's open space is less and distributed in various locations throughout the site, rather than in the northern site area as on the GP Update. This is an inconsistency between the project and GP Update, although the general intent of the project to provide low density housing is compatible with the Scenario IV Plan.

The project is compatible with Scenario IV low-density designations to the site's north (Rancho San Miguel Property). To the east, the proposed Salt Creek Ranch project involves development of residential uses and open space on 1200 acres, allowing a maximum of 4,100 units with varying densities. Immediately to the east of Salt Creek I on Salt Creek Ranch are proposed condominium and townhomes in the lc v-medium and medium density residential categories (3 to 6 and 6 to 11 du/ac). These densities of the two projects are appropriately located adjacent to one another, and present no incompatibility. The remainder of Salt Creek Ranch is comprised of varying residential, community service and open space uses father east.

Cumulative Impacts. Potential cumulative land use impacts involve contributions of development to urbanization of the rural eastern Chula Vista area. This area has been considered in citywide documents and regulations governing the City's overall land use balance; considerable acreage in the eastern Chula Vista region has been designated for open space conservation, ensuring a balanced land use mix. Consequently, no significant cumulative land use impacts will result merely from the area's development.

The project's proposed change from employment park to residential use will not significantly contribute to cumulative impacts on a citywide land use balance. The project as proposed would, however, lessen the open space designated areas in the project vicinity compared to previous plans as described above. It should be noted that a portion of the project site is proposed to be utilized as roadways (in conformance with the GP Update Scenario IV Plan) to serve the project and other development in the area (i.e. serve a cumulative demand for roadways). These roadways in effect reduce the site's developable acreage. The lesser open space acreage will nevertheless contribute to a cumulative loss of permanent open space in the local area and region.

Mitigation Measures

- The northern area of the project's single-family residential tract shall be redesigned to the satisfaction of the City Planning Director prior to tentative map approval, to provide open space in the site's northern area to the satisfaction of the City. The intent of the redesign is to ensure project consistency with regulating documents and to provide onsite open space and buffer at project edges. (Note: see Alternatives Section. Alternative D will reduce and partially mitigate this impact.)

- Precise/site plan and landscape plans for the condominium project's southern boundary shall provide for buffering from and transition to employment park development to the south/southeast. This may include slopes, setbacks, landscaping techniques, subject to the approval of the City Planning Director.

- Subsequent project approvals (i.e., precise plans, architectural review, grading permits, etc.) shall be consistent with applicable EastLake I PC Regulations (1982) and standards established in the 1984 SPA Plan. Consistency shall be verified by City approval of each plan.

Analysis of Significance

Identified land use incompatibility impacts in the northern project area can be partially mitigated by implementation of the above mitigation measures and the Design Alternative described in the Alternatives Section herein. Should the project fail to provide open space in the northern area to the satisfaction of the City, an adverse land use impact will result. The project, as proposed, would contribute slightly to a cumulative impact on open space acreage in the area because it is inconsistent with approved SPA Plan open space designations.

B. AESTHETICS/VISUAL RESOURCES

The following section is based in part upon information derived from the EastLake I SPA Plan EIR 84-1, supplemented by site-specific field inspection and project assessment.

Existing Conditions

The project site consists of 124.2 acres in the western foothills of the Peninsula Range. The property is typical of the rolling hills of eastern Chula Vista (Figures 3-2, 3-3a and 3-3b). Elevations range from approximately 425 to 665 feet above mean sea level (MSL). The immediate project area is characterized by natural slopes and intervening drainages extending down from San Miguel Mountain, located to the north. During the spring these hills can present a green, pastoral appearance, otherwise they are typically brown or bare. The EastLake I Business Park is under construction nearby to the south; other surrounding parcels are undeveloped (see also Land Use section).

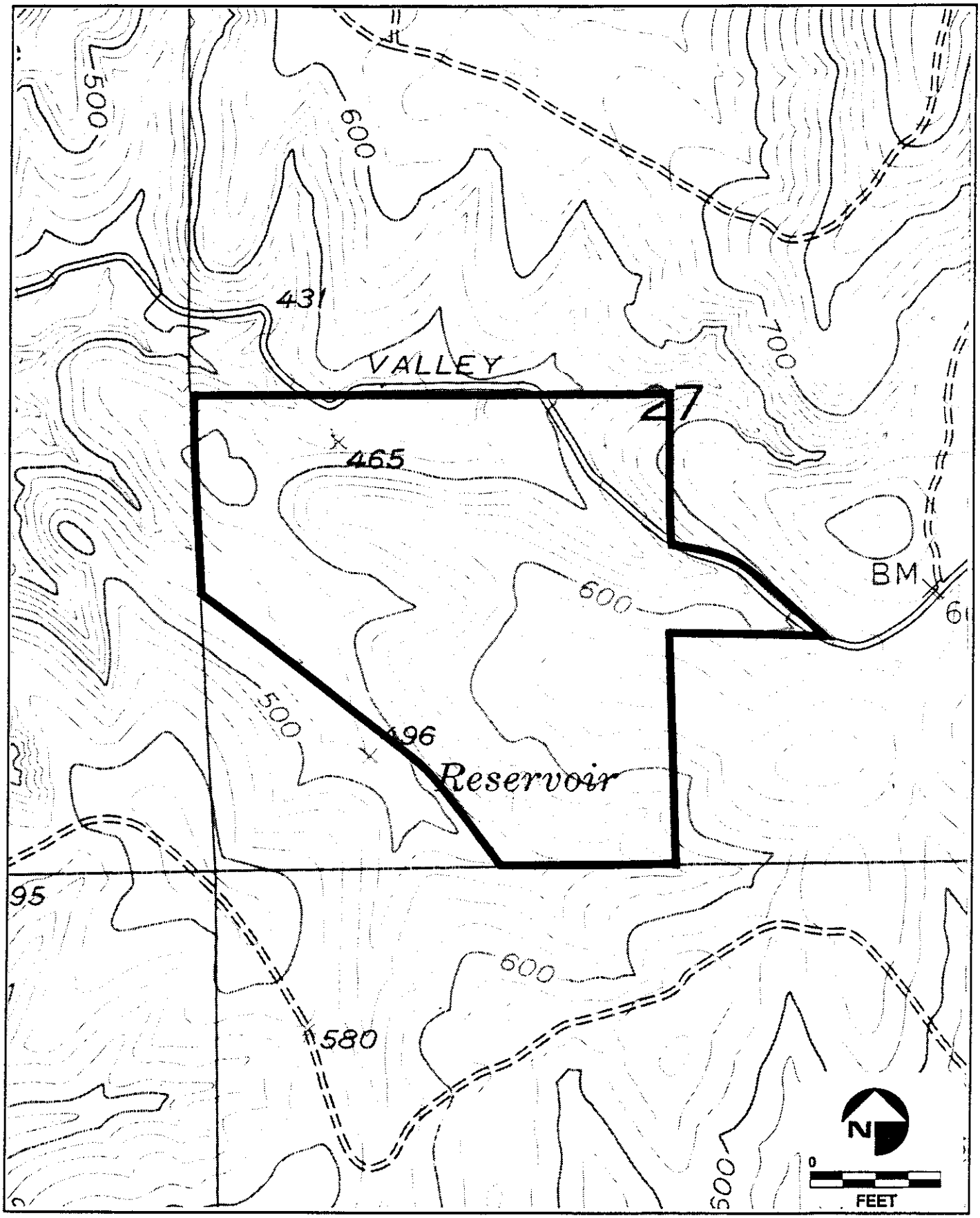
Visual Resources. Views from the higher elevations onsite can be panoramic, encompassing rolling hills in the foreground and the undeveloped Mother Miguel and San Miguel Mountains to the northeast, Jamul Mountains to the east, San Ysidro Mountains to the southeast, commercial development to the south, and views to the ocean and occasionally to Point Loma to the west. Views from the lower elevations onsite are partially constrained by topography and drainages although some views still extend to the ocean. San Miguel Mountain or the Jamul Mountains are visible over the tops of hills. Views are illustrated in Figures 3-3a and b.

The project site's visibility from the surrounding area is dictated by topography. The entire site is visible from San Miguel Mountain or the Jamul Mountains. Residential development to the northwest and west has interrupted views of the site and vicinity. The single-family homes to the southwest have a limited view of the site's slopes and ridges. The site is visible from the developing EastLake Business Park to the south, and from the graded dirt Proctor Valley Road bordering to the north. The SDG&E 230 kV transmission line runs from north to south through the site.

Designated Scenic Resources. The following describes City General Plan policies and other applicable scenic resource considerations.

City of Chula Vista: The Scenic Highways Element of the General Plan (1974) designates East "H" Street, which is proposed to cross the project site, an unofficial Scenic Route. The major objective of the Scenic Element is to "preserve and enhance the scenic quality of selected streets in Chula Vista." To meet this objective, several policies have been developed which address plan review for parcels adjacent to scenic routes. To implement these goals and objectives, the EastLake I PC Regulations (1982) establish general standards which must be met by developments adjacent to scenic routes (i.e., East "H" Street); the EastLake I SPA Plan Scenic Highway Study (1984) further explores opportunities to enhance the scenic routes in EastLake. These standards must be met during future subdivision and site plan implementation stages of development planning.

Lighting Astronomical Dark Sky: Optical astronomy is an important issue in San Diego County because of the location of two major observatories at Mt. Palomar (50 miles north) and Mt. Laguna (35 miles northeast). Local jurisdictions are asked by the observatories to use low-pressure sodium vapor (LPSV) lamps which reduce sky glow. The detailed discussion of this issue contained in EIR 84-1 is hereby incorporated by reference.



ERC Environmental and Energy Services Co.

Salt Creek 1 Project Site Topography

FIGURE 3-2

Impacts

Aesthetics. The proposed Salt Creek I development would change the appearance of the project site as the pastoral character of the existing landscape would be replaced by urban development. This conversion has been previously analyzed and approved (EIR 81-3; EIR 84-1). The project site has been designated in the Chula Vista General Plan for urban development and the SPA Plan further guides the implementation of this commitment. This amendment proposes to alter the type and configuration of development, which must be considered here regarding potential impacts.

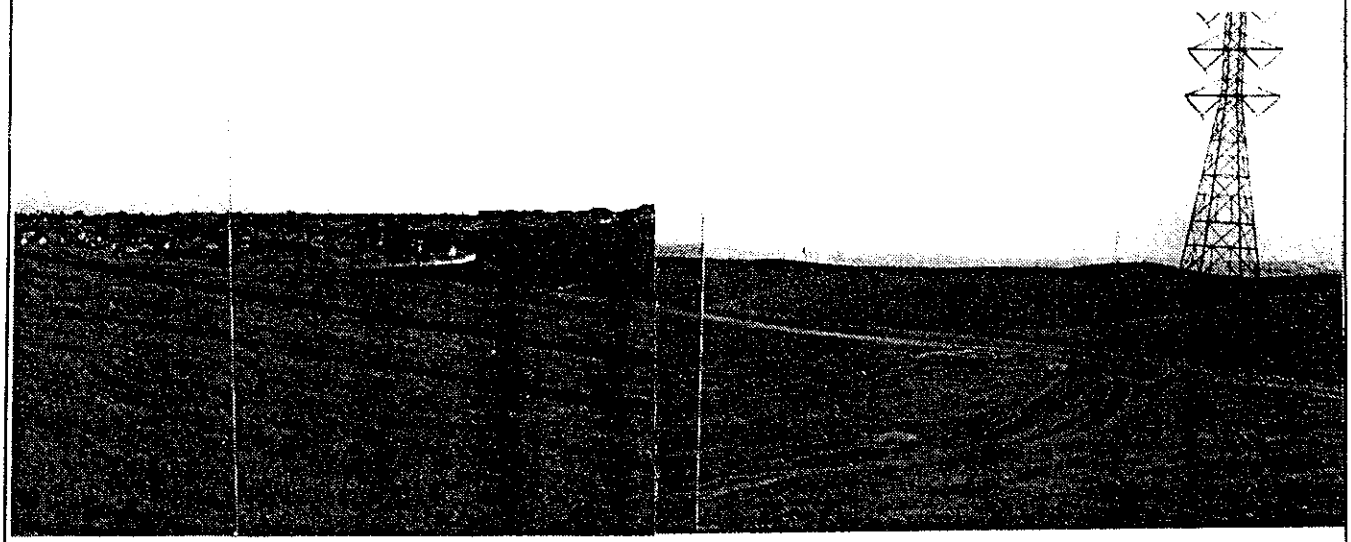
The project requests development of 550 residential units in comparison with the approved SPA Plan development of 37.4 acres of employment park (see Land Use section). Two factors of comparison must be considered: the amount of land developed and the type and design of development. First, the proposed project involves more development and roadway acreage in the northern area of the site, previously designated as open space. Open space is now proposed internal to the site (open space in single family project, recreation areas, greenbelt, etc.) rather than adjacent to exterior parcels. This configuration would result in an overall more developed aesthetic appearance of the site in the northern area compared to the existing SPA Plan and compared to the GP Update configuration, and presents a significant aesthetic impact.

It should be noted that a component of the aesthetic impact is attributable to San Miguel and Proctor Valley Roads, which are incorporated into the project due to the GP Update. These roads are not reflected in the existing SPA Plan. Depending on design, this impact may be minimized by landscaping typical of residential developments, serving to "soften" the visual impact below that which would result from employment park uses, but not minimized to the appearance of open space.

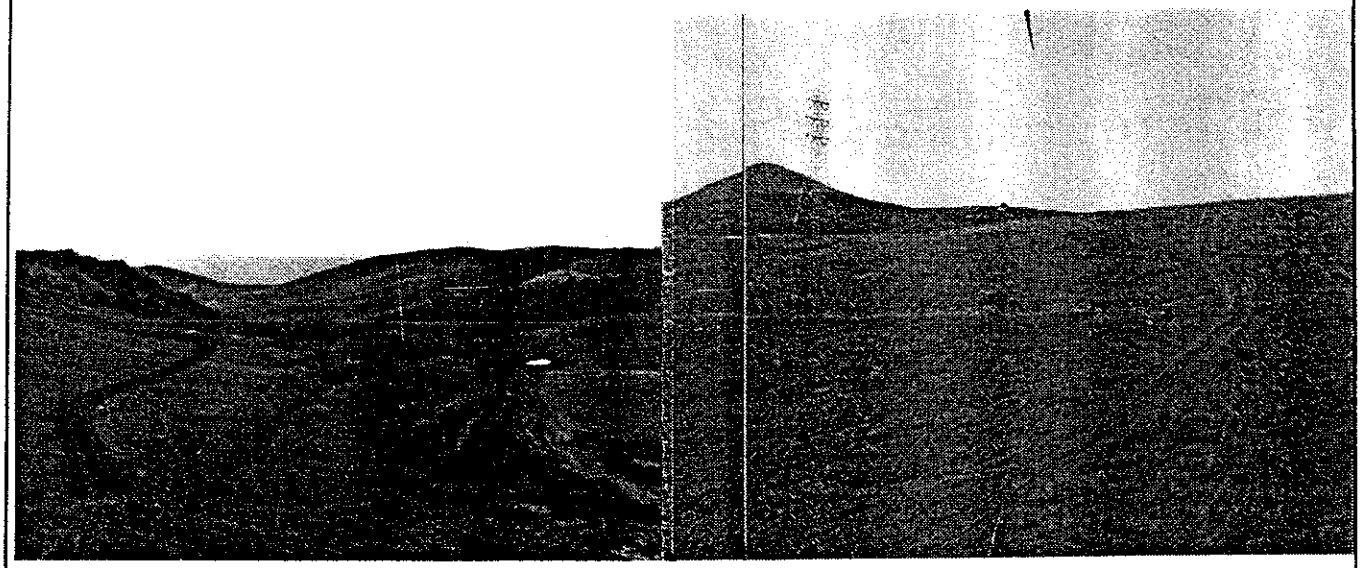
The second comparison is type and design of development proposed versus the existing approved SPA Plan. Residential development presents an entirely different aesthetic appearance than commercial/industrial development. The resulting difference must be determined by an assessment of sensitivity in design, grading, edge treatment, compatibility to adjacent lands, site layout, and importantly, visual resource protection.

The proposed project is generally compatible with surrounding proposed land uses (see Land Use section for detail). The project provides adequate open space buffer on the west, southwest and southern border areas, and open space areas interior to the site. The project is also compatible with City-approved circulation plans which will affect the aesthetic appearance of the property (note that this is beyond the control of the property owner). The major concern in aesthetic incompatibility is the project's (single-family residential) design along the north area of the property, which provides less open space and edge treatment. Properties to the north and east are currently undeveloped, designated for low or medium-density residential uses. Additional project open space between developments and sensitive edge treatments at the project's north boundary could minimize this impact.

From a mass grading standpoint, the project presents a different approach and would result in smaller, varied pads which generally follow existing slopes, versus the four or five large commercial pads shown on the approved SPA Plan (1984 Grading Plan). Commercial pads would result in a more severe aesthetic impact which is also more difficult to mitigate. In the northern site area, the aesthetic



View from approximate middle of site viewing sout



Panoramic view from south portion of site toward t

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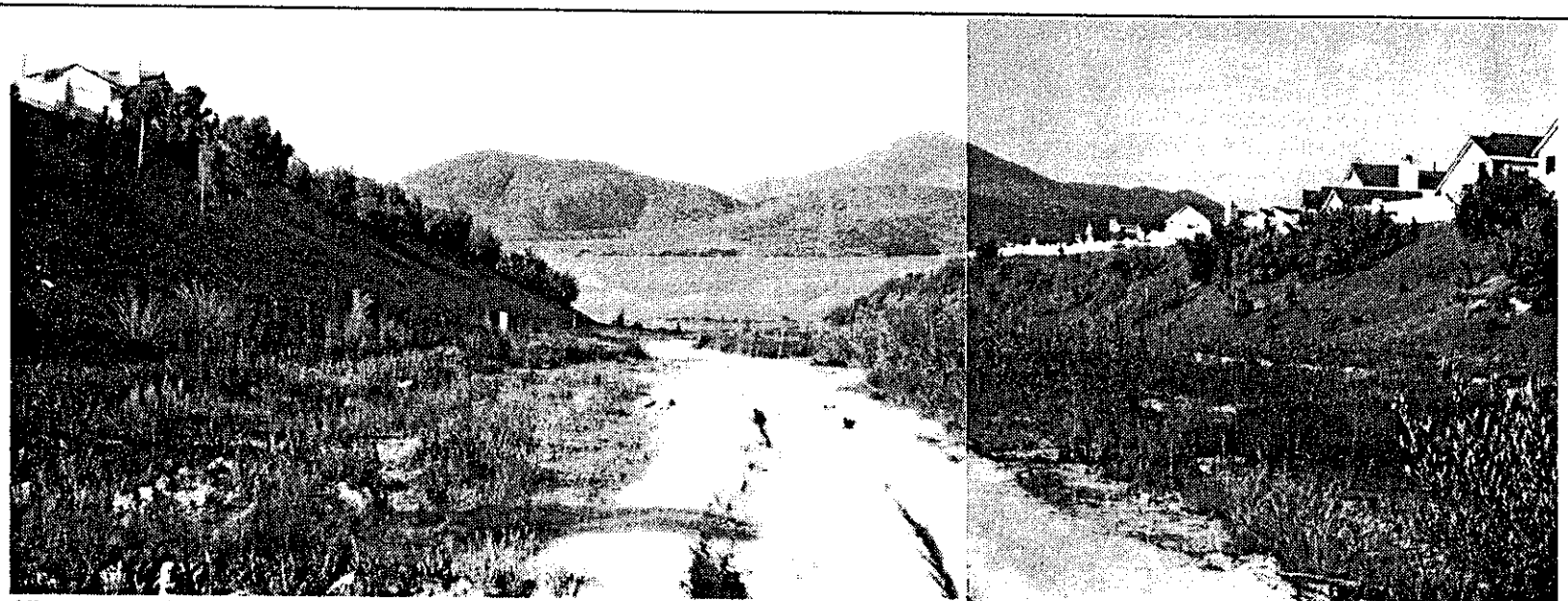
FIGURE
3-3a



View approximately 22° down "H" Street future alignment towards site.

View from slope of highest mesa towards Business Park Site.

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Site Photos

FIGURE 3-3b

grading associated impact is slightly greater for the Salt Creek I project due again to the difference in acreage retained as open space in the northern area. This could be minimized by retention of some open space in that area.

Both existing and proposed plans reflect graded open space slopes along SR-125 and East "H" Street to provide open space setbacks of development from roadways, consequently no inconsistencies regarding circulation/aesthetics exist. The project actually provides more right-of-way and setback, due to direction from City staff. The project also reflects San Miguel Road and Proctor Valley Road alignments as requested by the City General Plan Update Scenario IV. These roads, SR-125 and East "H" Street will require grading, resulting in an aesthetic impact expected by the City and not attributed specifically to the project. Landscaping and design could minimize these roadway aesthetic impacts.

View Impacts. Potential view impacts include a change in views of the undeveloped site from surrounding areas. As the site has been previously approved for development, views of the site are planned to change, but this nevertheless could represent an unavoidable impact to surrounding properties. To note is that the roadways onsite will also result in a view impact which has been evaluated and planned for as part of the GP Update, and therefore is not associated directly with this proposed project. Also, surrounding properties are developed or planned for development. The potential impact to views from these surrounding properties is not considered significant.

An impact will result from development of the northern site area which was previously designated as open space. Views to that area will now be of single family homes rather than undeveloped open space. These view impacts may be slightly reduced by sensitive design and buffer landscaping. View and aesthetic considerations such as architecture, landscaping, design themes/concepts, etc., are reviewed at later stages of planning and involve discretionary review and approval by the City of Chula Vista.

Designated Scenic Resources - City of Chula Vista: East "H" Street, as a City-designated Scenic Route, requires discretionary review in planning land development adjacent to its alignment. The proposed project development is more than adequately set back from the East "H" Street right-of-way as well as from the SR-125 right-of-way (see figures in Project Description Section). Design criteria pertaining to scenic routes have been established in the PC Regulations and SPA Plan for EastLake I in this area. The criteria are discussed in detail in EIR 84-1 (pages 3-56, 3-57), are incorporated by reference, and consist generally of the following:

- Land use variation along scenic routes
- Continuity in signage, landscaping, lighting, site furnishing, etc.
- Distinct identity for individual developments
- Adequate aesthetic accommodation of vehicular, bicycle & pedestrian circulation
- Signage program
- Sensitivity to scenic route edges in site and architectural design
- Landscape categorization into zones according to function
- Use of enriched paving materials
- Lighting standards

The project's ample setback from SR-125 and East "H" Street, combined with the incorporation of the above criteria in project design and adherence to EastLake I

PC Regulations and SPA Plan conditions will ensure that the project is consistent with scenic resource requirements, creating no adverse impacts.

Lighting/Astronomical Dark Sky: The project will result in a slight increase in night lighting impacts in the area. Measures are recommended by observatory scientists to reduce lighting impacts. Compliance with these requirements will ensure no lighting impacts will result from project implementation. No other light-related impacts have been identified, as the project area is developing or proposed for urban use.

Mitigation Measures

- The project's single-family residential northern area shall be redesigned to incorporate open space to the satisfaction of the City (refer to Section V, Alternative D). The redesign shall be subject to the approval by the City Planning Director, prior to any tentative map approval.

- The site plan and landscape plan encompassing the site's southeast border (condominium project) shall delineate special edge treatment adjacent to the employment park uses to the southeast. The plans shall be subject to the acceptance of the City prior to site plan approval.

- The project shall comply with all PC Regulations/Standards, and design criteria and requirements set forth in the 1984 SPA Plan (specifically Section V.C.3, page 21), compliance subject to city review prior to Final Site Plan approval.

- Project grading shall be contoured to blend with natural landforms. Techniques shall include rounding vertical and horizontal intersections of graded lanes, incorporating variable slope ratios for larger slope banks, use of landscaping for erosion control and obscuring drainage structures, and other measures. Slope banks shall generally not exceed a 2:1 slope ratio, and shall conform to Section 15.04.040 and other relevant sections of the City Grading Ordinance.

- Low-pressure sodium vapor lamps for outdoor illumination shall be utilized throughout the site. Mercury vapor lamps are presently being converted to low-pressure sodium vapor to standardize outdoor illumination within the City of Chula Vista.

- Outdoor lighting shall be filtered, directed and shielded so as to minimize excess light and restrict upward and reflecting light. Also, outdoor lights not necessary for safety shall be turned off between 11 p.m. and 5 a.m., to the extent feasible. (Detailed recommendations are provided in EIR 84-1, page 3-58, 59).

Level of Significance

Implementation of the above mitigation measures will reduce aesthetic and visual impacts to the extent feasible. Project development and City roadway construction will, however, result in a permanent aesthetic alteration of the site and views from surrounding properties. This impact has generally been anticipated as the site has been previously approved for development (EIR 84-1 and GP Update). The project will, in the northern area, create an unavoidable aesthetic and visual impact previously unanticipated, due to the development proposed in the northern portion of the site. This impact can be minimized by Design Alternative D but not to a level

of insignificance. The project will add to the cumulative aesthetic and visual impacts resulting from on-going development in the area.

C. GEOLOGY/SOILS

This section is based on information contained in a geotechnical investigation of the EastLake I project conducted by Leighton and Associates, summarized in EIR 84-1, supplemented by site specific field inspection and geotechnical report (GeoSoils, Inc., March 1989). The 1984 geotechnical report and EIR 84-1 are on file with the City of Chula Vista Planning Department. The site-specific report is included as Appendix A of this SEIR.

Existing Conditions

The subject site encompasses 124.2 acres of gently rolling hills, east of Chula Vista and northwest of Otay Reservoir. The property is dominated by a central east-west trending ridge, flanked on the north and southwest by stream canyons which flow towards the west. Site elevations range from about 425 feet at the northwest corner to 665 feet above mean sea level at the southeastern corner. Natural slopes are 5:1 or flatter, with some steeper slopes of 3:1 and sections up to 1 3/4:1 along the northern slope of the central ridge. Refer to Figure 3-2 for an illustration of site topography.

Geologically, the subject site is located within the coastal subprovince of the northern Peninsular Range. The basement complex consists of Jurassic and Cretaceous plutonic and metavolcanic rocks. These rocks are overlain by Upper Mesozoic and Cenozoic sedimentary formations. These sediments are composed of detrital marine, lagoonal and terrestrial deposits consisting of sandstones, mudstones and conglomerates. Overlying these deposits are late Quaternary and Recent marine and non-marine sediments. These Tertiary and Quaternary formations are generally flat-lying, except for locally deformed areas such as Mount Soledad (approximately 20 miles northwest of the site).

The project site is underlain by the Otay and Sweetwater Formations and Santiago Peak Volcanics. The San Miguel Mountain area includes a granitic core which has intruded the older Santiago Peak Metavolcanics. Granitic material likely underlies the site at depth. These units are covered by veneers of topsoils, alluvium/colluvium and in the north portion of the project site, two small landslides. The geologic units encountered during the subsurface geotechnical investigation are described below in order of increasing age and are indicated on Plate 1 (oversized) of the GeoSoils report, on file at the City Planning Department.

Landslide Deposits. Due to the bedrock stratigraphy and the topographic setting, existing landslides on the property appear to be minor. As depicted on Plate 1 of the GeoSoils Report, based on the evaluation of aerial photographs and site inspection several small landslides appear to exist in the northern portion of the site. The March 1989 investigation updated the information on these landslides, as summarized below.

Surficial slumps and landslides have been identified both in exploration trenches and borings. Where observed, slide planes range in depth from 5 to 12 feet from existing surface and can be projected to approximately 20 feet deep on larger slide features. At the surface, slide masses ranged in width from 150 to 300 feet. The upper breakaways or scarps of the slides did not extend to the top of the ridge but

are located between one-third and one-half the slope height from the top. It is likely that most of the surficial slumping material will be excavated during normal grading operations. Recommendations regarding the landslide features will be discussed in the landslide stabilization section of this report.

Topsoil. The site is generally covered by a veneer of topsoil. These soils are composed of porous, highly expansive, black, stiff clays which tend to swell and shrink during wetting and drying periods. The topsoils are typically estimated to be 2 to 3 feet thick, but were found onsite typically 1 to 4 feet thick and up to 10 feet in depth.

Artificial Fill. A minor fill exists in the northwestern portion of the site. The fill formed a small dam which has been breached. The fill is of unknown origin and quality and warrants removal.

Alluvium/Colluvium (Qal/Col). Alluvial and colluvial soils occur in canyon bottoms, in the southwest and southeast areas onsite and at the edge of the SR-125 alignment. These soils consist of sandy clays and clayey sands that are typically unconsolidated, moderately compressible and highly expansive. The thickest alluvial/colluvial deposits range from an estimated thickness of 5 to 8 feet and may be as much as 15 feet thick.

Otay Formation (To). The Otay Formation is the predominant bedrock formation onsite. The formation was deposited in a shallow marine environment with sediments derived from volcanic ash from the west or south and interfingered with sediments derived from local metavolcanic and granitic terrain from the east. The Otay Formation onsite is composed of massive, light gray to brown, dense to very dense, fine to medium-grained silty sands. Onsite, the Otay Formation occupies ridge top areas. In the northern portion of the site the sand becomes a coarse grained "gritstone." Local cementation of the sand by calcium carbonate was encountered in several test borings. Interbedded in the sands are dense, very fine grained sandy silts.

Sweetwater Formation (Tsw). The Sweetwater Formation underlies the Otay Formation and was encountered in the site's extreme north, occupying ridge flanks and canyon bottoms. The Sweetwater Formation was deposited as an alluvial fan. The sediments were derived primarily from the metavolcanic and granitic terrain to the east. The Sweetwater Formation consists of red-brown to olive green, fine-grained sandy clays with interbeds of clayey fine to medium grained sands and sandy gravels. Mudstones within the formation are expansive, containing silt and sand particles. The bedding in the Sweetwater and Otay Formations appears to be nearly horizontal with a dip of 3 to 5 degrees to the southwest.

Santiago Peak Volcanics (Jsp). The Santiago Peak Volcanics consist of very hard, fractured, metavolcanic rock, varying in color from gray and orange brown to medium gray on fresh surfaces. These rocks outcrop in the northwest corner and northeast portion of the site, and from the basement on which the younger sedimentary units have been deposited. Hard rock was found at depths of 3 to 21 feet below the ground surface. The soil cover formed by weathering of the *in situ* rock ranges from 1 to 2 feet in thickness.

Seismicity. A review of available geologic literature pertaining to the project site indicates that there are no known active faults crossing the property. The nearest major active fault is the Coronado Banks fault located approximately 20 miles west

of the subject site (Figure 3-4). A fault was encountered in Boring B-1 (GeoSoils, 1989) but there is no indication of any geologically recent activity associated with it.

The closest potentially active fault is the La Nacion fault system, located approximately 2 miles west of the site. The faults encompassing the La Nacion fault system have been considered to be potentially active and have been mapped as a series of en-echelon subparallel faults.

The seismic hazard most likely to impact the project site is groundshaking resulting from a large earthquake on one of the major faults of the region. Major active faults in the San Diego region, distance to the faults and other statistics are included in the complete geotechnical report on file with the City of Chula Vista. The Coronado Banks faults is the most likely to affect the project site with groundshaking, should an earthquake occur on the fault (20 miles from the project site). A maximum probable event on the Coronado Banks could produce a peak horizontal acceleration of about 0.17g, assuming a magnitude 6.6 earthquake on the Coronado Banks Fault.

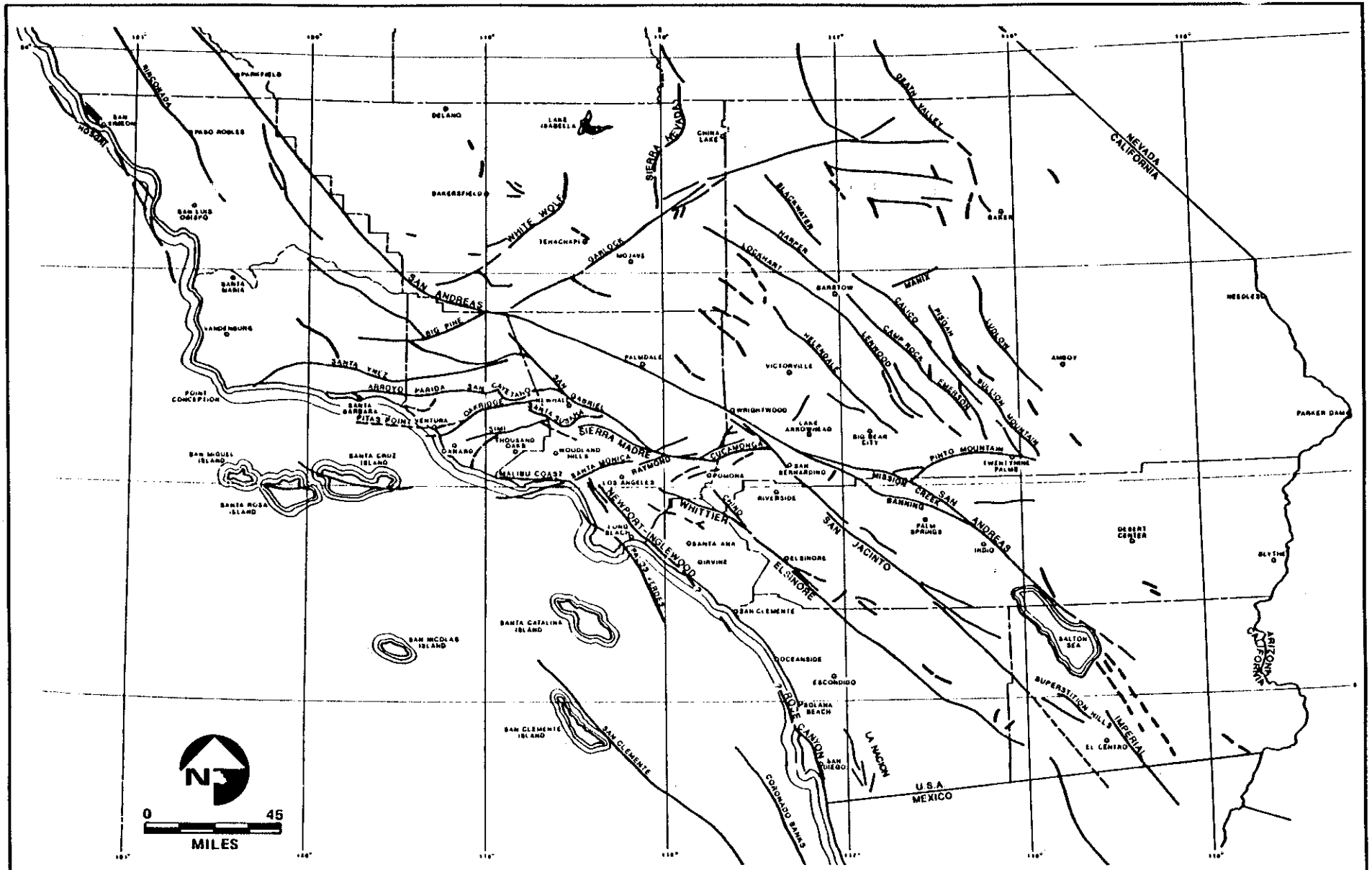
Liquefaction and dynamic settlement of soils can be caused by strong vibratory motion in response to earthquakes or machine vibrations. Both research and historical data indicate that loose, granular soils are susceptible to liquefaction and dynamic settlement, while the stability of most silty clays and clays is not adversely affected by vibratory motion. Liquefaction is generally known to occur only in saturated or near saturated soils at depths shallower than about 100 feet. Because of the dense nature of the subsurface soils encountered during the geotechnical investigation and the depth to the water table, the potential for liquefaction onsite is considered negligible. No other seismic hazards are expected to effect the site.

Groundwater. Surface water may exist for short periods of time in the drainage flowing to Long Canyon (along the southwestern project edge) during rainy periods. The groundwater depth to the regional water table is estimated to be greater than 100 feet in the area, and is estimated to occur between elevations of 200 to 300 feet above mean sea level. Groundwater was encountered at several test excavations within alluvian and bedrock material (GeoSoils, Inc., March, 1989).

Impacts

Based on the preliminary geotechnical investigation of the project site, it has been determined that development of the site is feasible from a geotechnical standpoint. There appear to be no significant geotechnical constraints onsite that cannot be mitigated by proper planning, design and sound construction practices. The following describes potential geotechnical concerns.

Landslide Deposits. Landsliding potential on the majority of the site appears to be relatively minor because of the competent nature of the underlying bedrock and the gentle slopes reflected in the topography. Geotechnical investigations indicated the existence of shallow landslides in the northern portion of the site. Several landslides and slumps have been identified near Open Space Lot "A." The easternmost slide is relatively small and shallow; it is located in a fill area. Complete removal is recommended; depths of 10 to 12 feet should be anticipated.



SOURCE: Jennings, 1975

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Regional Fault Map

FIGURE 3-4

The central landslide appears to have the most affect on site grading. It will be necessary to extend the key for the fill slope through the slide mass. The depth of the slide is approximately 20 feet. The lower portion of the central slide is to have fill placed against it. As for the upper fill complete slide removal with 1:1 projections downward are recommended. The mass of this slide that will remain after recommended corrective grading is not considered to present a risk to any lot as currently proposed. The western landslide area is a series of smaller slide features. The upper 8 to 10 feet is disrupted, soft, and weathered. This zone should be removed prior to fill placement. The remaining landslide mass is anticipated to be essentially an intact block of bedrock which will be effectively buttressed by proposed grading.

Topsoil. The topsoils that mantle the project site are typically highly expansive in nature. The topsoil material would not be suitable for support of conventional shallow foundations or as base for fill soils. Any excavation onsite would include the removal of topsoil to avoid expansion problems.

Alluvium/Colluvium (Qal, Col). The alluvial and colluvial soils that occur onsite are compressible in their present state and may settle appreciably under the surcharge of fills or foundation loadings. These soils are generally considered acceptable for reuse as compacted fill. Various cut-and-fill areas on slopes will require excavation and removal of alluvium and colluvium, depending upon future detailed analysis.

Otay Formation (To). The Otay Formation is composed primarily of massive sands with interbedded silts. In localized areas, the sands are well cemented. It is anticipated that excavation can be accomplished with the aid of heavy rippers. It is also anticipated that the excavated materials will be of very good quality for select fill. Some slope instability may occur from buildup of hydrostatic pressure, which would require remedial grading techniques including stabilization or additional excavation. Recommendations would be based upon field conditions during grading.

Sweetwater Formation (Tsw). The Sweetwater Formation outcrops in the extreme northern portion of the site and consists of massive sands with interbedded clays. It is anticipated that the sands can be excavated by heavy ripping and that the resulting excavated materials will be of good quality for fill construction. The interbedded clays may be highly expansive. These areas of Sweetwater Formation will require further geotechnical investigation before grading. As with the Otay Formation, some slope instability may occur, requiring remedial grading.

Santiago Peak Volcanics (Jsp). The metavolcanic rocks that outcrop in the very northwest corner of the site are highly fractured and dense. Excavation of these rocks would require blasting or heavy ripping in cut areas, producing poor to moderate quality fill due to oversize materials. It appears that most of that area is designated as open space and if so, no significant impacts are expected. This must be verified or mitigated to avoid potential impacts.

Seismicity. The maximum anticipated bedrock acceleration on the project site is estimated to be approximately 0.13 g based on a maximum probable earthquake on the Coronado Banks fault. Two-thirds of the maximum anticipated bedrock acceleration may be assumed for the design ground acceleration.

Earthwork. The earthwork to be anticipated will include, at a minimum, site preparation, excavation, and compaction of fill. The site preparation will include proper clearing of any existing debris and removal of vegetation and topsoil. Removed materials not suitable for structural backfill will be disposed of offsite, or in approved non-structural areas (i.e., San Diego Gas & Electric easements). Excavation will include the removal of topsoil, alluvium and colluvium. Quantities have not been estimated.

Cut Slopes. Cut slopes within the formational materials onsite will be predominantly in sand and silt. The highest planned cut slope (80 ± feet) is located northeast of the proposed State Route 125 and southeast of the proposed East "H" Street extension. Significant claystone units are anticipated to be encountered within this slope and remedial grading will be necessary.

The cut slopes surrounding the northernmost electric power tower might also encounter adverse conditions. Sheared surfaces and claystone (near toe grade) were encountered in Boring B-3 (See Appendix A). As such, the potential for stabilization of these slopes is very high. Redesign might be considered to minimize the height of these slopes. It does not appear likely that backcuts for stabilization fills would be prone to failure.

There is a potential for adverse joint and fracture surfaces to be exposed in the fill over cut slopes which lies west of the proposed San Miguel Road extension above Lots 13-18, potentially requiring remedial grading. A fairly consistent system of near surface joints have been identified which might present adverse conditions.

Fill Slopes. Fill slopes are proposed at gradients of 2:1 or flatter. The highest proposed fill slope is 50 (±) feet. Stability analysis indicates this slope should have a factor of safety of at least 1.5 or that recommended under the City Grading Ordinance.

Mitigation Measures

- A site-specific earthwork package shall be prepared in accordance with recommendations of the March 1989 GeoSoils report, indicating the approximate amount of earthwork removal necessary and addressing and mitigating any other geotechnical constraints. Onsite excavation of the formational units shall be quantified and shall define favorable select material for structural fills. Select fill soils may be mixed with the topsoil, alluvial and colluvial soils for deep canyon fills. Any export material must have an approved spoil site identified and procedures defined. The investigation and earthwork package shall be subject to approval by the City Engineer, prior to issuance of grading permits.

- Concerning seismicity, the effects of groundshaking on the project site shall be mitigated by adhering to the State 1976 Uniform Building Code or state-of-the-art seismic design parameters of the Structural Engineers Association of California.

- Cut-and-fill slopes constructed with erosion prone materials (i.e., granular sands of the Otay Formation) shall be provided with appropriate surface drainage features subject to approval by the City, and shall be landscaped immediately following grading to minimize any erosional damage from surface waters. Drainage features shall be installed in accordance with City

requirements to avoid erosion during grading subject to onsite inspection and approval by City staff.

- Expansive soils shall be removed and used in accordance with recommendations of the March 1989 GeoSoils report. Areas requiring removal and replacement of expansive soils shall be evaluated (for special foundation design, etc.) by the geotechnical engineer during the site specific tentative grading plan geotechnical investigations in accordance with City grading procedures and monitoring.

- Alluvial and/or colluvial soils encountered in areas that will receive fill or other surface improvements shall be removed and recompacted in order to mitigate the potential for settlement. Procedures shall be dictated precisely on plans which show where onsite this shall occur. Verification shall occur through onsite approval by a qualified expert.

- Cut slopes requiring special drainage or stabilization (i.e., northeast side of SR-125, southeast of "H" Street, the power tower in open space lot B), shall be evaluated by the geotechnical consultant and mitigated appropriately during site grading. Evaluation shall be verified and signed in written form at appropriate phases of grading.

- Foundations and slabs shall be designed in accordance with recommendations of the March 1989 GeoSoils report. Design shall be approved by the City, based on the type of soils encountered onsite and subsequent expansion testing, in accordance with City Code requirements.

- Prior to issuance of grading permits, outcrops shall be assessed for rippability and quality for fill material. Any additional mitigation shall be defined and may be included in the earthwork investigation, subject to approval by the City.

- Stabilization fills shall be constructed in accordance with slope height as dictated in the GeoSoils March 1989 report, page 26. Further, fill slopes shall be constructed at gradients of 2:1 or flatter, and in accordance with City of Chula Vista codes, the Uniform Building Code (UBC) and Grading Guidelines of the GeoSoils March 1989 report (Appendix D of GeoSoils report).

- Landslide corrective grading required in and around Open Space Lot "A" shall be conducted specifically in accordance with methodology dictated in the March 1989 GeoSoils report, plans subject to the approval of the City prior to issuance of grading permits.

- Lots 62 through 72 shall be overexcavated and reconstructed as shown in Appendix D of the GeoSoils March 1989 report.

- All slopes shall be designed and constructed in accordance with requirements of the City of Chula Vista codes, the UBC and recommendations of the Geosoils March 1989 report (specifically Appendix A and pages 29-30 of that report).

- Specific grading plans shall be reviewed by a qualified geotechnical expert and approved by the City prior to issuance of grading permits.

Analysis of Significance

Implementation of the above mitigation measures and adherence to City regulations and project documents will ensure that all potential geotechnical impacts of the project will be mitigated to a level of insignificance. No unmitigable cumulative impacts are anticipated.

D. HYDROLOGY/WATER QUALITY

Data for the following section were derived from various sources: hydrological calculations for the project (The McIntire Group, 1989; report on file at the City of Chula Vista); EIR 84-1; the Preliminary Geological Soils Engineering Study (GeoSoils, 1989); Master Plan of Water and Master Plan of Sewerage for Salt Creek I (Wilson Engineering, 1989). Regarding water supply issues, the reader is referred to Section III.L.4.

Existing Conditions

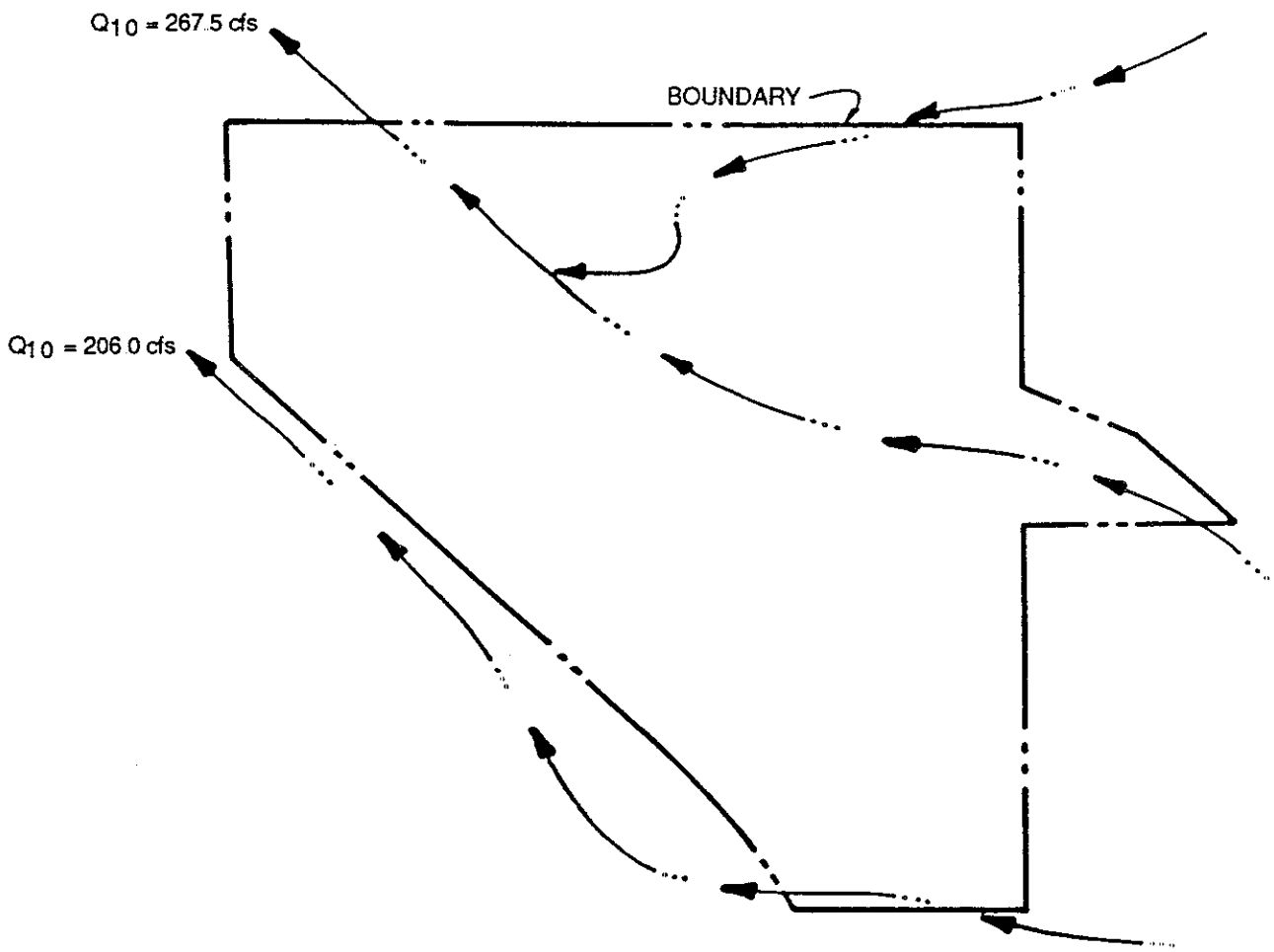
Hydrological characteristics of the watershed and region are discussed in detail in EIR 84-1, Section 3.6, hereby incorporated by reference. On a local/vicinity scale, the site is encompassed in the Proctor Valley Drainage Basin. The site is located at the southeastern end of the basin. The Proctor Valley Basin contains residentially developed areas only in its lower reaches located to the west/northwest of the subject site. Flooding problems associated with drainage facilities have been experienced in the general area (EIR 84-1). Natural water courses in the project vicinity are ephemeral in nature and contain runoff only during or immediately after prolonged or intense rainstorms. Earthen dikes have been created across drainage courses in the past in an effort to retain runoff for ranching purposes.

Drainage. Onsite, natural drainage flows generally southeast to northwest. There are no flood prone areas on the site due to its location at the headwaters of drainage. No evidence of springs or seeps that are perennial in nature was observed (GeoSoils, 1989). Groundwater was encountered during geotechnical investigation of the property (see Geology section). Existing flow direction and rates are identified in Figure 3-5. As shown, the two prominent drainages exit the site at the northwest and west boundaries, originating from the southeast and east.

Water Quality. The project site is under the jurisdiction of the California Regional Water Quality Control Board San Diego Region (RWQCB). The RWQCB protects water resources by establishment of "beneficial uses" required to maintain acceptable water quality. Water quality objectives are also established by RWQCB. The detailed discussion in EIR 84-1 regarding water quality objectives and standards relevant to this area is hereby incorporated by reference, and mitigation is included at the end of this section.

Impacts

Project Drainage and Proposed Facilities. Figure 3-6 illustrates post-development drainage patterns and quantities. When compared to quantities in Figure 3-5 (existing flows), the project is found to result in an offsite drainage increase of 99.5 cfs (Q_{10}) to the northwest and 78.4 cfs (Q_{10}) to the west. These increases (due to the development's resulting increase in impervious surfaces) must be accommodated either onsite or downstream, to mitigate potential runoff impacts to downstream areas.



N

NO SCALE

LEGEND

EPHEMERAL DRAINAGE COURSE

RUNOFF DIRECTION AND VOLUME

Q_{10} = 10 YEAR STORM FLOW (Cubic Feet per Second)

SOURCE: The McIntire Group, 1989.

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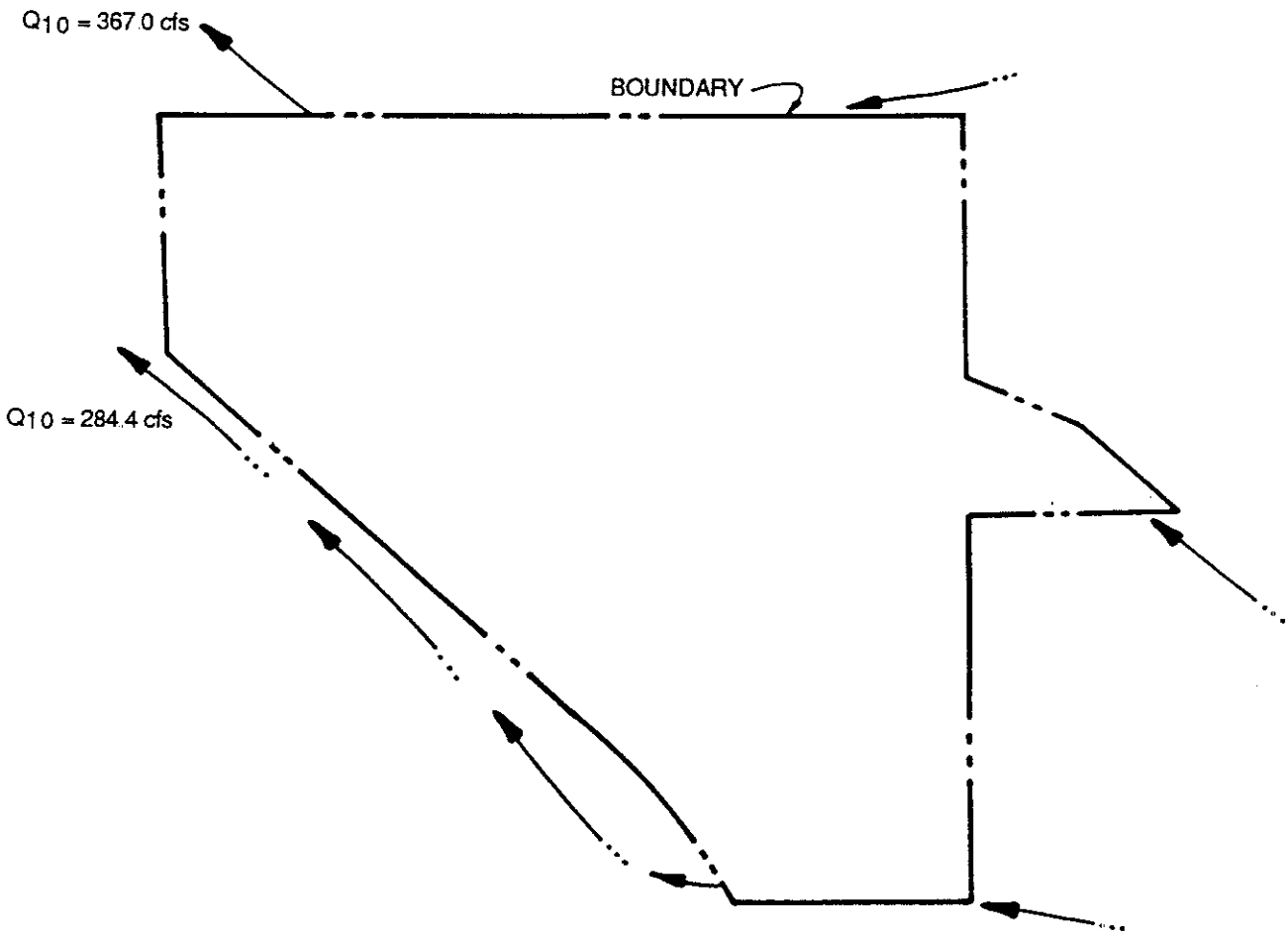
Existing Surface Drainage in the Project Site Vicinity

FIGURE 3-5



NO SCALE

LEGEND

EPHEMERAL DRAINAGE COURSE

RUNOFF DIRECTION AND VOLUME

Q_{10} = 10 YEAR STORM FLOW (Cubic Feet per Second)

SOURCE: The McIntire Group, 1989.

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Post Development Surface Drainage in the Project Site Vicinity

FIGURE **3-6**

The main consideration in increased flows is that the resulting flows are accommodated either by natural drainage courses without impact to those natural courses, or by facilities installed to mitigate additional drainage. The project, located at the headwaters of the drainage, will contribute to a cumulative increase in flows which can be accommodated downstream. No definitive hydrological mitigation of downstream runoff increases has yet been determined; negotiations are underway between landowners to solve potential cumulative drainage impacts from this and other projects in the drainage area. Mitigation must be formulated and approved prior to site grading.

Water Quality. The Salt Creek I development will add impervious surfaces to the undeveloped site, potentially adding pollutants into drainage areas to the west and northwest of the site. Urban runoff will carry pollutants from manmade surfaces. Typical pollutants from such development include: 1) nitrogen and phosphate compounds from fertilizers; 2) pesticides, herbicides and fungicides; 3) trace metals from streets; and 4) detergent and petrochemicals from motor vehicles. Potential water quality degradation from these urban pollutants, constituting a contribution to cumulative water quality impacts, will require mitigation such as screening in drainage structures and minimal use of fertilizers and pesticides. Adverse effects on groundwater are not expected. Water quality effects from sedimentation and erosion during project grading and construction and at project completion are also considered potentially adverse on a cumulative basis. These impacts can be mitigated via standard construction practices cited below.

Mitigation Measures

- The project shall comply with all applicable City flood control regulations.

- Prior to issuance of grading permits, the proponent shall verify (on drainage plans) to the satisfaction of the City Engineer/Public Works Department that project peak discharges offsite to the west and northwest will be mitigated (by limiting the increase in existing flows, participation in a flood control district, flood routing, or installation of downstream improvements), and will not impact the Proctor Valley Drainage Basin.

- Drainage plans for the project (required above) will incorporate facilities to provide for long-term erosion, sedimentation and pollutant control in project runoff. Said plans shall be subject to approval by the City Engineer or Public Works Department, prior to issuance of grading permits. Subsequent to project completion (Certificates of Use and Occupancy), these facilities shall be inspected for adequacy by a qualified expert approved by the City (inspection cost to be at the applicant's expense) to ensure adequate water quality control in project drainage facilities.

- The project shall be in conformance with applicable water and reclaimed water regulations of the Otay Water District and State Regional Water Quality Control Board.

- Construction sedimentation will be controlled by adherence to City erosion control measures. Sedimentation basins and other mechanisms shall be installed as deemed necessary by the City Engineer or Public Works Department, to control scouring and increased sediment loads. Monitoring during grading shall be conducted at the applicant's expense to verify adequate erosion control.

Analysis of Significance

Implementation of the above mitigation measures will insure that potential project-specific and cumulative adverse hydrology and water quality impacts are mitigated to a level of insignificance.

E. BIOLOGICAL RESOURCES

The biological resources of the Salt Creek I project area have been previously evaluated for other environmental reports (WESTEC Services 1979; 1980; 1981). The earlier baseline studies are incorporated by reference into this analysis. Field verification of sensitive species and delineation of plant communities were performed by ERCE biologist Patrick Mock and consulting biologist Vincent Scheidt in early April 1989, by Paula Jacks, ERCE biologist, in late April 1989, and by Steve Lacy, Manager of ERCE's Life Sciences Group, in early June 1989. The property was surveyed on foot; all habitats on the site were visited. Nomenclature follows Munz (1974) for plants, AOU (1983) for birds, Jennings (1983) for reptiles and amphibians, and Jones *et al.* (1982) for mammals.

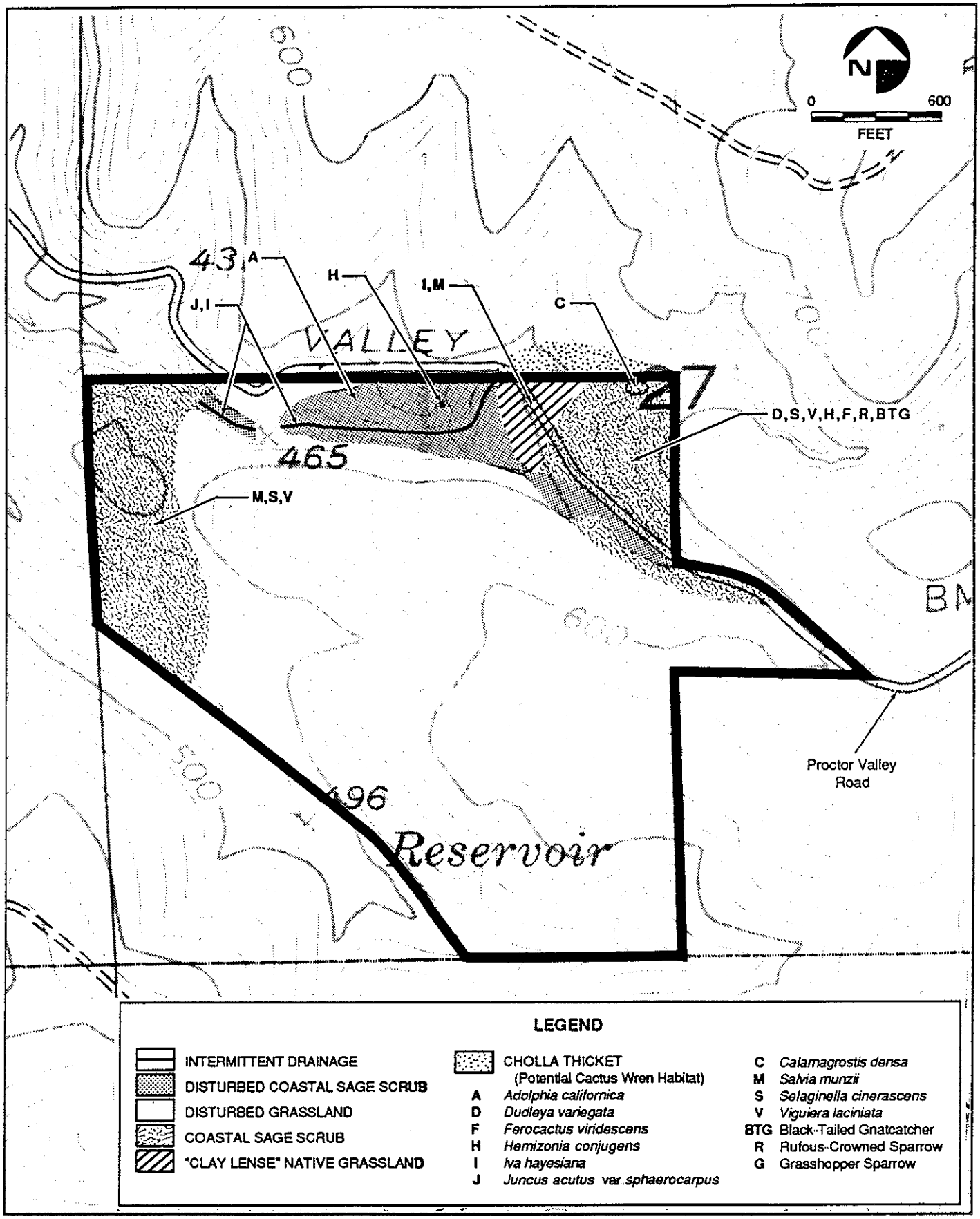
Existing Conditions

Vegetation

The Salt Creek I property is dominated by two plant communities, coastal sage scrub and disturbed grassland. Figure 3-7 and Table 3-2 illustrate and list biological resources onsite. Coastal sage scrub comprises approximately 20.2 acres (15.4 percent of the site) and is found in the northwestern and northeastern portions of the property (Figure 3-7). The coastal sage scrub on site is classified as Diegan coastal sage scrub (Holland 1986). Diegan coastal sage scrub is composed of low (less than 1 m high), soft-woody subshrubs, many of which are facultatively drought-deciduous. This association is typically found on dry sites, such as steep, south-facing slopes or clay-rich soils that are slow to release water. Dominant shrub species on the Salt Creek I property include California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum*), laural sumac (*Rhus laurina*), and San Diego sunflower (*Viguiera laciniata*). Typically, the understory of this association is well developed, and includes such species as bedstraw (*Galium aparine*), Indian paint brush (*Castilleja affinis*) and red monkey flower (*Mimulus puniceus*). Ashy-spike moss (*Selaginella cinerascens*) covers the entire area that is dominated by intact coastal sage scrub. Large patches of coast cholla (*Opuntia prolifera*) occur along the northeastern boundary of the property.

Disturbed areas of coastal sage scrub are present in various areas, principally in the open area between knolls on the northeastern and northwestern ends of the site. This habitat is similar in species composition to intact coastal sage scrub, but is significantly more open and infused with non-native grassland elements. This area may be in an early phase of recovery from past grazing.

In the northeastern section of sage scrub there are small pockets of native grassland located in clay lenses. This habitat, encompassing about 2.3 acres (1.8 percent of the property), supports such indicator native grass species as blue-eyed grass (*Sisyrinchium bellum*), robust gumplant (*Grindelic robusta*), mariposa lily (*Calochortus* sp.), wild onion (*Allium* sp.), and needlegrass (*Stipa* sp.). The rare



ERC Environmental and Energy Services Co.

Biological Resources of Salt Creek I Project Site

FIGURE 3-7

Table 3-2

SALT CREEK I IMPACTS TO BIOLOGICAL RESOURCES

Resource	Existing Condition	Expected Loss	Level of Impact
Habitats			
Coastal Sage Scrub	20.2 acres	16.9 acres	Significant, mitigable
Native Grassland	2.3 acres	2.3 acres	Insignificant; contributes to incremental regional effect
Disturbed Grassland/ Coastal Sage Scrub	107.4 acres	107.4 acres	Insignificant; contributes to incremental regional effect
Riparian Scrub	Trace	all	Insignificant
Sensitive Plants			
Adolphia californica	50-100 plants	50-100 plants	Insignificant; contributes to incremental loss
Calamagrositis densa	±25	±25	Insignificant; contributes to incremental loss
Adolphia californica *Dudleya variegata*	50-100 plants	50-100 plants	Insignificant; contributes to incremental loss
Ferocactus viridescens	200-500	200-500	Insignificant; contributes to incremental loss
Hemizonia conjugens	200	200	Significant, mitigable (Design Alternative)
Iva hayesiana	±100	±100	Insignificant; contributes to incremental loss
Jancus acutus var. *sphaerocarpus*	<20	<20	Insignificant; contributes to incremental loss
Salvia munzii	±20	±20	Insignificant; contributes to incremental loss
Selaginella cinerascens	Common in css	In all impacted Sage Scrub	Insignificant; contributes to incremental loss
Viguiera laciniata	±1000	In all impacted Sage Scrub	Insignificant; contributes to incremental loss
Sensitive Animals			
Black-tailed Gnatcatcher	1-2 pair	1-2 pair	Significant, mitigable
Coastal Cactus Wren	Suitable Habitat Present		Insignificant; contributes to incremental loss
Grasshopper Sparrow	2+	2+	Insignificant; contributes to incremental loss
Rufous-crowned Sparrow	2 pair	2 pair	Insignificant; contributes to incremental loss
Northern harrier	1 pair	1 pair	Insignificant; contributes to incremental loss
Birds of Prey		Loss of foraging habitat	Insignificant; contributes to incremental loss
Orange-throated Whiptail		Suitable habitat	Insignificant; contributes to incremental loss
San Diego Horned Lizard		Suitable habitat	Insignificant; contributes to incremental loss

San Diego thorn-mint (*Acanthomintha ilicifolia*) can potentially occur in this type of habitat.

Disturbed grassland on the property encompasses the remaining 107.4 acres (82.8 percent of the site) of the property. These grasslands were previously used for agriculture, allowing for nonnative annual grasses and other herbaceous weeds to invade. Characteristic species include wild oat (*Avena barbata*), soft chess (*Bromus mollis*), and ripgut grass (*Bromus rubens*).

There is a small drainage with an impoundment area (approximately 200 sq.ft in area) created by Proctor Valley Road on the western end of the site. This area supports weedy riparian species, including one tamarisk (*Tamarix* sp.), one mulefat (*Baccharis glutinosa*), San Diego marsh elder (*Iva hayesiana*), spiny rush (*Juncus acutus* var. *sphaerocarpus*), salt grass (*Distichlis spicata*), African brass buttons (*Cotula* sp.), rabbitfoot grass, and other herbs.

Sensitive Habitats and Plants. Sensitive habitats are those which are considered rare within the region, are listed by the Conservation Element of the General Plan for the County of San Diego (1980), or support sensitive plants or animals. Coastal sage scrub is considered a sensitive habitat by the County of San Diego. Oberbauer (1979) estimated that more than 70 percent of the original acreage of this habitat has been lost in the County to urban and agricultural development. Additional evidence of the decline of this once common habitat is the growing number of declining plant and animal species closely associated with it. Very little coastal sage scrub lies in areas designated as permanent natural open space in the County.

Native grassland is a sensitive habitat due to its rarity in southern California and its reduction due to agricultural development. Much of what remains lies around the fringes of expanding cities. The native grassland on the Salt Creek I property is limited to "clay lenses" within the coastal sage scrub habitat on the northeastern portion of the site.

High-interest plants include those listed by the U.S. Fish and Wildlife Service (USFWS) (1985), California Department of Fish and Game (CDFG) (1985), and the California Native Plant Society (CNPS) (Smith and Berg 1988). The CNPS listing is sanctioned by the California Department of Fish and Game and essentially serves as that department's list of "candidate" species for threatened or endangered status. Those sensitive plant species observed or expected on site are reviewed below. (See Appendix D, Attachment C for an explanation of the CNPS and USFWS designations).

Acanthomintha ilicifolia
San Diego Thorn-mint
USFWS: Candidate (Category 2)
CDFG: Endangered
CNPS rating: List 1, 2-3-2
San Diego thorn-mint is restricted to San Diego County and Baja California. This spring-blooming (April-May) annual plant occurs in clay depressions on mesas and slopes below 300 m (965 ft) elevation and is associated with coastal sage scrub, chaparral, and grassland. In San Diego County, the species is known from Encinitas and San Marcos south to Sweetwater and Otay lakes (Beauchamp 1986) and from higher elevations on McGinty Mountain (Oberbauer 1979, Wier 1986).

This species may occur within the clay lense grassland habitat on the site, but was not detected during late April surveys. It is best surveyed for in May and June.

Adolphia californica
California Adolphia
CNPS rating: List 2, 1-2-1
This winter to spring-blooming (December-May) shrub is known from western San Diego County and northwestern Baja California. It generally occurs on clay soils, in dry canyons and washes in chaparral below 300 m (965 ft) elevation. Reported localities in the County include Morro Hill, Agua Hedionda, Rancho Santa Fe, Mount Soledad, Bernardo, Chollas Valley, Barrett Junction, Proctor Valley, and Otay (Beauchamp 1986). This species is found in low lying areas of the site both north and south of Proctor Valley Road.

Calamagrostis densa
Dense Reed Grass
USFWS: Candidate (Category 2)
CNPS rating: List 4, 1-1-2
This San Diego County endemic is generally infrequent in open and disturbed sites above 400 m (1287 ft) elevation, although it is common near the summit of San Miguel Mountain (PSBS 1980). Additional reported localities include Julian, Inspiration Point, Barona Valley along the south fork of Featherstone Creek, Los Terranitos, and Otay Mountain (Beauchamp 1986). This perennial grass flowers in June and July. About 25 individuals were found on the northern slope of the knoll located in the northeast corner of the property.

Dudleya variegata
Variegated Dudleya or San Diego Hasseanthus
USFWS: Candidate (Category 2)
CNPS rating: List 4, 1-2-2
This species is restricted in distribution to southern San Diego County and northwestern Baja California. According to the CNPS, it occurs (overall) in sufficient numbers that immediate threat of extinction or extirpation is unlikely. However, it appears that this species is actually more restricted in range and more threatened than indicated by its current status in the CNPS Inventory. For example, the northern limits of the species are now Miramar NAS (PSBS 1982), Ralphs Ranch (Wier Biological 1983), Poway (at Lou Grubb Chevrolet, C. Patterson, personal communication), and a small population at Rancho Arbolitos (PSBS 1981). The population at Rancho Arbolitos may now be extirpated, since a development was planned for the area. The species usually grows in areas vulnerable to development rather than at sites at which it might be more easily protected (i.e., peaks). At the current time, the only "protected" sites for *D. variegata* are at the Naval Radio Receiving Facility towers in Imperial Beach and possibly on Miramar Naval Air Station.

Ferocactus viridescens
Coast Barrel Cactus
CNPS rating: List 2, 1-3-1
Coast barrel cactus is limited to San Diego County and Baja California. In San Diego County, this species is occasional on dry slopes below 1500 m (4922 ft) and is found along the coastal slope from Oceanside south to Boundary Monument. *Ferocactus viridescens* is seriously threatened by urbanization, off-road vehicles, and commercial exploitation. Scattered barrel cactus were observed

in low densities throughout the coastal sage scrub habitat on site. The population is estimated to be between 200 and 500 individuals.

Hemizonia conjugens
Otay Tarplant
USFWS: Candidate (Category 2)
CDFG: Endangered
CNPS rating: List 1, 3-3-2
This late spring to fall blooming (May-September) annual herb occurs only in southern San Diego County and northwestern Baja California. Within the County, Otay tarplant is found in scattered localities on clay soils and in swales from the vicinity of Sweetwater Reservoir south to the border. It is apparently equally uncommon in Mexico. This primary threat to this species is development of its habitat. Approximately 200 of this species was detected onsite, primarily in the northeastern portion of the property. A few individuals were found in a low lying area south of Proctor Valley Road, as well as offsite, adjacent to the northwestern corner of the property.

Iva hayesiana
San Diego-Marsh Elder, San Diego Poverty Weed
CNPS: List 2, 2-2-1
This perennial subshrub occurs in southwestern San Diego County and northern Baja California (Munz 1974). It is frequent in low-lying, moist or alkaline places along the coast and has been recorded along intermittent streams. Although rare in the County, this species is apparently more common and widespread south of the border. Reported localities include Rancho Santa Fe, Miramar Reservoir, Penasquitos Canyon, Alvarado Canyon, Proctor Valley, La Presa, Otay, Tijuana River Valley, and Otay Mesa (Beauchamp 1986). *Iva hayesiana* is threatened primarily by channelization of drainages and development. Approximately 100 specimens were observed in the drainage onsite.

Juncus acutus var. *sphaerocarpus*
Spiny Rush
CNPS : List 4, 1-2-2
Spiny rush is a relatively common plant associated with moist, saline or alkaline soils. This species is found in drainages and wetland areas south of Aqua Hedionda to the Sweetwater Valley. The sensitivity of this plant is due to the decline in wetland habitats throughout the County. Less than 20 specimens were observed in the drainages onsite.

Salvia munzii
Munz's Sage
CNPS rating: List 2, 2-2-1
Munz's sage is a small shrub which occurs frequently below 500 m (1640 ft) elevation in coastal sage scrub in the south foothill and coastal region of San Diego County. Reported localities for this species include San Miguel, Jamul, and Otay Mountains, Dictionary Hill, Proctor Valley, and Lower Otay Lake (Beauchamp 1986). This species is highly localized, found onsite (± 20 specimens) in small patches in both the northeast and northwest corners of the property. Some hybrids with white sage (*Salvia apiana)* were observed.

Selaginella cinerascens
Mesa Clubmoss
CNPS rating: List 2, 1-2-1
This prostrate, moss-like plant occurs in San Diego County and northwestern Baja California. It is still relatively abundant in coastal areas, occurring on flat mesas that are prime locations for development, such as Mira Mesa and Tierrasanta. Development of these areas has caused massive destruction of the habitat of this species. This species covers a large portion of the area currently supporting coastal sage scrub habitat.

Stipa diegoensis
San Diego County Needle Grass
CNPS rating: List 2, 3-1-1
This perennial bunchgrass occurs locally along vernal streams and on clay soils between 300 and 700 m (984 to 2297 ft) elevation. This species is known from the upper slopes of Jamul and McGinty mountains, as well as Proctor Valley, Lee Valley, and Otay Mountain (Beauchamp 1986). The potential of this species to occur onsite is high due to its known distribution in the vicinity of the site. This species is best surveyed during summer.

Viguiera laciniata
San Diego Sunflower
CNPS rating: List 2, 1-2-1
This species occurs in southern San Diego County and northwestern Baja California. In San Diego County, *V. laciniata* occurs from the international border north to about Santee and extends from the seacoast east, at a few localities where habitat remains, to about Crest. The primary threat to this species is urbanization. San Diego sunflower is a yellow-flowered, spring-blooming (January-July), xerophytic shrub that occurs in coastal sage scrub. This species is a common constituent of coastal sage scrub onsite.

Wildlife

Birds. Bird species expected to use the Salt Creek I site are listed in Table 3-2. Few species occur in the grassland habitat and most of these are winter visitors, not nesting in the area. Only the horned lark (*Eremophila alpestris*), western meadowlark (*Sturnella neglecta*), and grasshopper sparrow (*Ammodramus savannarum*) are expected to breed there. Savannah sparrows (*Passerculus sandwichensis*) were very common in the grassland habitat during the April surveys.

Most birds onsite were found in the coastal sage scrub or sage scrub/grassland ecotone. Characteristic species observed in the sage scrub include California black-tailed gnatcatcher (*Polioptila melanura californica*), Anna's hummingbird (*Calypte anna*), Bewick's wren (*Thryomanes bewickii*), brown towhee (*Pipilo fuscus*), and rufous-crowned sparrow (*Aimophila carpalis*). Suitable patches of cactus which are likely to support coastal cactus wrens (*Campylorhynchus brunneicapillus sandiegense*) are present on site, though no wrens were observed.

Sensitive Bird Species. The California black-tailed gnatcatcher is a candidate for federal listing (Category 2), and is considered a species of special concern by the California Department of Fish and Game (Remsen 1978). Recent taxonomic studies indicate that the coastal race of black-tailed gnatcatcher (*P m. californica*) is a distinct species, reproductively isolated from the desert race, *P m. lucidia*

(Atwood 1988). The California black-tailed gnatcatcher population has been estimated at about 1000 to 1500 pairs in the United States with less than 400 pairs remaining in San Diego County (Atwood 1980). The primary cause of this species decline is due to the cumulative loss of coastal sage scrub vegetation to urban and agricultural development. This species is probably extirpated from Ventura and San Bernardino Counties. It is declining proportionately with the continued loss of coastal sage scrub habitat in all of the other four coastal counties. The territory size requirements of the gnatcatcher varies with habitat quality. Documented home ranges have varied from 10 to 20 acres in San Diego County (RECON 1987; ERCE, unpublished data). At least one, possibly two pairs of gnatcatcher are present in the coastal sage scrub habitat in the northeastern portion of the property.

The coastal cactus wren is considered declining as a breeding species on the regional level (Everett 1979; Rea 1986). This distinct subspecies is found primarily in coastal sage scrub with stands of prickly pear or cholla and is of very local occurrence. Grinnell and Miller (1944) found this species much restricted in occurrence compared to its former distribution and that reduction has continued unabated. While this species currently has no official protected status, it is of local concern. Recent population surveys estimated that only 230 pairs remain in San Diego County (Weaver 1989). Cactus wrens are likely to use the property since suitable habitat is present directly adjacent to the site.

The rufous-crowned sparrow is a resident species that prefers grassy or rocky slopes with sparse bushes. Most of the species' population occurs in coastal sage scrub, so it has undoubtedly been reduced greatly by urban development. This species is not on any formal list, but recently has become of concern by local ornithologists. At least two pair are present in the northeastern section of the property.

The grasshopper sparrow (*Ammodramus savannarum perpallidus*) is a declining species that has no special regulatory status but has been eliminated from much of its range in San Diego County and is considered sensitive on the local level (Everett 1979). It occurs in grassland with sparse brush, primarily in the coastal lowland. Grasshoppers sparrows are seen mainly from late March through mid-July, when they sing from exposed perches; the species is nearly impossible to find when not singing, and most or all of the population migrates out of California for the winter. At least two grasshopper sparrows were observed onsite and a larger number was recently located on the adjacent Salt Creek Ranch property (ERCE, unpublished data).

Birds of prey as a group are considered sensitive because of loss of foraging areas, their vulnerability to human disturbance, their low population densities, and their position a the top of the food chain. One pair of northern harrier (*Circus cyaneus*) was observed on site and are likely to be nesting in the vicinity. Golden eagles are known to nest in the local mountains and use the grassland areas for foraging.

Reptiles and Amphibians. Species likely to be present include western fence lizard (*Sceloporous occidentalis*), side-bloched lizard (*Uta stansburiana*), western rattlesnake (*Crotalus viridis*). A common kingsnake (*Lampropeltis getulus*).was observed onsite. Amphibian species expected to occur on the property include Pacific slender salamander (*Batrachoseps pacificicus*), Pacific treefrog (*Hyla regilla*), and Western toad (*Bufo boreas*).

Sensitive reptiles. Several declining reptile species are known from San Diego County. These species are considered sensitive because their distribution is contracting as a result of on-going habitat loss from urbanization. In addition, the population levels of many of these species are poorly known. Two sensitive reptile species are likely to occur on the site.

The San Diego horned lizard (*Phrynosoma coronatum blainvillei*) is a candidate for federal listing (Category 2), protected by the California Department of Fish and Game, and considered endangered by the San Diego Herpetological Society (SDHS 1980) because of habitat destruction and collecting for the pet trade.

The orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*) is a candidate for federal listing (Category 2), protected by the California Department of Fish and Game, and considered threatened by the San Diego Herpetological Society (SDHS 1980). The principal threat to this species is loss of open sage scrub, its preferred habitat. It is still locally common in many areas. This species could occur throughout scrub habitats onsite, though none were detected.

Mammals. The coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus auduboni*), brush rabbit (*S. bachmani*), California ground squirrel (*Spermophilus beecheyi*), and woodrat (*Neotoma* sp.) are likely to be on the site. No sensitive mammal species are expected to make significant use of the site. Mountain lions (*Felis concolor*) are known from San Miguel Mountain and may utilize the site, however none were detected.

Impacts

Table 3-2 summarizes project impacts to sensitive habitats and species. The project as proposed would affect all areas of the property. Only 3.3 of 24 acres designated as open space will be retained in a natural condition as sage scrub habitat. This natural open space, located in the northwest corner of the property, will be contiguous with a much larger area designated as natural open space in the General Plan, and thus be included in a larger biologically viable sage scrub community. A loss of 16.9 acres of sage scrub which supports populations of *Hemizonia conjugens, Viguiera laciniata, Selaginella cinerascens, Dudleya variegata, Ferocactus viridescens,* 1-2 pairs of black-tailed gnatcatcher, and suitable habitat for coastal cactus wrens constitutes a significant cumulative impact. The City's General Plan policy considers a loss of more than 5 acres of sage scrub to be significant (City of Chula Vista 1989).

The significance of the loss of 2.3 acres of native grassland habitat cannot be fully assessed without surveys for rare plants that may occur in them. The loss of this habitat at this time is considered to contribute to an adverse, cumulative impact due to the small area involved and the isolated condition of this plant community.

The loss of disturbed grassland will result in a contribution to an adverse, cumulative impact to habitat used for foraging by predatory species such as golden eagles, northern harriers and barn owls. The magnitude of this impact is much less than the loss of undisturbed, natural habitats.

The small ephemeral drainage which runs through the property supports a poorly developed assemblage of weedy riparian plant species, but also includes *Iva hayesiana* and *Juncus acutus* var. *sphaerocarpus*. These small populations of

sensitive wetland species would be lost and represents a contribution to an adverse, cumulative impact.

A small population of *Hemizonia conjugens* is present primarily in the northeastern section of the property. The population size of this state-listed endangered species onsite is estimated to be about 200 individuals, though surveys during the summer are needed to verify this population estimate. A few individuals were located offsite in the proposed natural open space area northwest of the property. This population would be lost should the proposed project be implemented. Due to the estimated size of this population and the patchy geographic distribution of the species, the loss of this population is considered to be a significant impact.

The *Dudleya variegata* and *Ferocactus viridescens* are CNPS-listed species and are candidates for listing by the USFWS. The entire populations of these species would be lost under the proposed plan. The loss of these species onsite represents a contribution to an adverse, cumulative impact.

Adolphia californica, Calamagrostis densa, Salvia munzii, Selaginella cinerascens, and *Virguiera laciniata* are all CNPS-listed species, but are not state or federally listed. The loss of these populations is considered to contribute to a cumulative adverse impact.

Direct impacts to 1 to 2 pairs of black-tailed gnatcatchers in the property would be a significant impact. The area of sage scrub known to be utilized by gnatcatchers will be lost under the proposed plan. Though some sage scrub habitat is be preserved in natural open space, this area is not sufficient to support the extant population onsite. Suitable habitat offsite is likely to be occupied by other gnatcatchers, therefore relocation of individuals may not be feasible.

Direct impacts to the suitable habitats of several sensitive vertebrate species listed in Table 3-2 are considered to contribute to an adverse, cumulative loss of habitat for these declining species of special concern.

Mitigation Measures

The following measures are provided in an attempt to reduce impacts to biological resources to below a level of significance. Specific mitigation measures are presented first, followed by general recommendations regarding construction practices and open space.

Upland Habitat Replacement

The retention of native upland vegetation in open space is not sufficient to significantly offset impacts from the proposed development. The following measures are required to mitigate impacts:

- An area of coastal sage scrub habitat equivalent to the acreage lost shall be preserved in natural open space offsite. This mitigation area ideally should have black-tailed gnatcatchers present and be contiguous with a larger area of natural open space.

- Manufactured slopes and disturbed grassland onsite shall be revegetated with native scrub species found in the area. Revegetation of these areas would eventually provide some suitable habitat for the California black-tailed

gnatcatcher and reduce the potential for non-native landscaping materials invading natural habitats. Species suitable for revegetation include the following:

Artemisia californica	California Sagebrush
Eriogonum fasciculatum	Flat-topped Buckwheat
Lotus scoparius	Deerweed
Salvia mellifera	Black Sage
Salvia apiana	White Sage
Haplopappus venetus	Goldenbush
Eshscholzia californica	California Poppy
Lupinus spp.	Lupine

- Coastal sage scrub revegetation areas shall be effectively hydroseeded, followed by a tackified straw mulch. Materials and seed mixes may be changed only with the approval of the project biologist, who shall oversee revegetation procedures at the expense of the applicant.

- The coastal sage scrub habitat shall be irrigated as needed for the first year to accelerate establishment and coverage. The hydroseeding should be completed in the summer, if possible, so as to establish cover prior to the rainy season. A number of annual species are to be included in the hydroseed mixture to provide color to the slopes. The annual species should reseed themselves each year.

- The impacts to *Hemozonia conjugens* shall be mitigated by a seed collection, transplantation, and monitoring program, to be executed at the expense of the applicant. Open space areas of sufficient size to serve as viable mitigation sites exist onsite as well as offsite in areas proposed as natural open space. One to three suitable mitigation sites of sufficient size and with adequate buffer zones from developed areas shall be selected to the satisfaction of the project biologist, for seeding to ensure successful implementation of the mitigation program. These sites shall be permanently protected from development and other sources of human impact via mechanisms approved by the City (i.e., conservation easement, dedicated natural open space preserve, etc.).

- The mitigation sites shall be monitored for a period of 5 years, during which a weed control program will be implemented to prevent competition from weedy annual and perennial species. All phases of the mitigation program shall be supervised by a qualified biologist or native plant horticulturalist at the expense of the project applicant. The monitoring program shall include both quantitative and subject measures to determine the success of the mitigation effort. These performance criteria may include vigor, reproduction success, survivorship, and change in population size through time. Other factors, such as erosion, weed control, and herbivory, which may affect the success of the mitigation program shall be closely documented as determined necessary by the City and project biologist. Remedial measures (e.g., reseeding) shall be implemented if these performance criteria are not attained.

General Recommendations

The desired effect of the following general recommendations is to buffer and protect sensitive wetland and upland habitats and the wildlife therein, and to prevent further degradation of the habitat during and after the construction process.

Construction Practices. Additional loss of habitat could occur from the use of heavy equipment in wetland areas, on and offsite. Nonsensitive construction practices resulting in additional impacts to wetland vegetation would increase the total wetland impact acreage, and ultimately, the amount of mitigation required. Impacts to wetland vegetation adjacent to the grading areas would be reduced by adherence to certain construction practices, as outlined below.

- Heavy equipment and construction activities shall be restricted to the grading areas to the greatest degree possible in order to reduce direct impacts to wetland habitat. Construction of cut and fill slopes, and equipment used for this construction, will be kept within the limits of grading. Prohibited activities in the wetland habitat include staging areas, equipment access, and disposal or temporary placement of excess fill. Construction limits and wetland habitat shall be flagged by a qualified biologist. Construction activities shall be monitored by an onsite inspector (approved by the City) to ensure that grading activities do not affect additional acreage. Any unauthorized impacts caused by construction operations will require that the contractor replace all habitat to its original condition, with wetland habitat potentially being restored at greater than a 1:1 ratio, as deemed appropriate by the City and project biologist.

- Fueling of equipment shall not occur within 50 feet of the intermittent stream.

- Areas designated as open space shall not be grubbed, cleared, or graded, but left in their natural state.

- To ensure that contractors are fully aware of specific restrictions of the project, such as staging areas, limits of fill, no vehicle zones, and other appropriate regulations, information shall be clearly shown on the construction plans and further identified in the field onsite prior to commencement of grading. Contractors should be fully aware of the sensitivities and restrictions prior to bidding.

Open Space. The primary means of mitigating significant impacts to biological resources is the preservation of a system of open space which encompasses the most valuable habitat or sensitive species onsite. Designation of open space is only an initial step in preservation of the sensitive resources therein. The integrity of open space must also be preserved through adherence to responsible construction practices, as outlined above, and the exclusion of certain activities. The following recommendations are provided in an attempt to minimize the effects of the development in open space areas subsequent to construction activities:

- In the event that a fire or fuel break is deemed necessary, plant species used in this area shall be noninvasive, so as to reduce impacts to remaining native vegetation. Suitable species from a biological standpoint are low growing, moderately fire-retardant, native species such as prostrate coyote bush (*Baccharis pilularis* var. *pilularis*).

- No clearing of brush shall be allowed outside the fire or fuelbreak, and no fuelbreak clearing will be allowed in sensitive habitat areas. In general, the limits of the fuelbreak will be measured from the building pads. The width of the fuelbreak may be reduced by the use of low-growing, fire-retardant species (see above).

- Plants in riparian and/or natural areas within the project's boundaries shall not be trimmed or cleared for aesthetic purposes.

- Revegetation of cut slopes shall be accomplished with native plant species which presently occur onsite or are typical for the area. Suitable species include California sagebrush (*Artemisia californica*), flat-top buckwheat (*Erigonum fasiculatum* ssp. *fasciculatum*), black sage (*Salvia mellifera*), and San Diego sunflower (*Viguiera laciniata*). If this area is hydroseeded, measures shall be taken to ensure the exclusion of nonnative, weedy species from the mixture.

- A fence or other effective means shall be provided around the natural open space area to prevent adverse impacts to biological resources from domestic pets and human activity. An alternative would be the planting of barrier plant species that would discourage pedestrian activity into open space areas. A suitable species for barrier plantings is *Dudleya variegata*. Nonnative species would not be acceptable as barrier plantings within open space areas. No active uses shall be planned in the open space easements, including building structures or construction of trails through this area.

- Landscaping around buildings shall utilize noninvasive exotic species or preferably, native plant species found in the area. Species present onsite, such as desert elderberry (*Sambucus mexicana*) and California buckwheat, would be suitable for planting.

- The City of Chula Vista shall assure the long-term conservation of remaining native habitat onsite (wetlands and uplands) by dedicating these areas as part of a permanent natural open space easement. The City shall place an open space easement in this acreage which would eliminate further building activity and, in effect, permanently set this area aside for the preservation of wildlife. Additional facilities which would promote pedestrian activity in open space areas at the expense of wildlife should not be constructed.

Analysis of Significance

Implementation of all of the above mitigation measures, including replacement of significant habitat, would mitigate project specific impacts to a level of insignificance. The project will nevertheless unavoidably contribute to an incremental, cumulative loss of biological habitat in the region.

F. CULTURAL RESOURCES

The following section summarizes archaeological research conducted by ERCE in April 1989 and a paleontological assessment conducted by Paleo Services in April 1989. The two letter reports are on file at the City of Chula Vista Planning Department.

Existing Conditions

Archaeological Resources. The project area, initially surveyed for cultural resources by APC (1980) contains one prehistoric site (SDi-7197), recorded by R. Franklin in 1979. Testing to determine site importance was conducted for four of the five loci of SDi-7197 by Douglas (1981) and Recon (1988). The result of this work identified Loci B and E as important cultural resources. A data recovery program for Locus B was conducted by Padon (1983) to mitigate project impacts

resulting from the construction of SDG&E's transmission line within the project area.

The purpose of ERCE's testing program was to test the portion of Locus A within the project area, identified here as Locus A-1, to determine site importance; to review previous work with respect to historic sites within the project area; and to identify important cultural resources which may be affected by the proposed project. The testing program for Locus A-1 included posthole and unit excavation to determine site size, content, condition and potential to address important questions concerning prehistoric occupation.

Site SDi-7197, Locus A-1 produced over 500 artifacts, including three Early Period bifaces (relatively dated to circa 3000 to 7000 years ago), 1 core/hammerstone/scraper tool, flakes and angular waste for tool manufacture, shell, and a small amount of charcoal. Subsurface depth ranged from 30 to 70 cm with the 1 by 1 m unit excavated to 70 cm ending on a sterile white calcareous basal horizon. All lithics are of locally available metavolcanic material probably derived from the Santiago Peak Volcanic Formation, except for one piece of chert and one clear quartz flake.

Of these five loci, only Loci A-1 and E are identified as important cultural resources per CEQA criteria. The remaining three loci (Loci B, C and D) are identified as not important and as such need not be addressed.

Paleontological Resources. The project site is underlain by a series of three geological deposits (formations) including from oldest to youngest: meta-volcanic rocks of the Santiago Formation (Jurassic in age, approximately 140 million years old), gritty sandstones of the Sweetwater Formation (presumed Oligocene in age, approximately 28-30 million years old), and bentonitic sandstones of the Otay Formation (Oligocene in age, approximately 27 million years old). Museum records do not document any recorded fossil localities within the project site. However, over 80 sites are recorded in the EastLake area immediately to the south and west of the Salt Creek I project. These sites were discovered during grading operations for the EastLake planned community.

The Otay Formation at EastLake has recently been shown (Demere 1986, 1988) to contain significant paleontological resources including well preserved remains of fossil land vertebrates such as lizards, turtles, birds, hedgehogs, rabbits, rodents, carnivores, camels, mouse-deer, and creodonts (extinct pig-like grazing animals). Together these previously reported fossil occurrences point to the high paleontological resource potential of the Otay Formation.

The Sweetwater Formation has also produced fossils, however, these have generally been rare and fragmentary remains of primarily oreodonts. The Santiago Peak Volcanics are not known to contain fossils in the project vicinity. However, these rocks have never before been graded in eastern Chula Vista and may possess an unimproven paleontological resource potential. Elsewhere in San Diego County these rocks have produced rare but important remains of various types of ancient marine organisms including remains of clams and squid-like animals called belemnites.

Impacts

Archaeological Resources. As presently planned, Site SDi-7197, Locus A-1 will be directly impacted by residential development (Parcel R-17, SPA Plan Figure 2-5). Site SDi-7197, Locus E is situated primarily within open space and if this area is left natural, then the majority of this site will be avoided. If this open space area is to be used for park land, or will be graded, planted, and/or maintained, then this area will need to be mitigated of park/improvement impacts through a data recovery program. The remaining site area of Locus E will be affected through slope grading.

Paleontological Resources. Development of the project site will potentially result in impacts to significant paleontological resources. Principally, the fossiliferous deposits of the Otay and Sweetwater formations possess a high paleontological resource potential. Impacts would occur when mass grading operations cut into the fossil-bearing layers in these two formations.

Mitigation Measures

Mitigation of impacts for important cultural/archaeological resources (SDi-7197, Loci A-1 and E) can be achieved through either avoidance or by conducting a data recovery program as required in the below measure.

- The data recovery program shall 1) address important research questions as proposed in the test report (on file at the City of Chula Vista Planning Department); and 2) include a phased data recovery program. This phased approach employs a random sample in conjunction with a focused inventory for features and intact midden areas. The data recovery program shall be conducted in accordance with a regional approach to the prehistoric sites within Salt Creek Ranch and the EastLake III/Olympic Training Center Projects, thereby allowing for a comprehensive understanding of these Early Period sites. For Locus E, site boundary needs to be determined for both the prehistoric and historic components before the sample size is determined.

- Prior to issuance of a mass-grading permit the developer shall present a letter to the City of Chula Vista indicating that a qualified paleontologist has been retained to carry out the resource mitigation. (A qualified paleontologist is defined as an individual with an MS or PhD in paleontology or geology who is familiar with paleontological procedures and techniques).

- A qualified paleontologist and archaeologist shall be at the pre-grade meeting to consult with the grading and excavation contractors.

- A paleontological monitor shall be onsite at all times during the original cutting of previously undisturbed sediments of the Otay Formation to inspect cuts for contained fossils (the Otay Formation occurs generally above 680 feet elevation). The Sweetwater Formation shall be monitored on a half-time basis. Periodic inspections of cuts involving the Santiago Peak Volcanics shall be conducted in accordance with recommendations of the qualified paleontologist. (A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor should work under the direction of a qualified paleontologist.)

- In the event that well-preserved fossils are discovered, the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovering of small fossil remains such as isolated mammal teeth, it may be necessary to set up a screen-washing operation on the site.

- Fossil remains collected during any salvage program shall be cleaned, sorted, and cataloged and then with the owner's permission, deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum.

Analysis of Significance

Implementation of the above mitigation measures will ensure potential project and cumulative impacts to cultural/archaeological and paleontological resources are mitigated to a level of insignificance.

G. TRAFFIC AND CIRCULATION

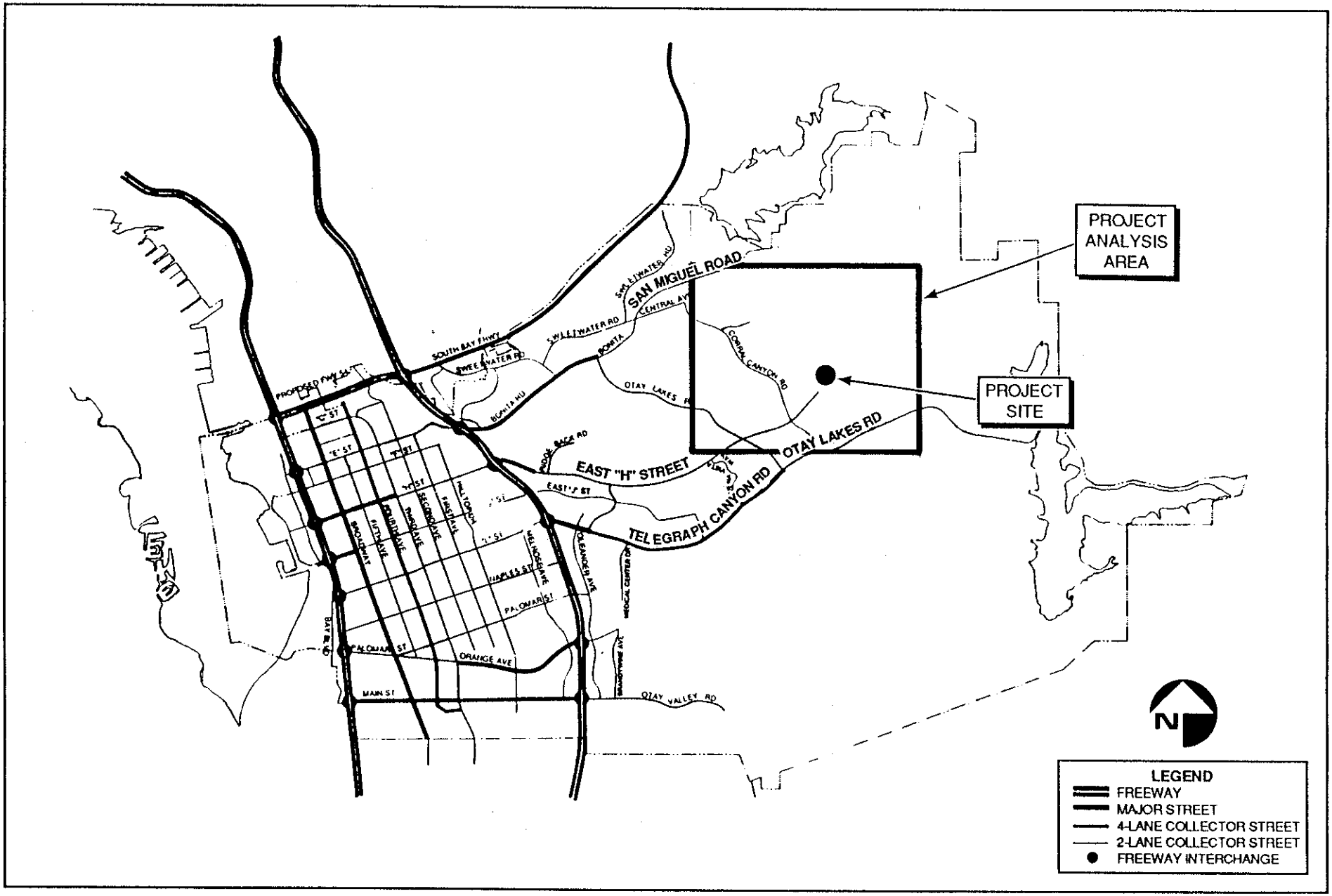
This section is based upon the following sources: EIR 84-1 Traffic Section 3.2 (incorporated by reference); Draft EIR 88-2 Traffic Section 3.14 for the City General Plan Update; and letter correspondence regarding the proposed Salt Creek I amendment traffic generation and cumulative development/transportation phasing (1989 correspondence from C. Swanson, City Public Works Department; R. Sergeant, Willdan Associates included in Appendix B).

Existing Conditions

The circulation system in the immediate project area is generally limited due to the area's current early development stage. Access to the site is obtained by Telegraph Canyon Road/Otay Lakes Road which access the EastLake Business Center. Lane Avenue reaches the property edge and transitions northward into a dirt road (east property boundary) to Proctor Valley Road. Proctor Valley Road is also unpaved and extends east-west along the northern site boundary. Roadways in the area which are relevant to the project due to future planned configurations are described below. The existing circulation network is illustrated in Figure 3-8.

East "H" Street, designated a Major Road (4 lanes, 100-foot right-of-way), traverses east-west and accesses the EastLake Planned Community from the west. This Major Road will extend farther east in the future (through the project site) as described in the following section (see also Figure 3-3, Site Photos). San Miguel Road currently terminates in the Sweetwater neighborhood north of the project area but will be extended south to the site in the future, as described below.

Planned Circulation System. The proposed Circulation Element of the General Plan Update was prepared by JHK and Associates in December 1988 (currently under public review, on file at the City Planning Department), and is utilized herein for future circulation and traffic projection assumptions. The proposed Circulation Element contains eight roadway classifications (in descending order): freeways, expressways, 6-lane prime arterials, 6-lane major streets, 4-lane major streets, class 1 collectors, class 2 collectors and class 3 collectors. These classifications are listed in Table 3-3, and are described in detail and compared to the existing Circulation Element's 5 roadway classifications in EIR 88-2 Section 3.14. Pertaining to the project vicinity are East "H" Street, SR-125 and San Miguel Road. East "H" Street



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Existing Circulation System
Salt Creek I

FIGURE 3-8

is planned as a 4-lane major street (104-foot right-of-way) and 6-lane prime arterial (128-foot right-of-way) in the project area, and will bisect the future SR-125 north-south alignment at the southwest project boundary. The SR-125 Freeway will be a new north-south route, serving to connect Otay Mesa and Eastern Territories region to the SR-54 east-west alignment and South Bay area to the north.

Threshold Criteria. The City maintains standards for intersection operations as described in the Threshold Policy (General Plan Update). In general, signalized intersections are to operate at Level of Service (LOS) "D" or better during peak hours of the day. (EIR 84-1 Section 3.2 provides a detailed description of Level of Services A through F.)

Impacts

The primary intent of this Supplemental EIR traffic analysis is to provide a comparison of the proposed project to the site's existing EastLake I SPA Plan traffic generation, and to ensure no unacceptable roadway or intersection Levels of Service will result in the project area in the future. The project specific analysis summarized below (Appendix B) provides the project comparison to existing designations. The cumulative impacts discussion involves future estimated traffic derived from the traffic analysis of General Plan (GP) Update EIR 88-2, hereby incorporated by reference. The GP Update traffic projections assume development of 550 residential units on the Salt Creek I property, thus the future cumulative impact assessment includes Salt Creek I project generated traffic.

Project-Generated Traffic vs. Existing SPA Plan. EIR 84-1 provides traffic generation calculations and resulting impacts of the existing SPA Plan industrial/employment land use designations onsite. Roadway improvements proposed and required for the EastLake I development approval were found to mitigate potential impacts to a level of insignificance (EIR 84-1 Section 3.2). Thus, the burden of proof rests on the proposed project to generate similar or less traffic than the existing approved SPA Plan analyzed in EIR 84-1, also considering the most recent traffic counts and projections. This analysis was conducted in January 1989 (Appendix B); results are presented below.

As documented in Appendix B and approved by the City (C. Swanson, February 1989), based on SANDAG trip generation rates the existing SPA Plan 37.4 acre industrial/employment park would generate 7,480 average daily trips (ADT). The proposed residential uses (181 single family and 369 multi-family units) would generate 4,762 ADT, resulting in a trip reduction of 2,718 ADT by the proposed project, a less significant traffic increase than the existing SPA Plan. Consequently, no project-specific impacts will result beyond those analyzed and mitigated in EIR 84-1. The project actually represents a positive impact in comparison to existing SPA Plan designations.

Cumulative Traffic Generation: General Plan Update. The General Plan Update traffic analysis (Draft EIR 88-2 Section 3.14) evaluates future development traffic generation and ultimate transportation needs to accommodate existing and future development. Draft EIR 88-2 summarizes these circulation needs and identifies areas of the City which could operate at unacceptable traffic levels in the future. The analysis concludes that no roadways or intersections in the project vicinity will operate below acceptable levels, assuming cumulative proposed development (including Salt Creek I) and identified circulation improvements. The analysis and needed improvements pertaining to the project area are briefly summarized below.

The GP Update circulation plan was generated based on a computer model which simulates traffic flows generated by existing and future development (full buildout) on the existing and planned circulation network. The model includes extension of East "H" Street, construction of the SR-125 corridor and extension of San Miguel Road south to the project site's eastern boundary to the EastLake Business Center (Figure 3-9). These roadways are reflected in the proposed Salt Creek I circulation network. The model would be refined as future development plans become more final (especially in the Eastern Territories area).

In the City's eastern areas, the circulation plan (Figure 3-9) shows a system of major roads aligned along natural topography, connecting existing routes. The proposed system assigns a LOS "C" (Table 3-3) as the threshold for roadway segments from which to assess potential impacts (i.e., if a segment's ADT exceeds LOS "C", an analysis of potential impact was conducted). Potential impacts at intersections were also assessed, based on a comparison between future intersection volumes and volume thresholds as identified by the City (see previous Threshold Criteria discussion). Intersection ADT thresholds are summarized as follows:

- 65,000 or fewer entering vehicles per day is considered tolerable.
- 65,000-75,000 entering vehicles per day requires design of, but not necessarily implementation of, mitigating measures.
- Over 75,000 entering vehicles per day requires the implementation of mitigation measures to allow the intersections to flow smoothly.

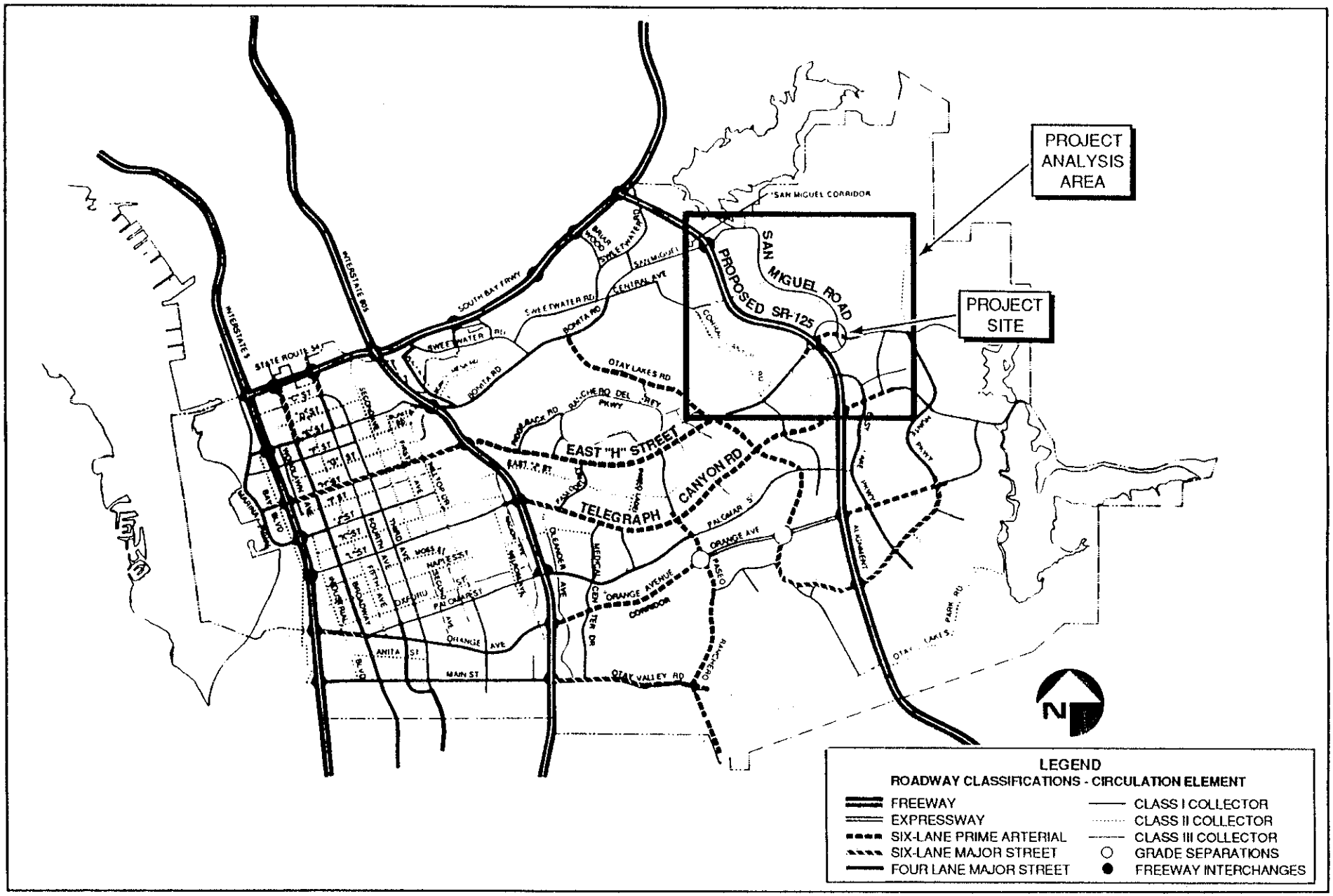
The two impact analyses of roadway segments and intersection Levels of Service identified areas of potential congestion in the City. No unacceptable levels or impacts were identified in or near the project area (see EIR 88-2 for impacts identified in other areas of the City). Consequently, no cumulative impacts are associated with the proposed project and surrounding circulation system, assuming proposed GP circulation improvements are made.

Mitigation Measures

- The project shall adhere to project phasing/transportation improvements required in the EastLake I Development Agreement and Public Facilities Financing Plan (1985), and mitigation measures cited in EIR 84-1 Section 3.2. Improvements pertaining to the project site involve the following roadways, constructed in accordance with speculations, schedules and financing approved by the City Traffic Engineer and Planning Director.

    - SR-125: 6 lane Expressway plus right-of-way for 8 lanes
    - East "H" Street: 6 lane Prime Arterial; 4-lane Major Street
    - San Miguel Road: 4-lane Class I Collector
    - Proctor Valley Road: as determined by City
    - Internal Roadways: as determined by City
    - Associated interchanges, land dedications and intersection improvements and amenities

- The project shall comply with provisions established in the General Plan Update Circulation Element and any programs established therein which are applicable to the project area (i.e., fee programs, subsequent traffic analysis). Mitigation measures in EIR 88-2 (Section 3.14) and the General Plan Update Circulation Element Policies/Guidelines and Roadway Standards (Sections 4 and 5) are



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Circulation Plan: General Plan Update
Salt Creek I

FIGURE 3-9

Table 3-3

CIRCULATION ELEMENT ROADWAY CLASSIFICATIONS AND LEVEL OF SERVICE STANDARDS

Classification	Applicable Roadway[1]	No. of Lanes	R.O.W.[2]	ADT at LOS "C"[3]
Expressway	SR-125	6	128'	70,000
6-lane Prime Arterial	East "H" Street	6	128'	50,000
6-lane Major Street	N/A in project area	6	128'	40,000
4-lane Major Street	East "H" Street	4	104'	30,000
Class 1 Collector	San Miguel Road	4	88'/94'	22,000
Class 2 Collector	internal streets	2	72'	12,000
Class 3 Collector	internal streets	2	60'	7,500

Source: General Plan Update Draft EIR 88-2

1 Roadways in project vicinity, applicable to Salt Creek I site.
2 R.O.W.=Road right-of-way in feet
3 ADT = Average Daily Trips (vehicles per day)
LOS "C" = Level of Service "C" roadway function as defined in General Plan Circulation Element.

hereby incorporated by reference; future actions on the project site shall adhere to these provisions for adequate circulation. In addition, the project shall comply with any applicable traffic threshold criteria as deemed appropriate by the City Engineer.

Analysis of Significance

Implementation of the above measures and provision of required circulation improvements in the project area will ensure that potential project and cumulative traffic impacts will be mitigated to a level of insignificance.

H. NOISE

The following section has been summarized primarily from a technical acoustical report prepared by Mestre Greve Associates (1989) for this project, in conjunction with project comparison to existing plans. The Mestre Greve report addresses onsite noise impacts and identifies mitigation measures designed to reduce future acoustical impacts. This report is contained in full in Appendix C.

Existing Conditions

The Salt Creek I project site is currently undeveloped except for a single dirt road. Proctor Valley Road, oriented southeast-northwest, currently traverses the northeastern portion of the site.

Existing noise sources in the immediate project vicinity include limited vehicular traffic and construction equipment in the nearby EastLake 1 Business Park area to the south-southwest, limited vehicular traffic on Proctor Valley Road onsite, and from occasional aircraft flyovers.

Community noise levels are generally presented in terms of Community Noise Equivalent Levels (CNEL), which will be referenced in this discussion. CNEL is the average equivalent A-weighted sound level during a 24-hour day, and is calculated by adding 5 decibels to sound levels in the evening (7 p.m. to 10 p.m.) and adding 10 decibels to sound levels at night (10 p.m. to 7 a.m.). The A-weighted scale measures noise levels corresponding to the human hearing range.

City Noise Guidelines. The Noise Element of the General Plan of the City of Chula Vista (Chula Vista 1982) and the Conditions of Approval specify outdoor and indoor noise limits for residential land uses based upon the CNEL index. The maximum acceptable outdoor noise standard for exterior living areas is 65 dB(A) CNEL for residential land uses. Exterior living areas are primarily intended to include side and backyards and not front yards. The City's interior noise standard for residential uses is 45 dB(A) CNEL. Proposed multiple-family development is subject to a 45 dB(A) CNEL as outlined by the State of California's interior noise requirement (Title 24). Title 24 requires an interior noise analysis when exterior noise levels are projected to be 60 dB(A) CNEL or greater.

Ambient Noise Monitoring. Noise measurements were conducted onsite on Monday, April 17, 1989 at 11:15 a.m. to determine existing noise levels. The measurement was made using a calibrated Type 2 Larson-Davis Model 700 sound level meter. The sound level meter was positioned 65 feet south from the center of Proctor Valley Road in the central-northeastern portion of the site. The sound level during the measurement period was calculated to be approximately 50 dB(A) L_{eq}

with no vehicles traveling on the roadway. When a vehicle did travel along Proctor Valley Road, the ambient noise level would rise approximately 5 to 8 decibels. Traffic is sporadic and infrequent along this dirt road. The increase in ambient noise due to traffic-generated noise would be highest adjacent to this roadway where the meter was positioned. The majority of the site was found to be exposed to noise levels from approximately 50 to 52 dB(A) L_{eq}. A measurement taken during a commercial airplane flyover was calculated to be approximately 59 dB(A) L_{eq}.

Existing noise conditions are not considered unacceptable because the proposed project site is undeveloped, and onsite generators (i.e., two dirt roads) do not create a significant amount of noise on a regular basis. Offsite noise generators are too distant from the site to generate significant noise onsite.

Impacts

Existing General Plan vs. General Plan Update and Proposed Project. The Salt Creek I project would amend the existing Chula Vista General Plan and zoning designations on the project site. The difference in project-generated noise between the existing General Plan (GDP and SPA Plan) and the proposed General Plan Update is primarily dependent on the difference in traffic volumes generated onsite between the plans. The existing GDP/SPA Plan designate the site for open space and an employment park which is intended for business community light industrial and limited service commercial uses. Traffic generation resulting under these designations would be 7,480 additional daily trips (ADT), as discussed in the Traffic Section of this report. The proposed 550 residential units (as allowed also under the GP Update) would generate 4,762 ADT, which is 2,718 ADT less than the existing GDP/SPA Plan. Thus, implementation of the proposed project and/or GP Update land uses for this site would generate less traffic and, therefore, less noise contribution than implementation of the existing General Plan land uses.

Trip distribution on the local street system is not provided in the noise technical report, although it can be estimated that the potential noise difference (reduction) from corresponding locations adjacent to the three local roadways would range from approximately 0.1 to 0.6 dB(A) CNEL. Therefore, implementation of the General Plan Update and proposed project land uses would not be anticipated to generate additional noise over that estimated from implementation of the existing SPA Plan.

Proposed Circulation and Roadway Noise Assessment Methodology. The primary noise source within the project area would be traffic-generated noise along local roadways. Local access and circulation would be provided primarily by three proposed roadways which pass through the project site. State Route (SR) 125 would define the project's southwestern boundary, proposed as a 6-lane freeway in this area. The proposed extension of East "H" Street would bisect the project site, extending from the EastLake Business Center to the Salt Creek Ranch property. The right-of-way has recently been increased through the project site to accommodate 8 lanes potentially needed in the future (it is currently proposed as a 4-lane facility with future widening planned to six lanes). San Miguel Road, proposed as a 4-lane roadway, would define the project's eastern boundary.

The noise levels projected in this report were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model", FHWA-RD-77-108, December 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway

geometry to compute the "equivalent noise level". A computer code has been written which computes equivalent noise levels for each of the time periods used in CNEL. Weighting these noise levels and summing them results in the CNEL for the traffic projections used.

Future Onsite Noise Levels. To determine the maximum noise levels that could be experienced on site, average daily traffic volumes, based on a traffic analysis prepared by P&D Technologies (December 1988) for SR-125, East "H" Street, and San Miguel Road, were utilized. Future traffic volumes for these road segments are contained in Appendix C. The analysis assumed that for arterials (i.e., East "H" Street, and a portion of San Miguel Road) cars would comprise 97 percent of the traffic, medium trucks 2 percent of the traffic, and heavy trucks 1 percent of the traffic. These traffic mix estimates are based upon traffic surveys, and are considered typical for arterials in southern California. The analysis assumed that for SR-125 cars would comprise 95 percent of the traffic, medium trucks 2.5 percent of the traffic, and heavy trucks 2.5 percent of the traffic. Average roadway speeds were assumed to be 60 mph on SR-125, 45 mph on East "H" Street, and 35 mph on San Miguel Road. The traffic mixes for each of the time periods analyzed the proposed arterials and SR-125 are contained in Appendix C.

Using the above assumptions, future noise levels were computed. The distances to various future CNEL contours from the center line of the three primary roadways passing through the site are depicted in Table 3-4. The contour distances do not take into account the potential attenuating affects of existing or proposed topography. Topographic effects are included in the following analyses to determine actual (future) noise exposure on the project site.

Table 3-4

FUTURE CNEL ONSITE NOISE CONTOUR DISTANCES

Roadway	ADT	Approximate Distance To CNEL Contours From Center Line of Road (Feet) 70	65	60
SR 125	182,300	453	976	2,102
East H Street	48,700	88	190	409
San Miguel Road	15,100	25	54	117

Source: Mestre Greve Associates, 1989.

Exterior Noise: Noise modeling indicates that future noise levels at all of the single-family homes and the multiple-family units in the first row along SR-125, some of the single-family homes and multiple-family units along East "H" Street would be exposed to noise levels in excess of 65 dB(A) CNEL, the City's exterior noise standard. A worst case exterior noise exposure of approximately 78 dB(A) CNEL would occur in the rear yard of Lot 130 due to traffic along SR-125, and a worst

case exterior noise exposure of approximately 70 CNEL would occur in the rear yard of Lot 77 due to traffic along East "H" Street. If unmitigated, these noise levels, which exceed the City's exterior noise guideline, would represent significant adverse noise impacts. The lots along San Miguel Road would experience a worst case exterior noise exposure of approximately 63 dB(A) CNEL. Lot numbers of units that would exceed the City's exterior noise guideline are reviewed in Table 3-5 in the Mitigation Section of this discussion.

The multiple-family lots (MF 1-5 identified on Figure 3-11) would be exposed to unmitigated noise levels of greater than 65 dB(A) CNEL, although, due to a proposed 9 foot high parking structure that would separate these lots from SR 125, the noise levels at both the first floor patios and the second floor balconies of these lots could be exposed to noise levels below 65 dB(A) CNEL. For the parking structures to act as a noise barrier for multiple-family Lots 1-5, the barrier must be continuous with no opening between the separate parking blocks. Figure 3-11 illustrates multi-family building numbers and locations for reference to these noise impacts.

Interior Noise: The proposed project (all units) must comply with the City's interior noise standard of 45 dB(A) CNEL. In addition to the City's 45 dB(A) CNEL guideline, the proposed multiple-family units would also be subject to the State of California's 45 CNEL requirement (Title 24). To comply with the interior noise standard the buildings must provide sufficient outdoor to indoor building attenuation to reduce the noise levels down to acceptable levels. It can be assumed that with closed windows, buildings typically provide 20 to 25 dB(A) of noise reduction (with typical building materials). Thus, any portion of the project property exposed to 65 dB(A) CNEL or greater has the potential for significant adverse interior noise impacts, if left unmitigated. For the proposed project, a worst case noise exposure of approximately 78 dB(A) CNEL occurs at Lot 130 along SR 125, and a worst case noise exposure of approximately 70 dB(A) CNEL occurs at Lot 77 along East H Street.

Mitigation Measures

Exterior: To mitigate the projected significant exterior noise impacts, the FHWA Model was used to determine the effectiveness of proposed walls in reducing noise exposure to acceptable levels (data provided in Appendix C). The grading plan shows that the primary outdoor living areas (potentially requiring mitigation) are the rear yards, patios, and second-floor balconies. The single- and multiple-family lots anticipated to require mitigation and the proposed barrier heights for these lots are shown in Table 3-5 and illustrated in Figures 3-10 and 3-11. To ensure acceptable exterior noise levels are experienced, the following measures are applied to the project:

- Noise barriers for the single-family houses shall be provided as delineated in Table 3-5 and illustrated in Figure 3-10. Barriers shall be located at the top of slope along the edge of the roadway from Lot 27 to Lot 77 and at the top of slope along the edge of the rear yard for the rest of the lots (from Lot 77 to Lot 141).

- The 9 foot high parking structure barrier separating MF lots 1-5 from SR-125 (Figure 3-11) shall be continuous with no opening between the separate parking blocks. This should serve as an adequate noise barrier for multi-family Lots 1-5. If the parking structures do not provide sufficient attenuation, then

additional barrier modeling will be required for these lots. The barriers for an additional 13 multiple-family units requiring mitigation should be located at the pad elevation for patio barriers and at the 2nd floor finished floor elevation for balcony barriers. The barrier heights to attenuate noise at these 13 multiple-family units shall be provided as presented in Table 3-5 and located in Figure 3-11.

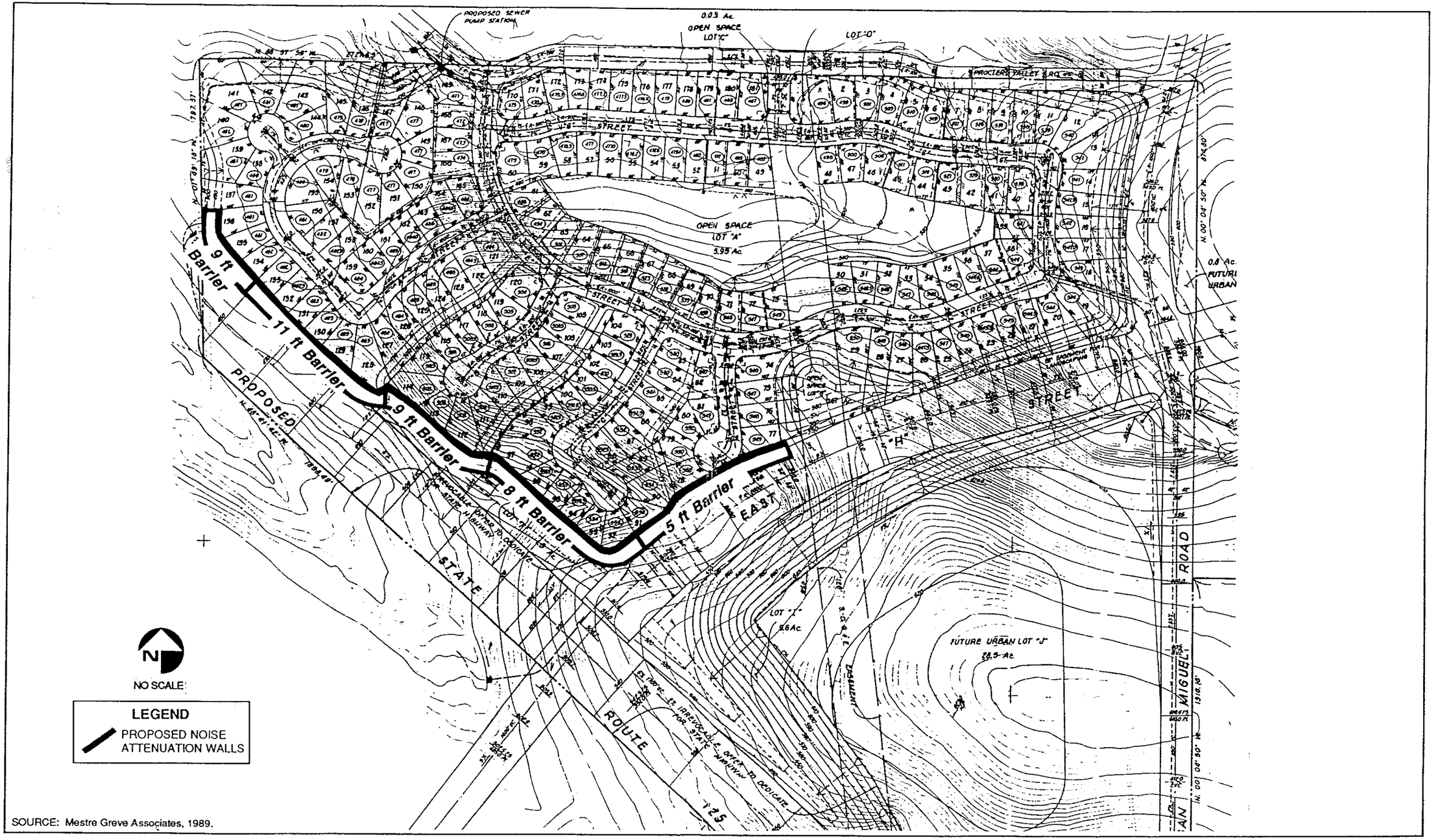
- The proposed noise barriers for the single- and multiple-family units shall have a surface density of at least 3.5 pounds per square foot, and shall have no openings or cracks. It may be constructed of 1/4 inch plate glass, 5/8 inch plexiglass, any masonry material, or a combination of these materials. Wood and other materials would also be acceptable if properly designed as a noise barrier. Implementation of adequate noise barriers shielding single- and multiple-family outdoor living areas would reduce potential noise impacts to below a level of significance.

Interior: To comply with the City and State's interior noise standards, the buildings must provide sufficient outdoor to indoor building attenuation to reduce the noise levels down to acceptable levels. The outdoor to indoor noise reduction characteristics of a building are determined by combining the transmission loss of each of the building elements which make up the building. To meet the interior standard of 45 CNEL, the buildings along SR-125 must provide a maximum building attenuation of approximately 33 dB(A) CNEL, and the buildings along East "H" Street must provide a maximum building attenuation of approximately 25 dB(A) CNEL. Thirty-three dB(A) CNEL is a significant amount requiring extraordinary windows and stucco construction. Therefore, it is anticipated that building material upgrades would be required for the homes along SR-125 and for some of the homes along East "H" Street. The following measures will ensure sufficient interior noise mitigation:

- Detailed engineering calculations shall be conducted to demonstrate the noise reduction levels are achieved by the buildings for residential building attenuation requirements of greater than 20 dB(A) CNEL. The actual noise attenuation supplied by the buildings as well as the building upgrades required shall be calculated when architectural plans become available. Adequate attenuation must be approved prior to issuance of building permits.

- In order to assume that windows can remain closed to achieve required attenuation, adequate ventilation with windows closed must be provided per the Uniform Building Code. All the lots along SR-125, East "H" Street, and San Miguel Road will require mechanical ventilation. Air conditioning would fulfill this requirement. Recommendations for the design of the ventilation system to attenuate noise levels are provided in Appendix C.

- If exterior noise levels exceed 60 dB(A) CNEL, the project shall comply with State of California's Title 24 requiring an interior noise analysis to confirm that noise levels do not exceed 45 dB(A) CNEL. Detailed engineering calculations will also be required to confirm adequate interior noise levels (pursuant to the City's standard) after detailed barriers locations and heights have been established. Barriers to mitigate exterior noise levels and potentially upgraded building materials (as required) would reduce potential interior noise impacts to below a level of significance.



SOURCE: Mestre Greve Associates, 1989.

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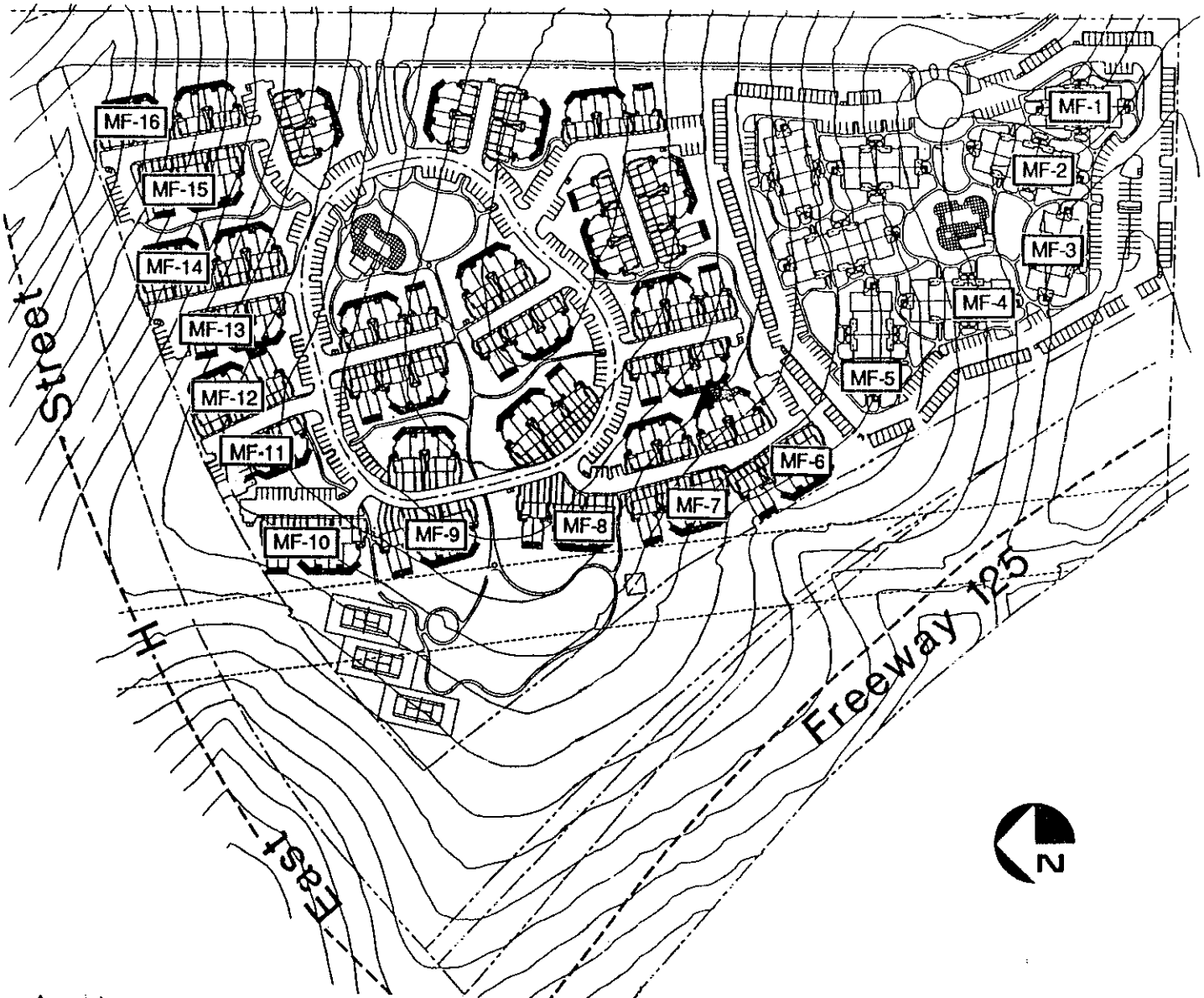
Location and Height of Proposed Noise Barriers for Single-Family Units

FIGURE 3-10



SOURCE: Mestre Greve Associates.

ERC
Environmental and Energy Services Co.

Multi-Family Unit Numbers and Building Locations

FIGURE
3-11

Table 3-5

REQUIRED NOISE BARRIER HEIGHTS

Lot Numbers[1]	Barrier Height Above Pad (FT)
SINGLE-FAMILY LOTS	
Lots 77-78	5.0
Lost 90-91	5.0
Lots 92-97	8.0
Lots 112-114	9.0
Lots 128-133	11.0
Lots 134-136	9.0
MULTI-FAMILY LOTS	
(1st Floor Patios)	
MF 6 7.0	
MF 7-8	6.5
MF 9 5.0	
MF 14	5.0
MF 16	5.0
(2nd Floor Balconies)	
MF 6 7.0	
MF 7 6.5	
MF 8 5.5	
MF 9 5.0	
MF 12	5.0
MF 14	5.0
MF 16	5.0

Source: Mestre Greve Associates, 1989.

[1] Refer to Figures 3-10 and 3-11 for lot number locations.

Analysis of Significance

The proposed parking structures, modeled noise barriers, and potential upgrading of building materials (as required by the above measures) would mitigate potential exterior and interior cumulative noise impacts to below a level of significance. Additional acoustical analysis will be required once plans are prepared for the site's Future Urban areas to determine future noise levels and appropriate mitigation, if measures are required. No further impacts have been identified.

I AIR QUALITY

Existing Conditions

Meteorology/Climate: The climate in the vicinity of the Salt Creek I development project area and all of San Diego County is dominated by a semi-permanent high-pressure cell located over the Pacific Ocean. This high pressure cell maintains clear skies for much of the year. It also drives the dominant onshore circulation and creates two types of temperature inversions, subsidence and radiation, 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. A shallow inversion layer is formed between the two air masses which can trap vehicular pollutants such as carbon monoxide and oxides of nitrogen.

The closest and most representative weather monitoring station to the project site is the Chula Vista station, located approximately 8 miles west of the site. The mean temperature in Chula Vista is 60.2°F; the mean maximum and mean minimum temperatures are 67.2°F and 53.1°F, respectively. Precipitation in the vicinity of the study area averages 10 inches annually, 90 percent of which falls between November and April.

Description of Pollutants: Photochemical oxidants, commonly known as smog, are produced from complex photochemical reactions involving reactive hydrocarbons (RHC) and nitrogen oxides (NO_x). Photochemical oxidants, expressed and measured in terms of 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, smog formed in the Los Angles 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). These areas of high CO build-up are generally referred to as CO "hotspots".

Since CO build-up 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.

Regulatory Framework: Ambient Air Quality Standards (AAQS) represent the maximum level of background pollution considered safe, 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 (CARB) has developed additional AAQS. The currently applicable state and federal standards are presented in Figure 3-12. The City of Chula Vista implements standards adopted by the Regional Air Quality Maintenance Plan (AQMP) as their threshold standard for air quality (Figure 3-12).

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) Revisions, 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 these actions are taken and if regional growth does not exceed anticipated levels, then the basin will no longer experience unhealthful air quality due to emissions generated in the basin.

The 1982 SIP Revisions and the 1985 Progress Report of the APCD employed the San Diego Association of Governments (SANDAG) Series V and VI growth forecasts which are based on Community and General Plan land use designations to project regional growth. Development that seriously departs from the forecasts could generate emissions in excess of what is necessary to attain state and federal standards.

Ambient Air Quality Summary: Ambient air quality is monitored by the State Air Resources Board at the Chula Vista monitoring station. In the absence of site specific air quality data, data from the Chula Vista station is assumed to be representative of the site. Table 3-6 summarizes ambient air quality data at the Chula Vista monitoring station from 1984 through 1987.

The entire San Diego Air Basin has not attained state and federal standards for ozone. The basin is in the progress of being redesignated as an attainment area for particulates. For the remaining criteria pollutants (carbon monoxide, sulfur dioxide, and nitrogen dioxide), the San Diego region is designated as an attainment area (APCD 1989).

In addition to adverse ozone levels, the City of Chula Vista currently experiences congested intersections which are typically located near freeway ramps in the urban core of the City. Based on the latest General Plan Update for the City of Chula Vista (1989), which incorporates a general plan for buildout of the area consistent with the SANDAG Series VII projections, these intersections are anticipated to remain at LOS D, but will not be worsened as a result of the projected growth. The City of Chula Vista has run several air quality models to evaluate the level of CO at these intersections and no "hot spots" have been identified. However, the potential does exist for "hot spots" to occur given the increased ADT associated with future

POLLUTION	AVERAGING TIME	CALIFORNIA STANDARDS (1)		NATIONAL STANDARDS (2)		
		CONCENTRATION	METHOD	PRIMARY	SECONDARY	METHOD
OZONE	1 Hour	0.09 ppm (180 $\mu g/m^3$)	Ultraviolet Photometry	0.12 ppm (235 $\mu g/m^3$)	Same as Primary Standards	Chemiluminescent Method
CARBON MONOXIDE	8 Hour	9 ppm (10mg/m^3)	Nondispersive Infrared Spectroscopy	9 ppm (10 mg/m^3)	Same as Primary Standards	Nondispersive Infrared Spectroscopy
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
NITROGEN DIOXIDE	Annual Average	–	Saltzman Method	0.05 ppm (100 $\mu g/m^3$)	Same as Primary Standards	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 $\mu g/m^3$)		–		
SULFUR DIOXIDE	Annual Average	–	Conductimetric Method	0.03 ppm (80 $\mu g/m^3$)	–	Pararosaniline Method
	24 Hour	0.05 ppm (131 $\mu g/m^3$)		0.14 ppm (365 $\mu g/m^3$)	–	
	3 Hour	–		–	0.5 ppm (1300 $\mu g/m^3$)	
	1 Hour	0.25 ppm (665 $\mu g/m^3$)		–	–	
SUSPENDED PARTICULATE MATTER	Annual Geometric Mean	PM-10 30 $\mu g/m^3$	High Volume Sampling	PM-10 50 $\mu g/m^3$	60 $\mu g/m^3$	High Volume Sampling
	24 Hour	PM-10 50 $\mu g/m^3$		PM-10 150 $\mu g/m^3$	150 $\mu g/m^3$	
SULFATES	24 Hour	25 $\mu g/m^3$	AIHL Method No. 61	–	–	–
LEAD	30 Day Average	1.5 $\mu g/m^3$	AIHL Method No. 54	–	–	–
	Calendar Quarter	–	–	1.5 $\mu g/m^3$	1.5 $\mu g/m^3$	Atomic Absorption
HYDROGEN SULFIDE	1 Hour	0.03 ppm (42 $\mu g/m^3$)	Cadmium Hydroxide Stractan Method	–	–	–
VINYL CHLORIDE (CHLOROETHENE)	24 Hour	0.010 ppm (26 $\mu g/m^3$)	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
$\mu g/m^3$ = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter

(1) CO, SO_2 (1 Hour), NO_2, O_3 and PM-10 Standards are not to be exceeded. All other Standards are not to be equaled or exceeded.

(2) Not to be exceeded more than once a year.

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California and Federal Ambient Air Quality Standards

FIGURE 3-12

Table 3-6

AMBIENT AIR QUALITY SUMMARY
CHULA VISTA MONITORING STATION

Pollutant	Average Time	California Air Quality Standards	Federal Primary Standards	Maximum 1 hr Concentrations (ppm) 1984	1985	1986	1987	Number of Days Exceeding State Standard 1984	1985	1986	1987
Oxidants (Ozone)	1 hr	0.10 ppm	0.12 ppm	0.15	0.20	0.14	0.16	18	28	20	15
Carbon Monoxide	8 hrs/	9 ppm	9 ppm	4.6	3.9	5.1	3.40	0	0	0	0
	1 hr	20 ppm	35 ppm	7.0	7.0	7.0	7.0	0	0	0	0
Nitrogen Dioxide	1 hr	0.25 ppm	---	0.20	0.16	0.14	0.15	0	0	0	0
Sulfur Dioxide	24 hrs/	0.05 ppm	0.14 ppm	0.021	0.015	0.013	0.011	0	0	0	0
	1 hr	0.25 ppm	---	0.07	0.08	0.06	0.04	0	0	0	0
Total Suspended Particulates	24 hrs	100 $\mu g/m^3$*	260 $\mu g/m^3$	88**	96**	119**	100**	---	---	---	---
Suspended Particulates (PM_{10})	24 hrs	50 $\mu g/m^3$	150 $\mu g/m^3$***	---	---	104**	68**	---	---	---	---

* In 1985, the California total suspended particulates standard (100$\mu g/m^3$) was replaced by the PM_{10} standard (50$\mu g/m^3$).

** Maximum 24-hour sample (in $\mu g/m^3$).

*** In 1987, a new federal primary standard for PM_{10} was specified.

ppm Parts per million.

$\mu g/m^3$ Micrograms per cubic meter.

Source: California Air Resources Board, 1984, 1985, 1986, 1987.

growth. Since the area surrounding the proposed project site has not been fully developed, no potential CO hot spots currently exist in the proposed project vicinity.

Impacts

Regional Air Quality. Potential air quality degradation resulting from the proposed project would emanate from both stationary and mobile sources. Stationary source pollutant emissions include those generated by the consumption of natural gas and/or fuel oil for mechanical/electrical power and heat generation, and the burning of wood in residential fireplaces. Stationary sources are expected to generate a significant amount of criteria pollutants such as hydrocarbons, nitrogen oxides, sulfur dioxide, carbon monoxide, and particulates. In addition to stationary sources, vehicular traffic contributes a significant amount of carbon monoxide, nitrogen oxides and hydrocarbons to the local air shed. 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.

Table 3-7 contains a breakdown of the pollutants that would be generated by mobile sources associated with the Salt Creek I development project at buildout level in 1993. The proposed 550 residential units would generate 4,762 average daily trips (ADT). The project would generate approximately 15 tons/year of reactive hydrocarbons (RHC), the main precursor to ozone. As shown in Table 3-7, the project will add only a very small fraction (0.08%) to the projected total emission burdens for the San Diego Air Basin.

Table 3-7

SALT CREEK I
SUMMARY OF PROJECTED VEHICLE EMISSIONS
(Ton/Year)

Mobil Source Pollutants	Total Projected Emissions	Burden*	%
Carbon Monoxide (CO)	160	212,543	0.08
Nitrogen Oxides (NO_x)	25	33,452	0.08
Sulfur Dioxide (SO_2)	1	1,931	0.08
Total Hydrocarbons (HC)	17	22,637	0.08
Reactive Hydrocarbons (RHC)	15	20,418	0.08
Total Suspended Particulate Matters (TSP)	5	6,165	0.08

*Based on projected vehicle emissions data for the year 1993 (CARB).

In the San Diego area, a project is considered to have a significant, cumulative air quality impact if it has not been included in the SANDAG Series V growth forecast, which is the basis for the air quality attainment plans contained in the 1982 SIP Revisions. Land use at the project site was designated residential in SANDAG's Series V growth forecast, with densities of 0.3 dwelling units/acre. Since the Salt Creek I development project proposes a more intensive residential land use with an average density of 8.2 dwelling units/acre, the project is not consistent with the 1982 SIP Revisions and could affect the ability of the region's air quality strategy to attain federal and state standards. The latest SANDAG forecast (Series VII), which will be used in the next SIP Revisions, has redesignated approximately 23 acres of the project area as an employment area. The remaining part of the project site has been designated in SANDAG Series VII as open space. Therefore, the proposed project may contribute to a potentially significant cumulative air quality impact.

Local Air Quality. During the construction phase of the Salt Creek I development project, short-term emissions of several criteria air pollutants would occur. Significant emissions of nitrogen oxides, carbon monoxide, sulfur dioxide, particulates, and unburned hydrocarbons will be generated from the combustion of fossil fuels by construction equipment. In addition, clearing, earth movement, and vehicle travel on unpaved surfaces can create considerable quantities of fugitive dust. The California Air Resources Board estimates that such activities create about 1.2 tons of dust per acre disturbed per month. Construction dust is comprised primarily of large, chemically inert particles which, when inhaled, can be filtered through the human respiratory tract. Therefore, the dust constitutes more of a temporary soiling nuisance on cars, homes, foliage, and other surfaces than a health hazard. Impacts of this type tend to be less severe, more localized, and somewhat more easily controlled than those of other sources. The CARB estimates that dust control measures can reduce dust emission rates by about one-half (i.e., regular watering).

As mentioned previously, no potential CO hotspots currently exist in the immediate vicinity of the project site. Since the property was previously designated as an industrial zone under the approved EastLake I SPA Plan in 1984, rezoning of the project site as a residential area would represent a reduction in the expected traffic generation for this area. Therefore, the proposed project is not expected to create any localized adverse traffic or air quality impacts. However, the potential may exist for "hot spots" to occur near the project site under the cumulative development scenario which incorporates impacts of additional traffic associated with future growth from other approved projects in the vicinity of the project area.

Mitigation Measures

Since the project, as proposed, was not included in SANDAG's Series V and VII growth forecasts, an impact of inconsistency must be made. No mitigation is readily available to offset this impact. The following measures are required to reduce short-term pollutant emissions:

- Use watering or other dust palliatives to reduce fugitive dust; emissions reductions of about 50 percent can be realized by implementation of these measures.
- Disturbed areas shall be hydroseeded, landscaped, or developed as soon as possible and as directed by the City to reduce dust generation.

- Trucks hauling fill material shall be properly covered.
- A 20 mile-per-hour speed limit shall be enforced on unpaved surfaces.
- Heavy-duty construction equipment with modified combustion/fuel injection systems for emissions control shall be utilized during grading and construction.

Analysis of Significance

Project-specific impacts are considered less than the previous approved SPA Plan air quality impacts due to less traffic generated. The development would represent growth that was not considered when formulating the regional air quality attainment plans for the San Diego region. The project will, therefore, contribute to a cumulative air quality impact on the region's degrading air quality.

J. FISCAL ANALYSIS

The City of Chula Vista requires the use of fiscal impact reports for all projects as determined in their threshold standard policy. John McTighe & Associates was retained to prepare an analysis of the fiscal impact on the City of Chula Vista that could result from the Salt Creek I project. This analysis considered all known operating costs and revenues that might be attributed to the development of the Salt Creek I site. The analysis also covered the added capital costs and proposed methods of financing. The John McTighe fiscal report is on file at the City of Chula Vista Planning Department. Sections of the report have been extracted or summarized in this section.

Existing Conditions

The site in its present vacant state generates almost no revenue or cost to the City of Chula Vista. The City of Chula Vista's preliminary 1988-89 budget is $35,747,192. These costs have been allocated to 18 "direct service" activities to allow a determination of which areas would be impacted by the proposed development.

This analysis has considered all known non-enterprise fund operating costs and revenues that might be attributable to the development of Salt Creek I. City operating costs were projected based on a computer model that took into consideration the fiscal year 1988-89 budget of the City and input received from various City operating departments. City 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 by John McTighe & Associates 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 product pricing. The 18 activities and their associated 1988-89 direct service budgeted expenditures are listed in Table 3-8.

Impacts

The development of Salt Creek I is projected to have an overall negative fiscal impact on the City of Chula Vista. Cumulative operating costs are projected to

Table 3-8

CITY OF CHULA VISTA
1988-89 GENERAL FUND
DIRECT SERVICE ACTIVITIES' FULL COST

Activity/Department	1988-89 Full Cost
General Government and Non-Departmental	$ 1,105,712
Planning	1,086,301
Community Development	747,544
Police/Animal Regulation	13,460,289
Fire Protection	5,559,511
Building and Housing	781,854
Public Works/Engineering	
Engineering	
Design and Construction	1,181,280
Land Development	712,458
Traffic Engineering	445,852
Public Works	
Street Maintenance	1,368,221
Street Sweeping	253,700
Street Tree Maintenance	569,816
Traffic Operations	374,823
Traffic Signal and Street Light Maintenance	1,088,293
Sewer Systems Maintenance	894,800
Pump Station Maintenance	167,922
Parks and Recreation	3,509,232
Library	2,439,583
TOTAL	$ 35,747,192

Source: City of Chula Vista 1988-89 Adopted Budget; John McTighe & Associates.

exceed cumulative operating revenue over the 11 year period of time analyzed in this study. The project's annual impact after buildout is estimated to be a negative $68,699 per year in current dollars.

The Salt Creek I development is expected to have a neutral effect on the City's capital expenditures and revenues, in that the development, as part of the EastLake I SPA, would provide public facilities financed either from the developer of the property or from the property itself through the use of public debt mechanisms tied to the property (i.e., 1913 Act assessment districts). The Public Facilities Financing Plan for EastLake I details the methods to be used to finance the affected public facilities.

Table 3-9 shows the projected combined operating funds costs and revenues over the buildout period and for five years beyond. The funds included in this grouping are the General Fund, Special Gas Tax, Traffic Safety Fund and State Library Act Fund.

Project costs to the City of Chula Vista would occur in two ways: one-time costs and on-going operational or maintenance costs. One-time costs are related to planning, building inspections, engineering services, and fire prevention. Planning would experience a one-time impact over a two and a half year period as the plans for the development of Salt Creek I are formalized and processed. Since the buildout of this project is anticipated to extend over a two and a half year period, this impact should not have a significant impact at any particular point in time. It is not now possible to quantify the cost of this impact on 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. These planning fees include fees for building, plumbing, electrical, housing, and sewer connection permits along with charges for environmental reviews, plan checks, zoning, and engineering.

Table 3-10 summarizes the projected on-going costs. At full project buildout (Year 11), generation of an annual on-going cost to the City would be $384,291. These cost projections include such items as street operations; street, sewer, water, and park maintenance; and police, fire, sewer, and library service.

The project would also generate ongoing revenues on an annual basis. These funds are generated by such items as property taxes, sales and use taxes, franchise taxes, property transfer taxes, utility user taxes, and motor vehicle in-lieu taxes. Other minor sources of revenue include business licenses, bicycle licenses, animal licenses, cigarette taxes, fines, forfeitures and penalties, public swimming pool user fees, and other recreation programs. The City places its idle funds in interest-bearing investments. Generally, as the City's total revenue increases, the amount of money available for investment also increases. The analysis has assumed that only the net positive difference between annual revenue and expenditures would be available to earn interest. Therefore, incremental additional revenue ($488 estimated in 1990) would be available to the City as a result of the project from investment earnings on project-generated funds.

The Salt Creek I project would also result in moneys available to the City from certain special funds. These include the Traffic Safety Fund, which receives revenue from fines for violations of the Vehicle Code; the State Library Act Fund, which receives State library funding for expenditures over a fixed per capital amount; the Sewer Service Revenue Fund, based on sewer service charges; and the

Table 3-9

PROJECTED ANNUAL OPERATING REVENUES AND COSTS
(in constant 1989 $)

Fiscal	Revenue	Cost	Net Impact	Net Impact	Cost Ratio
1990	$7,000	$0	$7,000	$7,000	n/a
1991	$77,990	$71,423	$6,567	$13,567	1.09
1992	$210,716	$215,815	($5,099)	$8,468	0.98
1993	$334,609	$361,242	($26,633)	($18,165)	0.93
1994	$315,592	$384,962	($69,370)	($87,535)	0.82
1995	$315,592	$384,291	($68,699)	($156,234)	0.82
1996	$315,592	$384,291	($68,699)	($224,934)	0.82
1997	$315,592	$384,291	($68,699)	($293,633)	0.82
1998	$315,592	$384,291	($68,699)	($362,332)	0.82
1999	$315,592	$384,291	($68,699)	($431,031)	0.82
2000	$315,592	$384,291	($68,699)	($499,730	0.82

Source: John McTighe & Associates, 1989.

Table 3-10

SUMMARY OF ON-GOING ANNUAL CITY COST INCREMENTS RESULTING FROM DEVELOPMENT OF SALT CREEK 1
(in constant 1989 $)

Fiscal Year	Cost
1990	$ 0
1991	71,423
1992	215,815
1993	361,242
1994	384,962
1995	384,291
1996	384,291
1997	384,291
1998	384,291
1999	384,291
2000	384,291

Source: John McTighe & Associates, 1989.

Special Gas Tax Fund, which is distributed by the State according to a set of formulas that consider the population of Counties compared to the State total, the population of cities to total County population, and the assessed value of cities compared to the total assessed value within the County. The total ongoing revenues by source of the project and the basis for these projections are presented in the Fiscal Report (McTighe, 1989) on file at the City of Chula Vista.

Mitigation Measures

Although implementation of the project is anticipated to result in a negative fiscal impact to the City of Chula Vista, no mitigation is considered necessary. It is anticipated that the negative fiscal impact expected from development of the Salt Creek I project would be offset by positive fiscal impacts generated by development of other land uses designated in the City's General Plan. The project should be monitored to confirm the negative fiscal impact projected by the fiscal analysis.

Analysis of Significance

Based on the fiscal analysis prepared by John McTighe & Associates, the project's cumulative operating costs are projected to exceed cumulative operating revenue which would result in a negative fiscal impact to the City of Chula Vista. This fiscal impact is acknowledged for informational purposes but is not considered to create an adverse environmental impact, requiring neither mitigation nor findings pursuant to CEQA.

K. PARKS, RECREATION AND OPEN SPACE

Existing Conditions

The site is currently in an undeveloped natural state as described in the Land Use section, approved for future urban development. The approved/existing GDP (General Plan)/SPA Plan Site Utilization Plan shows 56.8 acres of open-space land use designated onsite (Figure 2-4 and Table 3-1). No local parks are designated on the property. An on-street bikeway and off-street pedestrian walkway are designated on East "H" Street through the site.

Open space areas identified in the SPA Plan are intended primarily to remain natural. The Recreation, Open Space and Trails Plan of the SPA Plan establishes overall park, open space and trails criteria and standards for EastLake I. That Plan and Site Utilization Plan together insure that an open space/development balance is maintained on a community-wide basis.

Local park code requirements, based on the Parks and Recreation Element of the General Plan, are set forth in the EastLake I SPA Plan. The proposed General Plan Update defines standards for neighborhood and community parks, and establishes threshold standards for overall City parkland (refer to General Plan Update for detailed standards).

Currently the City has 291 acres of parkland and a population of 125,712 for an overall parkland/1000 person ratio of 2.31 acres. The threshold standard is 3.0 acres per 1000 population. The current shortfall in parkland is in the area west of I-805 which has a ratio of 1.26 acres per 1000 population, as compared to the area east of I-805 which has a 5.85 parkland ratio. Thus, the project area is not deficient

in parkland. The City plans to prepare a Master Plan and implementation program to upgrade the facilities west of I-805.

Impacts

The project SPA Plan, as proposed, provides 14.9 acres of open space. The EastLake I SPA Plan designates 56.8 acres of open space onsite (Figure 2-4, Table 3-1). Note that these acreages do not reflect roadways (San Miguel and Proctor Valley Roads) which have been required in the GP Update Circulation Element by the City (refer to Land Use Section for detailed discussion). The northern project area has been found to have site-specific land use and aesthetic impacts in regards to the proposed residential use in comparison to the designated open space in the northern area. Similarly, the project would result in a project-specific and cumulative impact to the area's supply of open space. In consideration of the identified need for preservation of community open space, this impact is significant. This impact could be offset by redesigning the site to provide open space acreage to the satisfaction of the City.

Local parkland requirements of the City's Local Park Code have been applied to the EastLake I PC in Section V.D of the SPA Plan. Parkland requirements are cited by the City Recreation Department based on dwelling unit count and types. 4.86 acres of public local parkland must be provided by the project to satisfy requirements for 550 units. No public parks are proposed onsite, although parks will be provided in nearby developments (i.e., EastLake, Salt Creek Ranch). The applicant proposes to satisfy local parkland (4.68 acres) requirements by payment of in-lieu fees, as no public parkland is proposed onsite. An in lieu fee of $842,820 would be required to be paid to the City, as shown in Table 3-11.

Table 3-11

SALT CREEK I PARKLAND DEVELOPMENT FEES[1]

Residential Product	Dwelling Units (du)	Fee per du	Total Fee Amount
Single Family Homes	181	$1,680	$304,080
Multi-Family Homes	369	$1,460	538,740
Total	550		$842,820

Source: City of Chula Vista Recreation Department, Park Development Ordinance/Park Acquisition and Development Fees, 1988; M. Mollinedo, June 1989.

Recreation areas are proposed in the single family residential area and in the townhome and condominium projects south of East "H" Street (R-17 and R-18, Figure 2-5). These recreation amenities will be private, to serve project residents.

The EastLake I SPA Plan Trails Plan designates an on-street bikeway on East "H" Street and an off-street pedestrian sidewalk. The project plans are consistent with these designations. The City Parks and Recreation Department further requires trail connections through onsite open space and recreation areas to offsite open space areas and parks.

Mitigation Measures

- The Tentative Tract Map and subsequent applicable plans shall provide for a bike lane on East "H" Street, in accordance with City requirements.

- The proponent shall provide additional open space to the satisfaction of the City Parks and Recreation Department and City Planning Director, prior to final Site Plan approval.

- Prior to the issuance of building permits, the project proponent shall pay a parkland development in-lieu fee of $842,820 as shown in Table 3-11 (payable to the City Parks and Recreation Department), or satisfy City parkland requirements to the satisfaction of the City Parks and Recreation Department.

- Final Site Plans shall incorporate bikeways, trails and trail connections to adjacent areas such as Salt Creek Ranch and EastLake Business Park. Bikeways and trails shall be identified on the tentative map and site plans. Configurations shall respect all natural open space/conservation areas, and shall be subject to review and approval of City Planning and Parks and Recreation Departments.

- A view fence shall be constructed adjacent to homes fronting on open space, in order to enhance awareness of the boundary between residential property and natural open space preservation areas. Fencing design shall be approved by the City Open Space Coordinator prior to issuance of grading permits.

- Slopes in open areas shall be maintained as possible (subject to City review) in a natural state. Where grading must occur on slopes adjacent to housing, 30 feet of succulent or other acceptable width and plant material shall be planted, followed by a 15-foot DG trail to act as a firebreak. Planting of native, drought tolerant low fuel plant material shall be provided closer to the natural open space areas, in accordance with Fire Marshall and City Open Space Coordinator standards.

Analysis of Significance

Project adherence to applicable requirements of the EastLake I PC Regulations and SPA Plan standards, and implementation of the above mitigation measures will ensure that all potential recreation, park and open space impacts will be reduced to a level of insignificance. Specifically regarding open space, if additional open space is not provided (onsite, offsite or via payment of in-lieu fees), an adverse project and cumulative open space impact would result. No further cumulative impacts have been identified.

L. PUBLIC SERVICES AND UTILITIES

This section is an update to information contained in EIR 84-1 and is intended to provide site-specific data and a comparison to the previously approved SPA Plan. Where applicable, information from EIR 84-1 is cited briefly, repeated or incorporated by reference so as not to be redundant. All questions and concerns relating to regional scale topics or EastLake I Planned Community issues are directed to EIR 84-1. Fiscal impacts related to services and facilities are addressed in the project's Fiscal Report; specific financial issues and costs of facilities are not contained in this section but are analyzed in the Fiscal Report. Correspondence regarding public services and utilities is contained in Appendix D.

1. Schools

Existing Conditions

The project site is within the jurisdiction of the Chula Vista City School District (CVCSD, providing education to grades Kindergarten through 6) and Sweetwater Union High School District (SUHSD, grades 7 through 12). CVCSD is comprised of 29 elementary schools. Enrollment has grown from 14,000 students in 1983-84 to 15,500 students in 1987-88, an increase of 10%. Elementary schools in the area include Parkview, Rogers and Kellogg Schools, which are currently at or near capacity. The District is planning new facilities including a school in the EastLake development on Hillside Drive and another in the Rancho Del Rey development at the intersection of Paseo Ranchero and East J Street. Chula Vista Elementary school, located on Buena Vista Road south of East H Street, opened in early 1989 and currently has 320 students. During the 1988-89 school year, the entire district had an enrollment of 16,434 students. The District elementary schools are currently at capacity; 19 relocatable classrooms have been installed to accommodate students over the past two years.

The Sweetwater Union High School District (SUHSD), with an enrollment of 26,845 students, operated beyond capacity during the 1988-89 school year. Junior high and high schools in the area include Bonita Vista JH and HS, and Hilltop JH and HS, which now operate at or near capacity. Construction of a junior high school within the Rancho del Rey development is expected to begin before 1992. State law allows that developers contribute financially to the acquisition of land and construction of new school facilities. The amount of the contribution is dependent upon the district's requirements and can be up to $1.53 per square foot of site coverage for residential developments.

The City of Chula Vista's threshold requirements state that both districts shall be provided with development forecasts so that school construction can be completed concurrent with need.

Impacts

The project site was previously approved for employment park uses and now proposes development of 550 residential units. Consequently, the project will generate a need for student housing above previous projections for the area. The estimated student generation resulting from the proposed project is listed in Table 3-12. As shown, the project will generate approximately 165 elementary students, 105 junior high and 160 high school students.

Table 3-12

SALT CREEK I STUDENT GENERATION

	Generation Rate 1	Students Generated
Elementary (K-6)	0.3	165
Junior High	0.19	104.5
High School	0.29	159.5
TOTAL		

1) Generation rates derived from quotes from CVCSD and SUHSD, 1989, based on estimated students per dwelling unit.

An Elementary School Master Plan for EastLake I was prepared in 1984. The plan projected a maximum 1,200 elementary students at buildout of EastLake I, warranting two elementary school facilities. These facilities are being financed through a Mello-Roos Community Facilities District (CFD), which covers the project site. The CFD will finance schools to house students in EastLake I and Salt Creek I.

Recent correspondence with CVCSD staff (Appendix D) indicates that the Salt Creek Ranch project to the east will provide at least one and possibly two elementary school sites. The Salt Creek I project's elementary students will attend either the EastLake schools or the Salt Creek Ranch schools although attendance boundaries have not yet been determined. The District states that the proposed project will increase the demand for student facilities. This increase will be offset by financing via the CFD in place and a ~~$600~~ $630.37 per dwelling unit fee, adjusted annually (in July) for inflation.

SUHD schools in the area are currently operating near or at capacity. The project-generated students will further increase demands on the district's facilities. Facility financing will be satisfied by a CFD currently in place (for EastLake I), similar to the CVCSD CFD. This financing should offset impacts of the project.

Mitigation Measures

- Prior to the issuance of building permits, the applicant will obtain written verification from CVCSD and SUHSD that students proposed to reside in Salt Creek I will be adequately served in the districts' schools.

Analysis of Significance

Implementation of the above mitigation measure will mitigate project and cumulative impacts to school facilities and services to a level of insignificance.

2. Police Protection

Existing Conditions

The Chula Vista Police Department provides police service to the project area. Average police response time in the City is approximately 4 minutes for priority calls. The current ratio of officers per 1,000 population is approximately 1.13. Patrol staffing needs are determined by 1) a staffing model based on projected workload demands, and 2) an assessment of whether new development areas can be incorporated into existing patrol beats or development of additional beats is warranted.

The City threshold for police service, as adopted by the Growth Management Oversight Committee, is to properly respond to calls as follows:

- Respond to 84% of Priority I emergency calls within 7 minutes and maintain an average response time to all Priority I emergency calls of 4.5 minutes or less.
- Respond to 62.10% of Priority II urgent calls within 7 minutes and maintain an average response time to all Priority II calls of 7 minutes or less.

Impacts

Project development will increase demand for police service in the area. Police protection of the project site would likely be covered by an existing beat (M. Chase, May 1989). The project is estimated to require an additional 1 to 2 officers to maintain current threshold levels of police service. City policy dictates that if the City determines that threshold levels are not maintained for police services, a moratorium within the project area or other measures to attain adequate service could be enacted. Project impacts are seen as a contribution to a cumulative increase on demand for police services.

Mitigation Measures

- Prior to issuance of building permits, the project proponent shall obtain written verification from the Chula Vista Police Department that adequate police protection services will be available to service the Salt Creek I project.

Analysis of Significance

Adherence to the City's threshold standards and the above mitigation measure will ensure potential project and cumulative impacts to police protection services will be mitigated to a level of insignificance.

3. Fire Protection

Existing Conditions

The Chula Vista Fire Department (CVFD) has jurisdiction over the project area. The closest fire station is Station #4, located on Otay Lakes Road south of East "H" Street.

Fire Protection Planning. As part of the General Plan Update a Fire Station Master Plan has been prepared and is currently under review (March 23, 1989 draft). The plan analyzes in detail long-term fire protection facility needs on an area-wide basis. It identifies performance standards, thresholds of service levels, future facility needs, and a development fee structure for financing future stations, among other items. Specifically, for example, recent performance data indicate that approximately 92% of emergency calls are presently responded to within 7 minutes; a threshold of 85% has been established as a "floor" below which service levels should not fall.

Regarding future fire protection, the Master Plan identifies a Planning Area Network of 8 fire stations. With implementation of the network, the City would sufficiently provide fire protection service in accordance with thresholds. Within this network a new station is proposed to be located within the project site on Salt Creek I. The Salt Creek I station (CV #4) would ultimately service an area of 13,751 residential units. The station would be needed potentially by 1992-93, or, more specifically, targeted operation should be when EastLake Greens reaches a 40-50% build-out level (based on estimated development and infrastructure phasing). The new CV #4 would replace the original fire station site planned within EastLake I. As reviewed in the draft Master Plan, various general alternative site locations within the network were considered.

Impacts

Since the draft Fire Station Master Plan is based upon the City's General Plan Update, the CVFD anticipates designated residential use on the project site (see Land Use Section for discussion of General Plan Update and the proposed project). Therefore, the project's residential unit demand on fire protection service does not in itself constitute an impact because servicing the proposed residential units has been anticipated and planned. If the draft Master Plan is implemented as proposed, then CVFD should be able to serve the project's population without impact.

A direct conflict does result between the proposed project and Master Plan, due to the CVFD's identification of a fire station on the project site which is not reflected in proposed project plans. This conflict could represent a significant impact, however, the Master Plan is not yet adopted. CVFD has identified the need for a fire station on the project site; if this is not possible, an alternative site in the immediate project vicinity must be identified as soon as possible. Negotiations are underway between CVFD and Baldwin to locate the station site on the Salt Creek Ranch project site, at a location to the immediate east of the Salt Creek I site (M. Chase, CVFD, personal communication, June 1989). Site dedication and facility financing would also need to be addressed.

Mitigation Measures

- Prior to final tract map approval, a 1-acre site location for fire station CV #4 shall be determined to the satisfaction of the CVFD, City Director of Planning, and the Baldwin Company. It appears at this time that the site will be located on the Salt Creek Ranch property (M. Chase, CVFD, personal communication, June 1989). If so, a pro rata share of financing shall be established for Salt Creek I, payable prior to issuance of building permits.

- The proponent shall obtain verification from the CVFD, prior to Certificates of Use and Occupancy, that adequate fire protection service will be provided to the project on an interim short-term basis and a long-term basis. This includes adequate water pressure onsite, emergency access, adherence to building fire codes of the City, and other relevant criteria. Fee payments may be required in accordance with City impact fees.

Analysis of Significance

Implementation of the above measures will ensure potential impacts to fire protection services will be mitigated to a level of insignificance.

4. Water

Existing Conditions

The property is located within the service area of the Otay Water District (OWD), one of 24 member agencies of the San Diego Counter Water Authority (CWA). The CWA receives water from the Metropolitan Water District facilities via Colorado River and California Aqueduct sources. (Further discussion of regional water supply and local water supply facilities is provided in EIR 84-1, pages 3-26 through 3-29, hereby incorporated by reference).

Water Supply and Facilities. The existing water supply to the study area is supplied by a connection to the San Diego County Water Authority Aqueduct Pipeline 3. The San Diego County Water Authority Aqueduct connection supplies the 12 million gallon, 624 HGL Patzig Reservoir. The Central Area Pump Station draws water from the Patzig Reservoir and discharges 710 Zone water. The 710 Zone water is then further boosted to the 980 Zone.

The project site has been annexed into Improvement District No. 22 as part of the EastLake Business Center. The nearest 710 Zone facility to the Salt Creek I project is a 12-inch line at the intersection of East "H" Street and EastLake Drive; this line is approximately 2,200 feet southwest of the property boundary of Salt Creek I. Storage for the 710 Zone is provided in the 3 million gallon reservoir, located south of Otay Lakes Road in the EastLake Development.

As mentioned above, the source for the 980 Zone is a pump station which is located just south of the intersection of Otay Lakes Road and Lane Avenue. Storage for the 980 Zone is provided in two, 5 million gallon reservoirs which are connected by a 20-inch line to the pump station. Additional 12, 16 and 20-inch transmission mains exist throughout the EastLake Development.

Impacts

Water Demand. Correspondence with OWD (April 1989) indicates that because the property has been approved for water service as a component of EastLake Business Center, no further impacts will result from the project. Water demand is based upon a gallon per day (gpd)/unit factor for residential use and a gpd/acre factor for commercial use. These factors are applied to the existing commercial land use designations and proposed residential designations for a water demand comparison in Table 3-13. Although there is a higher water demand with the residential uses, this increase is considered minor and will not constitute a project-specific significant impact to water supply or services.

Table 3-13

WATER DEMAND COMPARISON

Land Use	Quantity	gpd Demand Factor[1]	gpd Average Demand[1]
Residential (proposed)	550 units	600 gpd/unit	330,000 gpd
Commercial (existing/approved)	37.4 acres	3,500 gpd/acre	130,900 gpd

[1] gpd = Gallons per day

Source: Salt Creek I Master Plan of Water

Proposed Water Facilities. The proposed project can be serviced from the 710 Zone and 980 Zone facilities of the Otay Water District. The 710 Zone, which encompasses the 181 single family residences, is proposed to be served from a 12-inch connection to existing offsite 710 Zone facilities with a second source provided from a pressure reducing station connected to a future 980 line in East "H" Street. The 980 Zone will service the 369 multi-family residences and is proposed to be served directly from the proposed 20-inch line in San Miguel Road.

Adequate water service will warrant the construction of the following facilities, as recommended in the project's Master Plan of Water (Wilson Engineering, March, 1989):

a. A 12-inch 710 Zone water main from the intersection of EastLake Parkway and East "H" Street to the project.
b. A 10-inch 710 Zone loop through the residential portion of the project.
c. A 16-inch 980 Zone water main in East "H" Street from EastLake Parkway to San Miguel Road.
d. A pressure reducing station connected from the 16-inch 980 Zone water main with a 6-inch and a 2-inch pressure reducing valve. This station will be tied into the 10-inch 710 Zone loop through the residential portion of the project.

e. A 20-inch 980 Zone water main in San Miguel Road north to East "H" Street, and a 20-inch in East "H" Street east of San Miguel Road.
f. A 10-inch water main should be extended from the 710 Zone, 10-inch loop to Proctor Valley Road.
g. A 10-inch loop should be installed through the multi-family lots which will be serviced through the 980 Zone. The 10-inch loop should be connected to the 20-inch water main in San Miguel Road at two separate locations.

Cumulative Water Demand. Estimates of water demand from existing and future projects in the local area have been requested by OWD and calculated in the Master Plan of Water. Table 3-14 lists the total demand of these projects to be serviced by the 980 Zone. Assuming facilities are installed as recommended, no cumulative impacts are expected to result. The table shows maximum day demands for the 980 Zone. These can be used to show that existing pumping station capacity is adequate at the present time based upon full build-out of the EastLake Business Center, EastLake Hills and Shores, and the Salt Creek I project. If the EastLake Greens development precedes Salt Creek I, a third pump will have to be added to the pump station raising the available pumping capacity to 8,000 gpm. This new capacity would be sufficient to serve the Salt Creek I project in addition to build-out of the EastLake Business Center, Hills and Shores, and the Greens without any upgrading.

Table 3-14

980 ZONE CUMULATIVE WATER DEMANDS

Project	Maximum Day Demand, gpm[1]
EastLake Business Center	2,053
EastLake Hills and Shores	1,262
EastLake Greens	3,658
Salt Creek I	338
Salt Creek Ranch	3,340
Total	10,651

[1] gpm = Gallons per minute

Source: Salt Creek I Master Plan of Water (Wilson Engineering, 1989)

Mitigation Measures

- Prior to the recordation of final maps, the proponent shall obtain will-serve letters, verifying that water facilities proposed shall adequately service the project, via approval by the OWD of all plans and specifications. Recommendations of the Master Plan of Water for Salt Creek I (Wilson

Engineering, March 1989) shall be followed and utilized as a guideline, in consultation with OWD.

- If the EastLake Greens development precedes Salt Creek I, a third pump will be added to the proposed pump capacity, in accordance with the March 1989 Master Plan of Water (Wilson Engineering), subject to approval by the City Engineer prior to issuance of building permits.

- Water conservation measures for onsiste landscaping and for maintenance of roadside vegetation shall be created and implemented by the project proponent, in coordination with the City Public Works Department and in consultation with OWD or other qualified water agency/organization. Appropriate conservation measures include but are not limited to planting of drought tolerant vegetation and the use of irrigation systems which minimize runoff and evaporation loss.

- The following water conservation measures shall be adhered to; implementation shall be approved prior to issuance of certificates of use and occupancy:

  a. Low-flush toilets (Section 17921.3, Health and Safety Code)
  b. Low-flush showers and faucets (California Administrative Code, Title 24, Part 6, Article 1, T20-1406F).
  c. Insulation of hot water lines in water recirculating systems (California Energy Commission).

Analysis of Significance

Implementation of the above measures and adherence to proposed plans and standard regulations will ensure that all potential project and cumulative water service impacts are mitigated to a level of insignificance. The project, as with any development, will unavoidably contribute to a cumulative demand and impact on the limited water supply for the region.

5 Wastewater Services

The following is based on the Master Plan of Sewerage for Salt Creek I (Wilson Engineering, March 1989) and correspondence with City of Chula Vista (Appendix D).

Existing Conditions

The City of Chula Vista is responsible for wastewater services in the project vicinity. The City operates and maintains its own sanitary sewer system with connections to the City of San Diego Metropolitan Sewer System (METRO). Sewer facilities in the area include an 8-inch sewer main in San Miguel Road west of Proctor Valley Road. This sewer main ties into the Spring Valley Outfall. An existing 8-inch sewer stub is located at the intersection of East "H" Street and EastLake Drive. This gravity sewer system ties into the Long Canyon sewer line and discharges into the Spring Valley Outfall.

Telegraph Canyon Basin sewer facilities follow Otay Lakes Road east to EastLake Parkway. A 10-inch sewer extends northerly along EastLake Parkway to Miller Drive in the EastLake Business Center. A 10-inch sewer stub is located in Boswell Court, west of Miller Drive. The Telegraph Canyon Sewer ultimately delivers flow

to the 90-inch Metropolitan Interceptor Sewer. Wastewater is treated by the San Diego METRO System.

Impacts

Wastewater Facility Demands. The study area for the project's Master Plan of Sewerage encompasses the project, EastLake Business Center, Salt Creek Ranch and the remainder of the Telegraph Canyon Drainage Basin. Consequently, this assessment will be divided into project demand and cumulative demand within the study area. Proposed facilities are then described based on interim demand and ultimate demand in the study area.

Generation factors and project sewage generation are provided in Table 3-15. As shown, the project will generate 139,240 gallons per day (gpd) of wastewater, as compared to 112,200 gpd generated by the existing employment park designation. The resulting project demand represents a slightly greater impact on demand for wastewater facilities and treatment than the existing SPA Plan, although this difference is considered minor and does not constitute a significant impact.

Project wastewater will be transported for treatment by the San Diego METRO System. Adequate capacity exists in the METRO to service the project; the project has been anticipated in future land use projections and associated sewage treatment needs (EIR 88-2, Section 3-13).

Cumulative Demands. Table 3-16 presents projected sewage flows for nearby developments. Flow projections are grouped by the drainage basin in which they are generated. Calculations are derived from the Master Plan of Sewerage (Wilson, 1989). These cumulative flows can be accommodated without impact (subject to City approval) provided that facilities recommended and proposed are implemented (see below).

Proposed Facilities. Three alternatives to provision of wastewater facilities were evaluated in the Wilson March 1989 report. The recommended alternative is described in the following paragraphs. Recommendations provide for interim and ultimate wastewater transport.

The most effective interim method of handling project wastewater is to pump all flow to the Telegraph Canyon Trunk Sewer System. Interim sewer service to the Telegraph Canyon Trunk Sewer will consist of a sewage lift station in the northwest area of the project. Force main discharge will be at the southeast end of the project into a new gravity sewer tying into the Boswell Court existing 10-inch stub. The recommended onsite facilities include 8 and 10-inch gravity sewer lines and a temporary pump station and 6-inch force main. The only offsite facility required is a 10-inch gravity line which is proposed to convey the force main discharge to the existing 10-inch plug at Miller Drive and Boswell Court.

There is adequate sewer capacity in the Telegraph Canyon Trunk Sewer to accommodate Salt Creek I flow on an interim basis. Existing flows plus EastLake Business Center flow, plus EastLake Greens plus Salt Creek I flow causes one reach of the trunk sewer to flow at 76% of full depth. All other portions of the Telegraph Canyon Trunk Sewer flow below the 75% design capacity under this scenario.

Table 3-15

WASTEWATER FLOW COMPARISON

Land Use	Quantity	Generation Factor[1]	Average Flow, gpd
Proposed Residential			
Single Family	181 units	280 gpd/unit	50,680
Multi-Family	225 units	240 gpd/unit	54,000
Stacked Flats	144 units	240 gpd/unit	34,560
Total	550 units		139,240
Existing Commercial Designation			
Employment Park	37.4 acres	3,000 gpd/acre	112,200

[1] gpd = Gallons per day

Source: Salt Creek I Master Plan of Sewage (Wilson Engineering, 1989)

Table 3-16

CUMULATIVE OFFSITE SEWAGE FLOWS

Drainage Basin	Project	Land Use	Number of Units	Average Flow, gpd
Proctor Valley	Salt Creek Ranch	Single Family	180	50,400
Telegraph Canyon	Salt Creek Ranch	Single Family	1,261	353,080
		Multi-Family	571	137,040
	Eastlake Business Park	(1)		642,900
	Eastlake Greens	(1)		423,940
			Subtotal	1,556,960
Salt Creek	Salt Creek Ranch	Single Family	653	182,840
Otay	Salt Creek Ranch	Single Family	979	274,120

1 Flow based on data in Eastlake Wastwater System Subarea Master Plan, Lowry and Associates, January 1984.

Ultimately the Salt Creek I flows will gravity sewer down Proctor Valley Road to the Spring Valley Outfall. This option is not currently feasible because existing facilities are not in close proximity for connection. When the Proctor Valley Sewer is constructed, the interim sewage lift to the Telegraph Canyon Trunk Sewer station and force main will be abandoned. At that time the project will be serviced by the Proctor Valley Sewer.

Mitigation Measures

- Interim wastewater facility plans recommended in the March 1989 Wilson report shall be reviewed and approved by the City Engineer prior to any final map approval onsite. Approval may involve an agreement reached between the developer and City which will dictate how and where sewage is accommodated on an interim basis, and facility financing.

- Ultimate wastewater facility plans shall be reviewed and approved by the City Engineer. Implementation of the ultimate system shall be installed in a manner and at the time dictated by the City Engineer. Approval may involve an agreement reached between the developer and City which will dictate how and where sewage is accommodated, and facility financing and implementation phasing.

Analysis of Significance

Implementing of the proposed plans and mitigation measures will mitigate potential wastewater project and cumulative impacts to an insignificant level.

6. Waste Disposal

Existing Conditions

Chula Vista Sanitary Service provides solid waste disposal service for the City. Refuse is transported to the Otay Landfill, located north of Otay Valley Road 1 mile east of Highway I-805. The landfill has a projected lifespan through year 2006.

Impacts

Based on an average refuse generation rate of 5 pounds per day per capita for multi-family dwellings, and 7 pounds per day per capita for single family dwellings, the project, is estimated to generate 9,973 pounds of refuse per day. This does not represent a significant impact on service capacity or landfill lifespan, as the property has previously been approved for development.

Mitigation

None necessary.

Analysis of Significance

No significant impacts to waste disposal services or capacity will result from project implementation.

7. Gas/Electric/Energy Conservation

Existing Conditions

The San Diego Gas & Electric Company (SDG&E) provides electricity and natural gas to the area. A SDG&E 120-foot easement and 230kV transmission line traverse the central portion of the site in a north-south direction.

Impacts

SDG&E will provide gas and electricity to the project. Existing distribution facilities nearby would be extended to serve the development. The existing 120-foot easement and associated facilities will be respected and retained as open space, as reflected in project design (see Figure 2-6 Tentative Map).

EIR 84-1 Section 3.3.8 provides an extensive discussion on energy and conservation. That section is hereby incorporated by reference; recommended energy conservation mechanisms are listed as mitigation herein (see following). The proposed project is not expected to create a significant increase in energy demand over that analyzed in EIR 84-1. As with any development, the project will contribute to a cumulative increase in demand for non-renewable energy resources.

Mitigation Measures

- The project shall, to the extent feasible and to the satisfaction of the City, provide the following:
    - Encourage the use of public transit by providing bus loading zones at key locations onsite.
    - Implement efficient circulation systems including phased traffic control devices.
    - Adhere to updated Title 24 building construction and design standards.
    - Install landscaping that provides afternoon shade, reduces glare, encourages summer breezes, discourages winter breezes.
    - Minimize reflective and heat absorbing landscapes.
    - Reserve solar access and implement passive solar systems.
    - Develop dwellings on small lots to decrease indoor and outdoor heating and lighting requirements.
    - Install energy efficient appliances in residential developments.
    - Limit strict lighting and install energy efficient lights.
    - Demonstrate energy conservation practices.

Analysis of Significance

Potential project impacts to energy resources will be, with implementation of the above measures, mitigated to a level of insignificance. The project, as with any development, would contribute to a cumulative demand and impact on non-renewable energy resources in the region.

8. Public Transit

Existing Conditions

The Chula Vista area is serviced by three Chula Vista Transit (CVT) routes.

Impacts

The EastLake I SPA Plan (EIR 84-1) identified an increase in public transit demand, creating a need to extend CVT services at full buildout of EastLake I. This proposed project will not significantly increase the transit demand previously identified in EIR 84-1, creating no additional impacts. A need to provide transit facilities was also discussed in EIR 84-1. This project's location and configuration support a potential siting for transit facilities as recommended below.

Mitigation Measures

- Prior to final site plan approval, the developer shall consult with City planning staff regarding location of transit facilities (i.e., bus stops) onsite. Should there be a need for such facilities, site design shall provide for said facilities, subject to review and approval by the City.

Analysis of Significance

Any potential impacts to transit services will be mitigated by the above measure to a level of insignificance.

9. Library Facilities

Existing Conditions

The City of Chula Vista currently operates one central library located at 365 F Street in the Chula Vista Civic Center. The library contains approximately 190,000 volumes and circulates over one million books per year. During the 1988/89 fiscal year the library averaged 2,032 patrons per day. In terms of books and patrons served, the library is current operating at capacity (Howard 1989).

In addition to the central library, the City of Chula Vista pays the County of San Diego to operate two libraries, located south of Chula Vista in the Montgomery area. The two branches contain a total of approximately 14,000 volumes. Both branches are operating below capacity since the County has a circulation system which includes other County branches. The City is scheduled to assume responsibility for these libraries in 1989.

The City of Chula Vista's library threshold objective is to provide supplemental branch library facilities in the Montgomery/Otay area and in the area east of I-805. A draft Library Master Plan has been prepared for the Chula Vista library system identifying the future facilities required as a result of growth in Chula Vista. Chula Vista will need approximately 123,700 square feet of new public library space by the year 2010, based on projected population. The recommendations contained within the Master Plan state regarding eastern Chula Vista, a leased storefront or portable facility will be needed by the year 2000.

Impacts

Residents generated by the project would slightly increase the demand on library facilities within the project vicinity, representing a contribution to a cumulative increase in demand for library facilities. The growth anticipated in eastern Chula Vista will require an expansion of existing facilities. Smaller branch libraries or a

large facility within Chula Vista's eastern territory would increase the system's capacity.

The City of Chula Vista's threshold standard for libraries is 500 square feet of fully staffed and equipped library space per 1000 residents. A one acre library site has been included within the PC regulations for the EastLake project. According to the director of the Chula Vista public library system, the branch will be necessary once 30,000 people are present in the area (Lane 1986). Since it takes approximately three years to plan and construct that type of library facility, plans for the branch library should be developed concurrent with residential development. Financing for the library could be achieved through a Mello-Roos Community Facilities District or through special grants.

Mitigation Measures

- The project applicant shall participate in any funding programs created for financing of a library facility to serve the vicinity, as deemed appropriate by the City.

Analysis of Significance

Any library impacts associated with the project will be mitigated to a level of insignificance by implementation of the above mitigation measure.

10. Other Services

Services such as telephone and hospital facilities are adequately addressed in EIR 84-1 Section 3.3, which is incorporated by reference. The proposed amendment will not result in increases in demand for services above those identified in EIR 84-1, thus no impacts are identified.

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IV. REQUIRED CEQA SECTIONS

A. CUMULATIVE IMPACTS SUMMARY

This section presents a summary of impacts which would result from implementation of the proposed project in combination with other past, present and reasonably foreseeable future projects in the eastern Chula Vista area. Other projects include existing and future development assumptions utilized in the City General Plan Update and, specific to the immediate project vicinity, those projects illustrated in Figure 3-1 of the Land Use Section. These assumptions have been used throughout this EIR for cumulative analyses. Note that the summary includes only the environmental effects which were found to have a potential cumulative impact; each respective section provides a more detailed evaluation of all potential impacts.

Land Use

Implementation of the project as proposed would result in less open space acreage onsite than designated on existing approved plans (see Table 3-1), specifically in the northern project area. This previously unanticipated difference in open space (an inconsistency of the project with approved plans) would contribute to a cumulative impact on the permanent open space acreage in the area, in combination with other ongoing development and associated conversion of open space to urban uses.

Aesthetics/Visual Resources

The project site has been approved for development as part of the EastLake I Planned Community (EIR 84-1), consequently aesthetic impacts have previously been considered. Development now proposed in the northern project area (previously designated open space) will nevertheless add to aesthetic and visual impacts in the northern portion of the site previously unanticipated. The aesthetic and visual impacts of the proposed development in the northern area will contribute to a cumulative aesthetic impact from ongoing development in the area.

Geology/Soils

Potential cumulative impacts associated with geology, soils and erosion will be mitigated to a level as insignificance.

Hydrology/Water Quality

A potential cumulative water quality impact of the project and other development has been identified. As with any development, urban land uses generate pollutants in drainage/runoff. Mitigation proposed herein is determined to mitigate the potential water quality impacts to an acceptable level, thus no cumulative water quality impacts will result after mitigation.

Biological Resources

Significant cumulative impacts can be partially mitigated by measures proposed herein. The project will, however, unavoidably contribute to cumulative loss of biological habitat in the region.

Cultural Resources

Mitigation measures proposed herein will serve to mitigate potential cumulative impacts to cultural resources to a level of insignificance.

Traffic and Circulation

The project and ongoing development, without mitigation, would have a cumulative impact on traffic and circulation in the area. The City General Plan Update has recently identified circulation improvements necessary to accommodate cumulative development; some of those improvements have been incorporated into this proposed project (i.e., extension of East "H" Street, San Miguel Road, SR-125). Those improvements and additional mitigation presented in this SEIR will mitigate cumulative traffic impacts to a level of insignificance.

Noise

Potential cumulative noise impacts associated with the project will be mitigated to a level of insignificance with implementation of mitigation measures presented herein.

Air Quality

Potential cumulative air quality impacts will be partially mitigated to the extent feasible. The project development, however, was not included in formulating regional air quality attainment plans for the San Diego region. Therefore the project will contribute to a significant cumulative air quality impact on the regions degrading air quality.

Fiscal Analysis

The project is acknowledged to result in a negative cumulative fiscal impact to the City for informational purposes. This effect, however, is not considered to create an adverse environmental impact requiring neither mitigation nor findings pursuant to CEQA.

Parks, Recreation and Open Space

Potential impacts regarding parks and recreation will be mitigated to a level of insignificance. The project as proposed, however, will contribute to a cumulative impact on permanent open space in the area, due to the (previously unanticipated) development proposed in the site's northern area which is designated as open space on the existing SPA Plan.

Public Services and Utilities

Potential cumulative impacts can be mitigated to a level of insignificance with two exceptions. The project's resulting unavoidable increase in demand for water and non-renewable energy resources represents a contribution to cumulative impacts on the region's limited water supply and energy resources.

B. GROWTH INDUCING IMPACTS OF THE PROPOSED PROJECT

The 1982 EastLake PC General Plan Amendment (EIR 81-03) and 1984 EastLake I SPA Plan approval (EIR 84-1) each were subject to a detailed evaluation of growth

inducing impacts of the EastLake Planned Community. Growth inducing considerations are critical in the CEQA process at initial project approvals because those first approvals (i.e., General Plan and Zoning) pave the way for future, subsequent entitlement and project implementation. In other words, the decision to convert the land has been made once an urban General Plan land use designation is established. It is appropriate and necessary to evaluate in detail the growth inducement at that stage of planning. The Growth Inducing Impacts sections of EIRs 81-03 and 84-1 are hereby incorporated by reference, serving to document the growth inducing impacts of site development in general.

The proposed project amendment from commercial to residential uses must also be evaluated for potential growth inducement effects of the specific site onto surrounding properties. The proposed conversion of the site to residential designations is considered to have a insignificant impact on surrounding properties, because the area has been planned and evaluated in the GP Update recently. Also, surrounding parcels to the south, southwest and southeast are developed or approved for development; land to the east is currently being considered for development as the 1200-acre Salt Creek Ranch Planned Community; land to the north is being considered as the San Miguel Ranch development, and properties to the west generally are made up of Chula Vista residential neighborhoods. The area has been planned in the Eastern Territories Area Plan at a General Plan level; roadways, open space and frastructure have been assessed in consideration of cumulative future land uses.

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

Section VII from EIR 84-1 for EastLake I Spa Plan is hereby incorporated by reference. The following pertains to the subject proposed amendment.

The proposed project would commit the site to a long-term residential use, precluding any future agricultural or open space uses onsite. The site, however, has been planned and previously approved for urban development. The project proposes to satisfy an increasing demand for housing in the vicinity and region.

The project is assessed by community planning efforts of the City of Chula Vista which, on a comprehensive basis, strive for a balance in community land uses, enhancement of the long-term productivity of the city and region, as well as maintenance and conservation of valuable resources. If approved by the City, this project will be found in conformance with those long-term goals.

D. IRREVERSIBLE CHANGES THAT WOULD RESULT FROM THE PROJECT

The project would result in an irreversible commitment of the site to residential uses, as compared to the existing commercial designation. The commitment to convert the property to urban use was made in 1982 with the GPA and Zoning approval (EIR 81-03). EIR 81-03 and EIR 84-1 are incorporated by reference and provide summaries of irreversible changes at a broad, PC level of planning. This project would serve to direct development for residential use rather than commercial. As the development occurring in the area is primarily residential, this project would not aid in providing a more balanced land use mix. Evidently the area has been assessed for commercial development demand and the EastLake Business Center is found to be an adequate size and scope with deletion of this

124 acres from commercial/employment park use. That confirmation can only be made with time in the future as the area matures.

Site development would result in an irreversible commitment to further use of non-renewable energy resources. Finally, the following paragraph is extracted from EIR 84-1 and serves to summarize the remaining irreversible changes resulting from the project.

Energy and water resources will be committed in site preparation activities (grading and construction) and as part of future site usage. Grading of the project site for development would permanently alter the existing site topography. Cultural and paleontological resources onsite could be adversely affected by future site development; however, it is assumed that data recovery programs and salvage will mitigate any potential losses. Ambient noise levels in the project vicinity will increase because of higher traffic volumes as well as other noise sources associated with urban activities. Noise levels will not exceed land use compatibility standards if mitigation measures are incorporated.

E. UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL IMPACTS

On a project-specific basis, the amendment, as proposed, would result in impacts associated uniquely with the proposed single-family residential tract in the northern project area. These impacts include the following:

- Land Use. Project inconsistency exists with the approved SPA Plan as well as with the General Plan Update designations of open space in a large portion of the northern project area. Note that San Miguel and Proctor Valley Road alignments (in the northeast area) would occur, however, with the General Plan Update regardless of the project.

- Aesthetic/Visual Resources. Visual impacts would result from proposed development in the northern area (which would be retained largely in open space under the existing SPA Plan or under the General Plan Update). Note however that (General Plan) proposed San Miguel and Proctor Valley Roads would result in some aesthetic impacts in the northeast area regardless of the project. (These roadway alignments are not shown on the existing SPA Plan).

- Biological Resources. Significant biological resources onsite exist in the northern area (see Figure 3-7 and Table 3-2). The project, as proposed, will significantly impact these resources if no adjustments are made in the northern area site design.

- Parks, Recreation and Open Space. The project proposes less onsite open space than the existing SPA Plan. Also, the GP Update designates a larger area as open space in the northern area than does the project. This difference in open space, an identified project impact, is cited (separately from the Land Use analysis) due to the overall context and importance of permanent open space in the rapidly urbanizing area and community as a whole. The project, as proposed (without redesign in the north area or provision of alternate open space), will contribute to a cumulative loss of designated permanent open space in the area.

The above adverse project impacts can be mitigated by redesign of the northern project area to protect significant biological resources, and to retain open space in

configuration and acreage which would reduce Land Use, Aesthetics and Open Space impacts to the satisfaction of the City. Design Alternative D presented in Section V would attain the necessary reductions in impacts. Otherwise, the project as proposed would result in the above cited unavoidable adverse impacts.

On a cumulative basis, the project will unavoidably contribute, in conjunction with other development in the region, to 1) a loss of biological habitat; 2) permanent aesthetic/visual alteration of the land; 3) regional air quality degradation; and 4) an increase in demand for water and non-renewable energy resources which are in limited supply.

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V. ALTERNATIVES TO THE PROPOSED PROJECT

INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an EIR include a discussion of reasonable project alternatives which could avoid or reduce significant adverse environmental impacts of the project. EIRs 81-03 and 84-1 provide alternatives discussions on a planned community scale; these sections are hereby incorporated by reference and some information below regarding the No Project alternative has been extracted from EIR 84-1. The focus of this analysis is on the avoidance of the proposed amendment's adverse impacts, specifically the land use inconsistency of residential development versus open space in the northern portion of the site; grading/aesthetic and open space impacts in the northern area; and biological resource impacts. Refer to Section I.C for an impact summary comparison of the below alternatives to the proposed project.

The proposed project generally involves an amendment to redesignate the site from commercial/employment park and open space uses to residential and open space uses. Alternatives evaluated below include: A) No Project; B) Lower Density; C) Higher Density; D) a Design Alternative incorporating more open space; and E) Alternative Site. Alternative D is considered the preferred alternative; it is determined to avoid or reduce adverse project impacts while generally satisfying objectives of the proposed project. The Summary of Alternatives comparison in Section I of this EIR provides a concise, brief comparison of project impacts versus impacts due to each of the below alternatives.

A. NO PROJECT/EXISTING GENERAL PLAN

Under the No Project alternative, the site would remain designated for (EastLake I) employment park and open space uses. (The No Development Alternative constitutes no development onsite, evaluated in EIRs 81-03 and 84-1, hereby incorporated by reference and dismissed from further consideration.) This alternative was evaluated in EIR 84-1, and no significant unmitigable impacts were identified with that project. The previous SPA Plan (No Project Alternative) effectively would eliminate this project's impacts of open space inconsistency in the northern area and would provide consistency with regulating land use documents. This alternative does not, however, provide for San Miguel Road and Proctor Valley Road alignments which are recently identified General Plan needs. The No Project Alternative is environmentally superior to the proposed project, however the lack of roadway alignments in this alternative should also be weighed.

B. LOWER DENSITY ALTERNATIVE

This alternative would allow development in the same areas as the proposed project but at a lower density, resulting in fewer units. For example, the multi-family sites proposed in the site's southern portion (369 units) would be designated low density. This reduction would serve to slightly reduce traffic, noise and air quality impacts, but not significantly. The major impacts in the northern area on biological resources, open space and land use inconsistencies would not be reduced. A fire station site could potentially be located in the southern area under this alternative. Important is that low-density residential may not be entirely suitable in the southern area because of its proximity to major roadways and higher intensity uses to the south and southeast. This alternative should be dismissed due to the above factors;

it does not satisfy the objectives of lessening the project's environmental consequences.

C. HIGHER DENSITY ALTERNATIVE

Higher density residential designations in any or all areas of the site would not serve to reduce potential impacts beyond those identified and is therefore rejected from further consideration. In fact, impacts such as aesthetics, land use consistency and compatibility, traffic, noise, air pollution, demand on public services and utilities and grading would be greater under this alternative.

D. DESIGN ALTERNATIVE: INCREASED OPEN SPACE

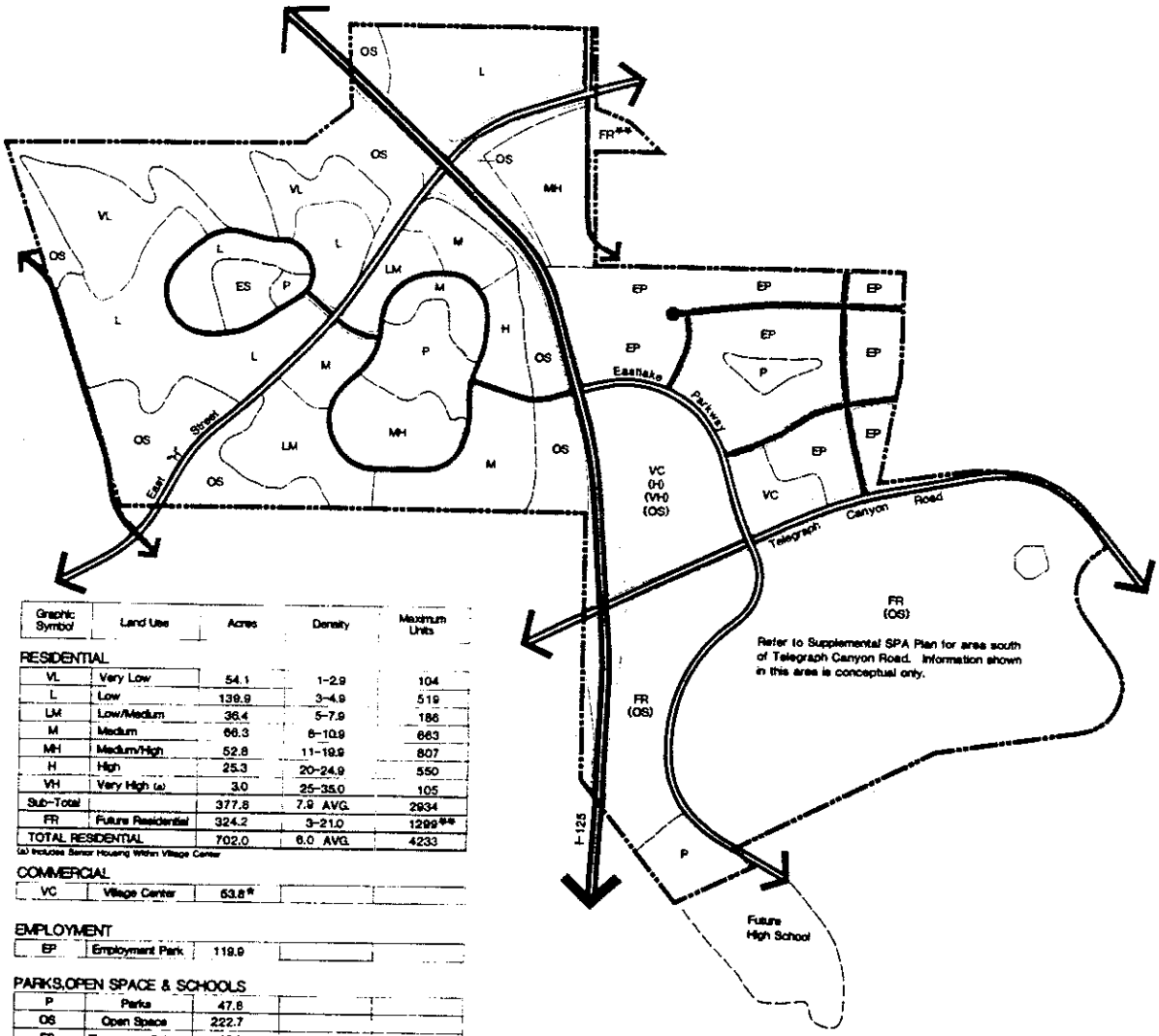
The Design Alternative, created upon identification of project impacts, is an attempt to minimize the project's adverse effects while attaining the project objectives of residential development onsite. Figures 5-1 through 5-4 illustrate the Alternative. This Alternative provides a net additional 4.0 acres of open space, specifically in the northwest corner (Lot A of Figure 5-4, 6.45 acres), north-central area (Lot B, 1.08 acres) and along SR-125. The plan also changes the proposed land use of the southernwest parcel from Condominium to Future Urban Use. The Alternative will reduce project impacts on biological resources, open space, aesthetics and inconsistency with regulating land use documents. Each significant environmental impact resulting from the project is reviewed below in consideration of the Design Alternative. A determination of level of significance is concluded under each topic below. This Design Alternative is environmentally superior to the proposed project and should be considered as a preferred alternative.

Land Use

The project's single-family residential area was determined to be inconsistent with the EastLake I SPA Plan open space land use designation of the site's northern area. The Design Alternative slightly increases open space (14.9 to 18.9 acres) and redistributes open space from the central portion of the single family residential tract to the northwest corner and north central edge (Figures 5-3 and 5-4). This redistribution is pursuant to biological resource preservation (see below, Biology discussion). This Alternative further reduces land use impacts but not to a level of insignificance.

Aesthetics/Visual Resources

A similar impact resulting from proposed residential development in the northern site area has been identified regarding aesthetics and view impacts (Note that a portion of the aesthetic impact is due to San Miguel and Proctor Valley Roads, included pursuant to the GP Update Circulation Element.) A substantial portion of the northern area (designated open space on EastLake I SPA Plan) would be developed, resulting in an urban visual appearance in comparison to open space. The Design Alternative will reduce this impact by providing more open space located at the site's outer northwest and north, and by additional setback from SR-125. The aesthetic impact will not, however, be reduced to a level of insignificance by this Alternative.



Graphic Symbol	Land Use	Acres	Density	Maximum Units
RESIDENTIAL				
VL	Very Low	54.1	1-2.9	104
L	Low	139.9	3-4.9	519
LM	Low/Medium	36.4	5-7.9	186
M	Medium	66.3	8-10.9	663
MH	Medium/High	52.8	11-19.9	807
H	High	25.3	20-24.9	550
VH	Very High (a)	3.0	25-35.0	105
Sub-Total		377.8	7.9 AVG.	2934
FR	Future Residential	324.2	3-21.0	1299**
TOTAL RESIDENTIAL		702.0	6.0 AVG.	4233

(a) Includes Senior Housing Within Village Center

COMMERCIAL				
VC	Village Center	53.8*		
EMPLOYMENT				
EP	Employment Park	119.9		
PARKS,OPEN SPACE & SCHOOLS				
P	Parks	47.8		
OS	Open Space	222.7		
ES	Elementary School	10.0		
TOTAL		280.5		
CIRCULATION				
	Streets & Highways Master	131.3		
PROJECT TOTAL		1267.9	3.3 AVG.	4233

* Includes 19.6 acres of Open Space

** Units to be determined, not included in FR unit count

TRANSPORTATION CORRIDOR
182' R.O.W. Reserve

MAJOR
4 lane divided

COLLECTOR
2 lane undivided

N

0 2000

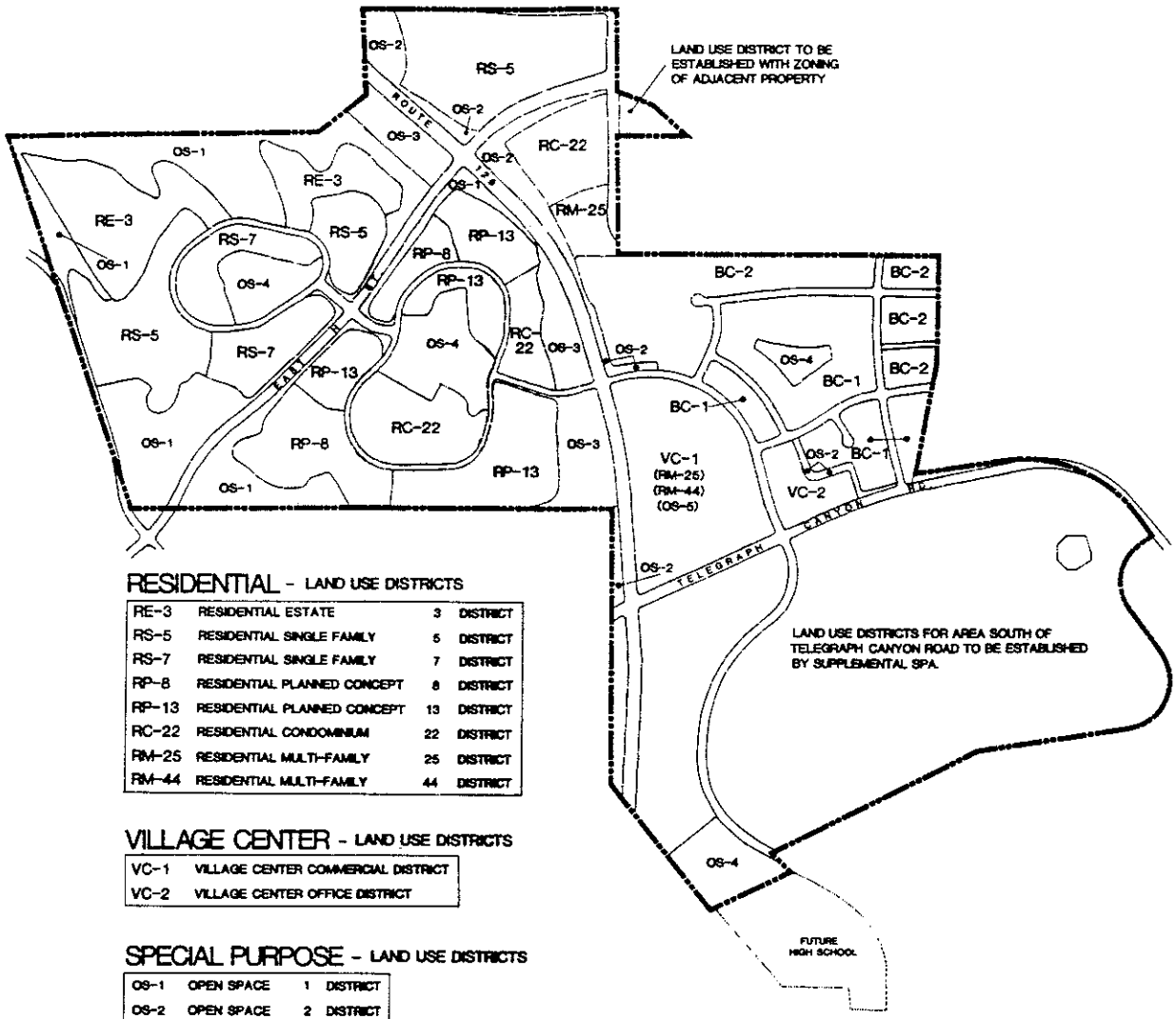
FEET

SOURCE: Cinti & Associates, 1989.

ERC Environmental and Energy Services Co.

Design Alternative - General Development Plan

FIGURE 5-1



RESIDENTIAL - LAND USE DISTRICTS

RE-3	RESIDENTIAL ESTATE	3	DISTRICT
RS-5	RESIDENTIAL SINGLE FAMILY	5	DISTRICT
RS-7	RESIDENTIAL SINGLE FAMILY	7	DISTRICT
RP-8	RESIDENTIAL PLANNED CONCEPT	8	DISTRICT
RP-13	RESIDENTIAL PLANNED CONCEPT	13	DISTRICT
RC-22	RESIDENTIAL CONDOMINIUM	22	DISTRICT
RM-25	RESIDENTIAL MULTI-FAMILY	25	DISTRICT
RM-44	RESIDENTIAL MULTI-FAMILY	44	DISTRICT

VILLAGE CENTER - LAND USE DISTRICTS

VC-1	VILLAGE CENTER COMMERCIAL DISTRICT
VC-2	VILLAGE CENTER OFFICE DISTRICT

SPECIAL PURPOSE - LAND USE DISTRICTS

OS-1	OPEN SPACE	1	DISTRICT
OS-2	OPEN SPACE	2	DISTRICT
OS-3	OPEN SPACE	3	DISTRICT
OS-4	OPEN SPACE	4	DISTRICT
OS-5	OPEN SPACE	5	DISTRICT

BUSINESS CENTER - LAND USE DISTRICTS

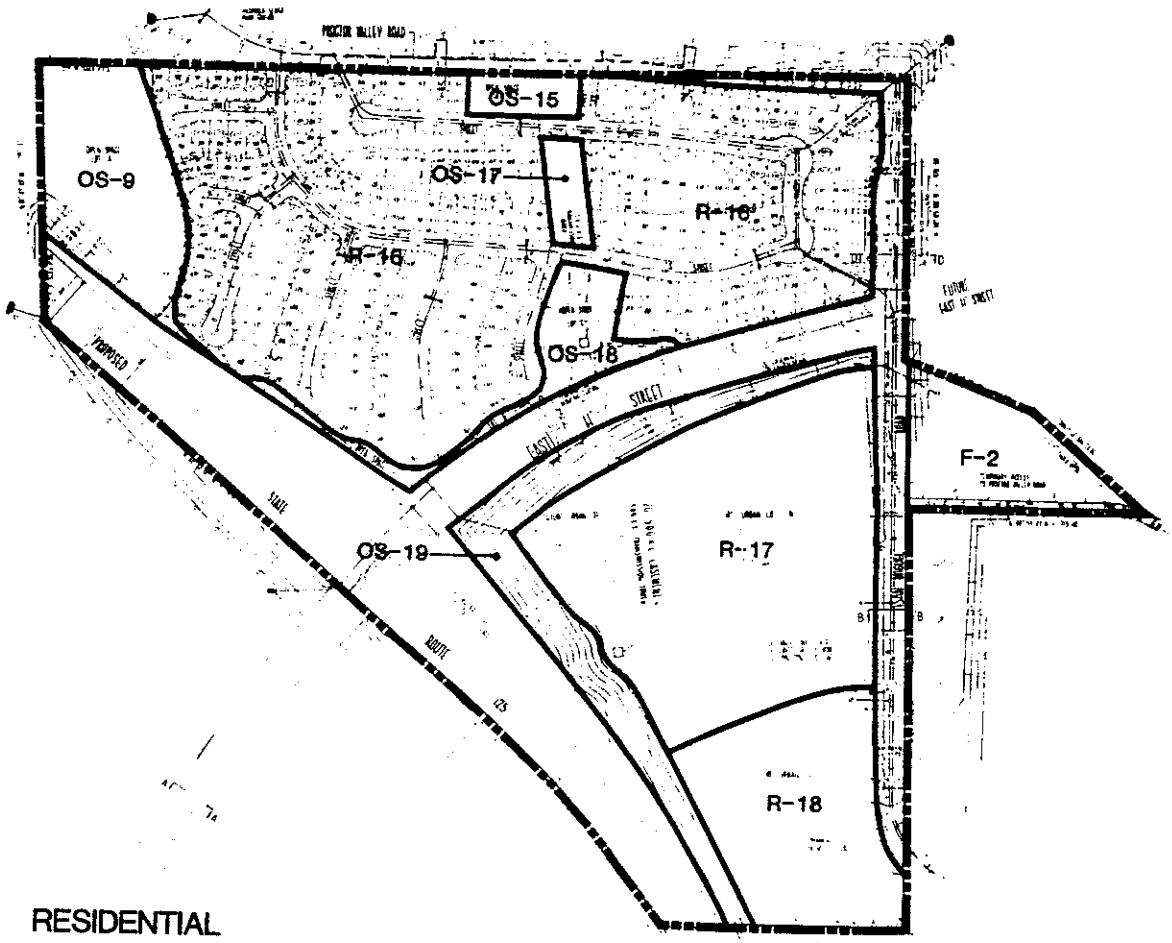
BC-1	BUSINESS CENTER MANUFACTURING PARK
BC-2	DISTRICT BUSINESS CENTER MANUFACTURING SERVICE DISTRICT

SOURCE: Cinti & Associates, 1989.

ERC Environmental and Energy Services Co.

Design Alternative - Land Use Districts

FIGURE 5-2



RESIDENTIAL

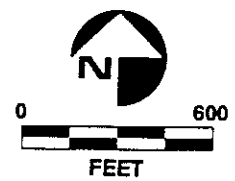
Parcel No.	Attached (A) Detached (D)	Density Range	Acres	Target Density	DU
R-16	D	0-5	43.6	3.9	169
R-17	A	5-15	20.0	11.8	237
R-18	A	15-25	8.5	16.9	144
Total			72.1 ac	7.6 avg.	550du

OPEN SPACE

Parcel No.	Land Use	Acres
OS-9	Open Space	6.5
OS-15	Open Space	1.0
OS-17	Open Space	1.0
OS-18	Open Space	3.2
OS-19	Open Space	7.2
Total		18.9 ac

FUTURE URBAN

Parcel No.	Land Use	Acres
FU-1	Future Urban	3.5
Total		3.5 ac



SOURCE: Cinti & Associates, 1989.

ERC Environmental and Energy Services Co.

Design Alternative - SPA Plan

FIGURE 5-3

Biological Resources

Section III.E evaluates the site's biological resources (Figure 3-7) and associated project impacts. This Design Alternative was created to minimize the identified biological resource impacts. Specifically, the Alternative's open space in the northwest corner (Lot A, 6.45 acres) provides for preservation of coastal sage scrub habitat; the north-central open space (Lot B, 1.08 acres) will adequately protect the endangered *Hemizonia conjugens* (Otay tarplant). Other biological resources will still be impacted under this Alternative by the proposed development and roadways. It should be noted that habitat in the northeast area (coastal sage scrub, native grassland, cholla thicket) will be impacted by the General Plan alignments of San Miguel and Proctor Valley Roads, in combination with the residential development proposed in that area. The black-tailed gnatcatchers present in that area will also remain impacted. In summary, the Design Alternative will provide for mitigation of project-specific adverse impacts to a level of insignificance; the project's contribution to cumulative adverse biological resource impacts is reduced by the Alternative but not to a level of insignificance.

Noise

Noise impacts identified in Section III.H are mitigable to a level of insignificance by onsite design and noise attenuation technology. This impact is mentioned here because the Design Alternative further reduces onsite noise impacts by additional development setback along SR-125 (Figure 5-4, Open Space Lot C). Noise impacts are mitigable to a level of insignificance.

Air Quality

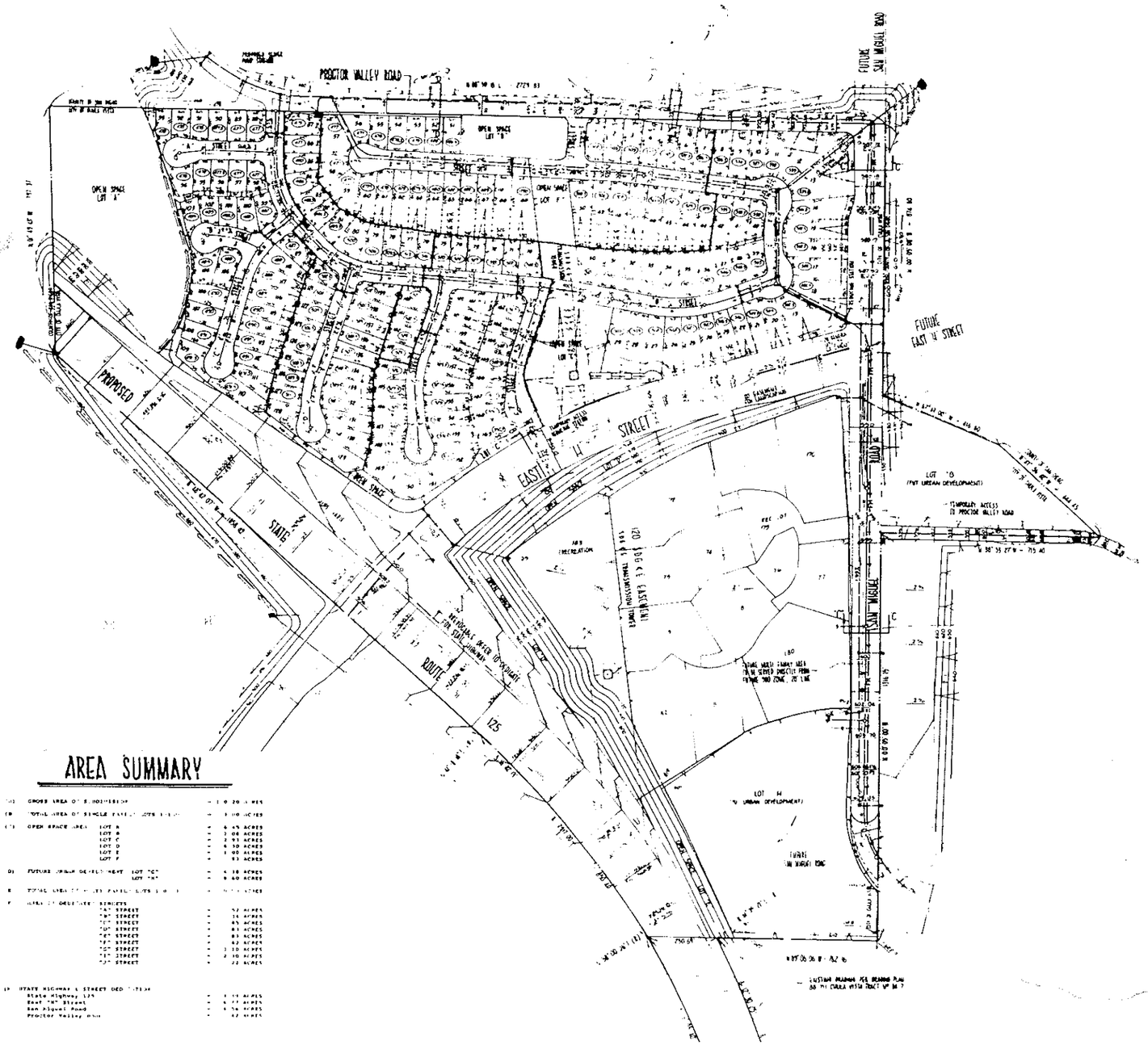
The project will contribute to an unavoidable cumulative impact on the region's degrading air quality because it was not incorporated into regional land use projections in formation of SANDAG's growth forecasts. This cumulative impact remains unchanged by the Design Alternative.

Parks, Recreation and Open Space

As identified in the Land Use Section, the project's open space is inconsistent with that designated in the EastLake I SPA Plan. The Design Alternative increases onsite open space by 4.0 acres, in locations critical for biological resource preservation. This Alternative will reduce the open space impacts, in combination with mitigation in Section III.K, to a level of insignificance. Parks and recreation potential impacts are also mitigable by measures in Section III.K.

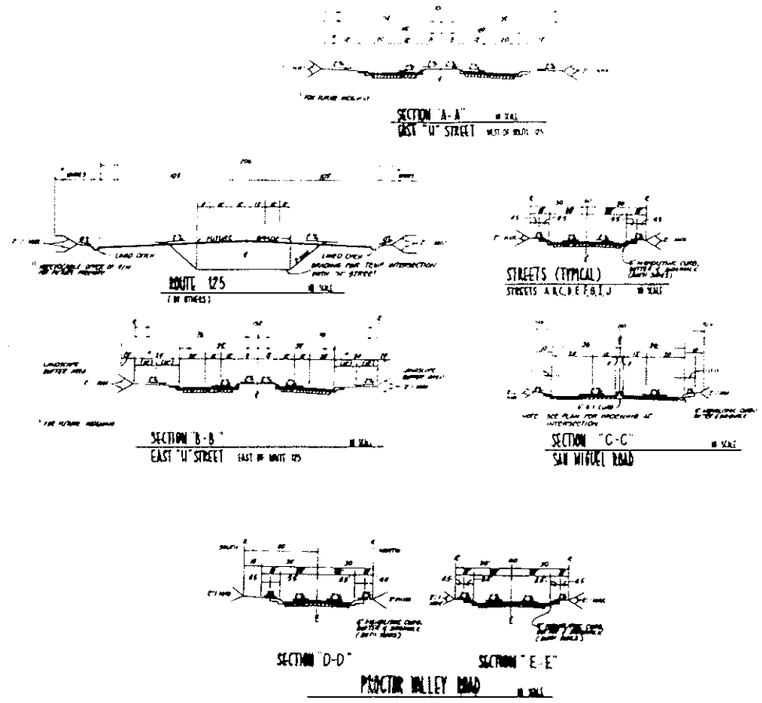
Public Services and Utilities

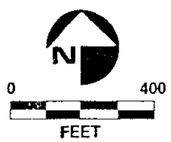
Potential project and cumulative impacts are mitigable by project design, financing programs and measures contained in Section III.L, with the exception of cumulative water supply and energy resource impacts. Under this Alternative, as with any development, this cumulative impact is unmitigable and unavoidable.



AREA SUMMARY

(A)	GROSS AREA OF SUBDIVISION	± 1020.1 ACRES
(B)	TOTAL AREA OF SINGLE FAMILY LOTS	± 310 ACRES
(C)	OPEN SPACE AREA: LOT A	± 645 ACRES
	LOT B	± 308 ACRES
	LOT C	± 293 ACRES
	LOT D	± 630 ACRES
	LOT E	± 160 ACRES
	LOT F	± 93 ACRES
(D)	FUTURE URBAN DEVELOPMENT LOT "G"	± 518 ACRES
	LOT "H"	± 849 ACRES
(E)	TOTAL AREA OF SINGLE FAMILY LOTS (B)	± 310 ACRES
(F)	AREA OF DEDICATED STREETS: "A" STREET	± 52 ACRES
	"B" STREET	± 26 ACRES
	"C" STREET	± 85 ACRES
	"D" STREET	± 84 ACRES
	"E" STREET	± 83 ACRES
	"F" STREET	± 62 ACRES
	"G" STREET	± 3.10 ACRES
	"H" STREET	± 2.10 ACRES
	"J" STREET	± 22 ACRES
(G)	STATE HIGHWAY & STREET DEDICATION: State Highway 125	± 7.15 ACRES
	East "U" Street	± 5.77 ACRES
	San Miguel Road	± 4.54 ACRES
	Proctor Valley Road	± 42 ACRES





LEGEND

- SUBDIVISION BOUNDARY
- LOT NUMBER
- PAD ELEVATION
- STORM DRAIN (MAJOR SYSTEM)
- SEWER MANHOLE
- DEBRIS BASIN & DRAINAGE INLET
- WATER MAIN
- SEWER MAIN
- UNIT PHASING BOUNDARY

SOURCE: McIntire Group

ERC Environmental and Energy Services Co.

Design Alternative - Revised Tentative Tract Map

FIGURE 5-4

Summary/Conclusion

In summary, the Design Alternative will reduce significant impacts identified in this SEIR as indicated below:

Land Use: Impacts are reduced, but project and cumulative impacts attributed to the northern area of the site are not reduced to a level of insignificance.

Aesthetics/Visual Resources: Impacts are reduced especially at the northwest corner, however project and cumulative impacts from development and roadways in the site's northern area remain significant.

Biological Resources: Significant project-specific impacts are mitigated to an insignificant level. The contribution to cumulative impacts is reduced but not to a level of insignificance.

Air Quality: Cumulative impacts remain significant.

Parks, Recreation and Open Space: Open space impacts are mitigated to an insignificant level by the Design Alternative and mitigation herein.

Water Supply and Energy Resources: Cumulative impacts remain significant.

E. ALTERNATIVE SITE ANALYSIS

This alternative analyzes the potential environmental impacts if the project were to be built on another site. Numerous locations would be suitable for residential development in the Southbay region. Each site would have its own unique environmental conditions. Construction of the project on another site would result in some similar impacts and in some impacts unique to the site. The type and amount of services needed from the site would not change although provision of those services might result in additional growth inducing impacts if infrastructure is extended across undeveloped territory.

The proposed project land use designations are generally consistent with the General Plan Update; implementation of the project on another site might be consistent or inconsistent with land use designations, potentially resulting in significant impacts. Impacts to noise, geology, biology, landforms and visual quality would be specific to the alternative site selected. In summary, additional environmental impacts might occur for various issues and would be dependent upon selection of a specific site. Since there are numerous sites which could be suitable for development of the project, evaluation of a specific alternative site is not possible without a detailed feasibility study and additional environmental analyses. This alternative should be dismissed from further consideration because the project site is appropriate for the development proposed, is generally consistent with policies and with land use designations in the General Plan Update and represents a logical development for the City.

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VI. INVENTORY OF MITIGATION MEASURES

This section is provided for use in the preparation of conditions of approval and subsequent approvals.

A. LAND USE

- The northern area of the project's single-family residential tract shall be redesigned to the satisfaction of the City Planning Director prior to tentative map approval, to provide open space in the site's northern area to the satisfaction of the City. The intent of the redesign is to ensure project consistency with regulating documents and to provide onsite open space and buffer at project edges. (Note: see Alternatives Section. Alternative D will reduce and partially mitigate this impact).

- Precise/site plan and landscape plans for the condominium project's southern boundary shall provide for buffering from and transition to employment park development to the south/southeast. This may include slopes, setbacks, landscaping techniques, subject to the approval of the City Planning Director.

- Subsequent project approvals (i.e., precise plans, architectural review, grading permits, etc.) shall be consistent with applicable EastLake I PC Regulations (1982) and standards established in the 1984 SPA Plan. Consistency shall be verified by City approval of each plan.

B. AESTHETICS/VISUAL RESOURCES

- The project's single-family residential northern area shall be redesigned to incorporate open space to the satisfaction of the City (refer to Section V, Alternative D). The redesign shall be subject to the approval by the City Planning Director, prior to any tentative map approval.

- The site plan and landscape plan encompassing the site's southeast border (condominium project) shall delineate special edge treatment adjacent to the employment park uses to the southeast. The plans shall be subject to the acceptance of the City prior to site plan approval.

- The project shall comply with all PC Regulations/Standards, and design criteria and requirements set forth in the 1984 SPA Plan (specifically Section V.C.3, page 21), compliance subject to city review prior to Final Site Plan approval.

- Project grading shall be contoured to blend with natural landforms. Techniques shall include rounding vertical and horizontal intersections of graded lanes, incorporating variable slope ratios for larger slope banks, use of landscaping for erosion control and obscuring drainage structures, and other measures. Slope banks shall generally not exceed a 2:1 slope ratio, and shall conform to Section 15.04.040 and other relevant sections of the City Grading Ordinance.

- Low-pressure sodium vapor lamps for outdoor illumination shall be utilized throughout the site. Mercury vapor lamps are presently being converted to low-pressure sodium vapor to standardize outdoor illumination within the City of Chula Vista.

- Outdoor lighting shall be filtered, directed and shielded so as to minimize excess light and restrict upward and reflecting light. Also, outdoor lights not necessary for safety shall be turned off between 11 p.m. and 5 a.m., to the extent feasible. (Detailed recommendations are provided in EIR 84-1, page 3-58, 59).

C. GEOLOGY/SOILS

- A site-specific earthwork package shall be prepared in accordance with recommendations of the March 1989 GeoSoils report, indicating the approximate amount of earthwork removal necessary and addressing and mitigating any other geotechnical constraints. Onsite excavation of the formational units shall be quantified and shall define favorable select material for structural fills. Select fill soils may be mixed with the topsoil, alluvial and colluvial soils for deep canyon fills. Any export material must have an approved spoil site identified and procedures defined. The investigation and earthwork package shall be subject to approval by the City Engineer, prior to issuance of grading permits.

- Concerning seismicity, the effects of groundshaking on the project site shall be mitigated by adhering to the State 1976 Uniform Building Code or state-of-the-art seismic design parameters of the Structural Engineers Association of California.

- Cut-and-fill slopes constructed with erosion prone materials (i.e., granular sands of the Otay Formation) shall be provided with appropriate surface drainage features subject to approval by the City, and shall be landscaped immediately following grading to minimize any erosional damage from surface waters. Drainage features shall be installed in accordance with City requirements to avoid erosion during grading subject to onsite inspection and approval by City staff.

- Expansive soils shall be removed and used in accordance with recommendations of the March 1989 GeoSoils report. Areas requiring removal and replacement of expansive soils shall be evaluated (for special foundation design, etc.) by the geotechnical engineer during the site specific tentative grading plan geotechnical investigations in accordance with City grading procedures and monitoring.

- Alluvial and/or colluvial soils encountered in areas that will receive fill or other surface improvements shall be removed and recompacted in order to mitigate the potential for settlement. Procedures shall be dictated precisely on plans which show where onsite this shall occur. Verification shall occur through onsite approval by a qualified expert.

- Cut slopes requiring special drainage or stabilization (i.e., northeast side of SR-125, southeast of "H" Street, the power tower in open space lot B), shall be evaluated by the geotechnical consultant and mitigated appropriately during site grading. Evaluation shall be verified and signed in written form at appropriate phases of grading.

- Foundations and slabs shall be designed in accordance with recommendations of the March 1989 GeoSoils report. Design shall be approved by the City,

based on the type of soils encountered onsite and subsequent expansion testing, in accordance with City Code requirements.

- Prior to issuance of grading permits, outcrops shall be assessed for rippability and quality for fill material. Any additional mitigation shall be defined and may be included in the earthwork investigation, subject to approval by the City.

- Stabilization fills shall be constructed in accordance with slope height as dictated in the GeoSoils March 1989 report, page 26. Further, fill slopes shall be constructed at gradients of 2:1 or flatter, and in accordance with City of Chula Vista codes, the Uniform Building Code (UBC) and Grading Guidelines of the GeoSoils March 1989 report (Appendix D of GeoSoils report).

- Landslide corrective grading required in and around Open Space Lot "A" shall be conducted specifically in accordance with methodology dictated in the March 1989 GeoSoils report, plans subject to the approval of the City prior to issuance of grading permits.

- Lots 62 through 72 shall be overexcavated and reconstructed as shown in Appendix D of the GeoSoils March 1989 report.

- All slopes shall be designed and constructed in accordance with requirements of the City of Chula Vista codes, the UBC and recommendations of the Geosoils March 1989 report (specifically Appendix A and pages 29-30 of that report).

- Specific grading plans shall be reviewed by a qualified geotechnical expert and approved by the City prior to issuance of grading permits.

D. HYDROLOGY/WATER QUALITY

- The project shall comply with all applicable City flood control regulations.

- Prior to issuance of grading permits, the proponent shall verify (on drainage plans) to the satisfaction of the City Engineer/Public Works Department that project peak discharges offsite to the west and northwest will be mitigated (by limiting the increase in existing flows, participation in a flood control district, flood routing, or installation of downstream improvements), and will not impact the Proctor Valley Drainage Basin.

- Drainage plans for the project (required above) will incorporate facilities to provide for long-term erosion, sedimentation and pollutant control in project runoff. Said plans shall be subject to approval by the City Engineer or Public Works Department, prior to issuance of grading permits. Subsequent to project completion (Certificates of Use and Occupancy), these facilities shall be inspected for adequacy by a qualified expert approved by the City (inspection cost to be at the applicant's expense) to ensure adequate water quality control in project drainage facilities.

- The project shall be in conformance with applicable water and reclaimed water regulations of the Otay Water District and State Regional Water Quality Control Board.

- Construction sedimentation will be controlled by adherence to City erosion control measures. Sedimentation basins and other mechanisms shall be

installed as deemed necessary by the City Engineer or Public Works Department, to control scouring and increased sediment loads. Monitoring during grading shall be conducted at the applicant's expense to verify adequate erosion control.

E. BIOLOGICAL RESOURCES

- An area of coastal sage scrub habitat equivalent to the acreage lost shall be preserved in natural open space offsite. This mitigation area ideally should have black-tailed gnatcatchers present and be contiguous with a larger area of natural open space.

- Manufactured slopes and disturbed grassland onsite shall be revegetated with native scrub species found in the area. Revegetation of these areas would eventually provide some suitable habitat for the California black-tailed gnatcatcher and reduce the potential for non-native landscaping materials invading natural habitats. Species suitable for revegetation include the following:

Artemisia californica	California Sagebrush
Eriogonum fasciculatum	Flat-topped Buckwheat
Lotus scoparius	Deerweed
Salvia mellifera	Black Sage
Salvia apiana	White Sage
Haplopappus venetus	Goldenbush
Eshscholzia californica	California Poppy
Lupinus spp.	Lupine

- Coastal sage scrub revegetation areas shall be effectively hydroseeded, followed by a tackified straw mulch. Materials and seed mixes may be changed only with the approval of the project biologist, who shall oversee revegetation procedures at the expense of the applicant.

- The coastal sage scrub habitat shall be irrigated as needed for the first year to accelerate establishment and coverage. The hydroseeding should be completed in the summer, if possible, so as to establish cover prior to the rainy season. A number of annual species are included in the hydroseed mixture to provide color to the slopes. The species should reseed themselves each year.

- The impacts to *Hemozonia conjugens* shall be mitigated by a seed collection, transplantation, and monitoring program, to be executed at the expense of the applicant. Open space areas of sufficient size to serve as viable mitigation sites exist onsite as well as offsite in areas proposed as natural open space. One to three suitable mitigation sites of sufficient size and with adequate buffer zones from developed areas shall be selected to the satisfaction of the project biologist, for seeding to ensure successful implementation of the mitigation program. These sites shall be permanently protected from development and other sources of human impact via mechanisms approved by the City (i.e., conservation easement, dedicated natural open space preserve, etc.).

- The mitigation sites shall be monitored for a period of 5 years, during which a weed control program will be implemented to prevent competition from weedy annual and perennial species. All phases of the mitigation program shall be supervised by a qualified biologist or native plant horticulturalist at the expense

of the project applicant. The monitoring program shall include both quantitative and subject measures to determine the success of the mitigation effort. These performance criteria may include vigor, reproduction success, survivorship, and change in population size through time. Other factors, such as erosion, weed control, and herbivory, which may affect the success of the mitigation program shall be closely documented as determined necessary by the City and project biologist. Remedial measures (e.g. reseeding) shall be implemented if these performance criteria are not attained.

F. CULTURAL RESOURCES

- The data recovery program shall 1) address important research questions as proposed in the test report (on file at the City of Chula Vista Planning Department); and 2) include a phased data recovery program. This phased approach employs a random sample in conjunction with a focused inventory for features and intact midden areas. The data recovery program shall be conducted in accordance with a regional approach to the prehistoric sites within Salt Creek Ranch and the EastLake III/Olympic Training Center Projects, thereby allowing for a comprehensive understanding of these Early Period sites. For Locus E, site boundary needs to be determined for both the prehistoric and historic components before the sample size is determined.

- Prior to issuance of a mass-grading permit the developer shall present a letter to the City of Chula Vista indicating that a qualified paleontologist has been retained to carry out the resource mitigation. (A qualified paleontologist is defined as an individual with an MS or PhD in paleontology or geology who is familiar with paleontological procedures and techniques).

- A qualified paleontologist and archaeologist shall be at the pre-grade meeting to consult with the grading and excavation contractors.

- A paleontological monitor shall be onsite at all times during the original cutting or previously undisturbed sediments of the Otay Formation to inspect cuts for contained fossils (the Otay Formation occurs generally above 680 feet elevation). The Sweetwater Formation shall be monitored on a half-time basis. Periodic inspections of cuts involving the Santiago Peak Volcanics shall be conducted in accordance with recommendations of the qualified paleontologist. (A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor should work under the direction of a qualified paleontologist).

- In the event that well-preserved fossils are discovered, the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovering of small fossil remains such as isolated mammal teeth, it may be necessary to set up a screen-washing operation on the site.

- Fossil remains collected during any salvage program shall be cleaned, sorted, and cataloged and then with the owner's permission, deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum.

G. TRAFFIC AND CIRCULATION

- The project shall adhere to project phasing/transportation improvements required in the EastLake I Development Agreement and Public Facilities Financing Plan (1985), and mitigation measures cited in EIR 84-1 Section 3.2. Improvements pertaining to the project site involve the following roadways, constructed in accordance with speculations, schedules and financing approved by the City Traffic Engineer and Planning Director.

  - SR-125: 6 lane Expressway plus right-of-way for 8 lanes
  - East "H" Street: 6 lane Prime Arterial; 4-lane Major Street
  - San Miguel Road: 4-lane Class I Collector
  - Proctor Valley Road: as determined by City
  - Internal Roadways: as determined by City
  - Associated interchanges, land dedications and intersection improvements and amenities

- The project shall comply with provisions established in the General Plan Update Circulation Element and any programs established therein which are applicable to the project area (i.e., fee programs, subsequent traffic analysis). Mitigation measures in EIR 88-2 (Section 3.14) and the General Plan Update Circulation Element Policies/Guidelines and Roadway Standards (Sections 4 and 5) are hereby incorporated by reference; future actions on the project site shall adhere to these provisions for adequate circulation. In addition, the project shall comply with any applicable traffic threshold criteria as deemed appropriate by the City Engineer.

H. NOISE

- Noise barriers for the single-family houses shall be provided as delineated in Table 3-5 and illustrated in Figure 3-10. Barriers shall be located at the top of slope along the edge of the roadway from Lot 27 to Lot 77 and at the top of slope along the edge of the rear yard for the rest of the lots (from Lot 77 to Lot 141).

- The 9 foot high parking structure barrier separating MF lots 1-5 from SR-125 (Figure 3-11) shall be continuous with no opening between the separate parking blocks. This should serve as an adequate noise barrier for multi-family Lots 1-5. If the parking structures do not provide sufficient attenuation, then additional barrier modeling will be required for these lots. The barriers for an additional 13 multiple-family units requiring mitigation should be located at the pad elevation for patio barriers and at the 2nd floor finished floor elevation for balcony barriers. The barrier heights to attentuate noise at these 13 multiple-family units shall be provided as presented in Table 3-5 and located in Figure 3-11.

- The proposed noise barriers for the single- and multiple-family units shall have a surface density of at least 3.5 pounds per square foot, and shall have no openings or cracks. It may be constructed of 1/4 inch plate glass, 5/8 inch plexiglass, any masonry material, or a combination of these materials. Wood and other materials would also be acceptable if properly designed as a noise barrier. Implementation of adequate noise barriers shielding single- and multiple-family outdoor living areas would reduce potential noise impacts to below a level of significance.

- Detailed engineering calculations shall be conducted to demonstrate the noise reduction levels are achieved by the buildings for residential building attenuation requirements of greater than 20 dB(A) CNEL. The actual noise attenuation supplied by the buildings as well as the building upgrades required shall be calculated when architectural plans become available. Adequate attenuation must be approved prior to issuance of building permits.

- In order to assume that windows can remain closed to achieve required attenuation, adequate ventilation with windows closed must be provided per the Uniform Building Code. All the lots along SR-125, East "H" Street, and San Miguel Road will require mechanical ventilation. Air conditioning would fulfill this requirement. Recommendations for the design of the ventilation system to attenuate noise levels are provided in Appendix C.

- If exterior noise levels exceed 60 dB(A) CNEL, the project shall comply with State of California's Title 24 requiring an interior noise analysis to confirm that noise levels do not exceed 45 dB(A) CNEL. Detailed engineering calculations will also be required to confirm adequate interior noise levels (pursuant to the City's standard) after detailed barriers locations and heights have been established. Barriers to mitigate exterior noise levels and potentially upgraded building materials (as required) would reduce potential interior noise impacts to below a level of significance.

I. AIR QUALITY

- Use watering or other dust palliatives to reduce fugitive dust; emissions reductions of about 50 percent can be realized by implementation of these measures.

- Disturbed areas shall be hydroseeded, landscaped, or developed as soon as possible and as directed by the City to reduce dust generation.

- Trucks hauling fill material shall be properly covered.

- A 20 mile-per-hour speed limit shall be enforced on unpaved surfaces.

- Heavy-duty construction equipment with modified combustion/fuel injection systems for emissions control shall be utilized during grading and construction.

K. PARKS, RECREATION AND OPEN SPACE

- The Tentative Tract Map and subsequent applicable plans shall provide for a bike lane on East "H" Street, in accordance with City requirements.

- The proponent shall provide additional open space to the satisfaction of the City Parks and Recreation Department and City Planning Director, prior to final Site Plan approval.

- Prior to the issuance of building permits, the project proponent shall pay a parkland development in-lieu fee of $842,820 as shown in Table 3-11 (payable to the City Parks and Recreation Department), or satisfy City parkland requirements to the satisfaction of the City Parks and Recreation Department.

- Final Site Plans shall incorporate bikeways, trails and trail connections to adjacent areas such as Salt Creek Ranch and EastLake Business Park. Bikeways and trails shall be identified on the tentative map and site plans. Configurations shall respect all natural open space/conservation areas, and shall be subject to review and approval of City Planning and Parks and Recreation Departments.

- A view fence shall be constructed adjacent to homes fronting on open space, in order to enhance awareness of the boundary between residential property and natural open space preservation areas. Fencing design shall be approved by the City Open Space Coordinator prior to issuance of grading permits.

- Slopes in open areas shall be maintained as possible (subject to City review) in a natural state. Where grading must occur on slopes adjacent to housing, 30 feet of succulent or other acceptable width and plant material shall be planted, followed by a 15-foot DG trail to act as a firebreak. Planting of native, drought tolerant low fuel plant material shall be provided closer to the natural open space areas, in accordance with Fire Marshall and City Open Space Coordinator standards.

L. PUBLIC SERVICES AND UTILITIES

- Prior to issuance of building permits, the project proponent shall obtain written verification from the Chula Vista Police Department that adequate police protection services will be available to service the Salt Creek I project.

- Prior to the issuance of building permits, the applicant will obtain written verification from CVCSD and SUHSD that students proposed to reside in Salt Creek I will be adequately served in the districts' schools.

- Prior to issuance of building permits, the project proponent shall obtain written verification from the Chula Vista Police Department that adequate police protection services will be available to service the Salt Creek I project.

- Prior to final tract map approval, a 1 acre site location for fire station CV #4 shall be determined to the satisfaction of the CVFD, City Director of Planning, and the Baldwin Company. It appears at this time that the site will be located on the Salt Creek Ranch property (M. Chase, CVFD, personal communication, June 1989). If so, a prorata share of financing shall be established for Salt Creet I, payable prior to issuance of building permits.

- The proponent shall obtain verification from the CVFD, prior to Certificates of Use and Occupancy, that adequate fire protection service will be provided to the project on an interim short-term basis and a long-term basis. This includes adequate water pressure onsite, emergency access, adherence to building fire codes of the City, and other relevant criteria. Fee payments may be required in accordance with City impact fees.

- Prior to the recordation of final maps, the proponent shall obtain will-serve letters, verifying that water facilities proposed shall adequately service the project, via approval by the OWD of all plans and specifications. Recommendations of the Master Plan of Water for Salt Creek I (Wilson Engineering, March 1989) shall be followed and utilized as a guideline, in consultation with OWD.

- If the EastLake Greens development precedes Salt Creek I, a third pump will be added to the proposed pump capacity, in accordance with the March 1989 Master Plan of Water (Wilson Engineering), subject to approval by the City Engineer prior to issuance of building permits.

- Water conservation measures for onsiste landscaping and for maintenance of roadside vegetation shall be created and implemented by the project proponent, in coordination with the City Public Works Department and in consultation with OWD or other qualified water agency/organization. Appropriate conservation measures include but are not limited to planting of drought tolerant vegetation and the use of irrigation systems which minimize runoff and evaporation loss.

- The following water conservation measures shall be adhered to; implementation shall be approved prior to issuance of certificates of use and occupancy:

  a. Low-flush toilerts (Section 17921.3, Health and Safety Code)
  b. Low-flush showers and faucets (California Administrative Code, Title 24, Part 6, Article 1, T20-1406F).
  c. Insulation of hot water lines in water recirculating systems (California Energy Commission).

- Interim wastewater facility plans recommended in the March 1989 Wilson report shall be reviewed and approved by the City Engineer prior to any final map approval onsite. Approval may involve an agreement reached between the developer and City which will dictate how and where sewage is accommodated on an interim basis, and facility financing.

- Ultimate wastewater facility plans shall be reviewed and approved by the City Engineer. Implementation of the ultimate system shall be installed in a manner and at the time dictated by the City Engineer. Approval may involve an agreement reached between the developer and City which will dictate how and where sewage is accommodated, and facility financing and implementation phasing.

- The project shall, to the extent feasible and to the satisfaction of the City, provide the following:

  - Encourage the use of public transit by providing bus loading zones at key locations onsite.
  - Implement efficient circulation systems including phased traffic control devices.
  - Adhere to updated Title 24 building construction and design standards.
  - Install landscaping that provides afternoon shade, reduces glare, encourages summer breezes, discourages winter breezes.
  - Minimize reflective and heat absorbing landscapes.
  - Reserve solar access and implement passive solar systems.
  - Develop dwellings on small lots to decrease indoor and outdoor heating and lighting requirements.
  - Install energy efficient appliances in residential developments.
  - Limit strict lighting and install energy efficient lights.
  - Demonstrate energy conservation practices.

- Prior to final site plan approval, the developer shall consult with City planning staff regarding location of transit facilities (i.e., bus stops) onsite. Should there be a need for such facilities, site design shall provide for said facilities, subject to review and approval by the City.

- The project applicant shall participate in any funding programs created for financing of a library facility to serve the vicinity, as deemed appropriate by the City.

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VIII. AGENCIES AND INDIVIDUALS CONSULTED

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Chula Vista Fire Department/Management Services Department
Marty Chase

Chula Vista Parks Department
Manuel A. Mollinedo

Chula Vista Police Department
Lt. Dean Girdner

Chula Vista Public Works Department
Clifford L. Swanson - Engineering Division

San Diego Gas & Electric
Kathy Cian

Sweetwater Union High School District
Thomas Silva - Planning Director

Otay Water District
Manual Arroyo - District Planning Engineer

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IX. PREPARERS/CONSULTANT IDENTIFICATION

This report was prepared by ERC Environmental and Energy Services Co., formerly WESTEC Services, Inc. of San Diego, California. Professional staff and consultants contributing to the report are listed below.

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Geosoils, Inc. - Geotechnical Consultant
McIntyre Group - Hydrological Consultant
John McTighe & Associates - Fiscal Consultant
Mestre Greve Associates - Noise Consultant
Paleo Services - Paleontological Consultant
Wilson Engineering - Water/Wastewater Consultant

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.

Jeanne Muñoz
Senior Project Manager

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APPENDIX A

GEOTECHNICAL REPORT

Salt Creek I

PRELIMINARY GEOLOGICAL AND SOILS ENGINEERING STUDY SALT CREEK, CHULA VISTA, CALIFORNIA

FOR

THE BALDWIN COMPANY
11975 EL CAMINO REAL, SUITE 200
SAN DIEGO, CALIFORNIA 92130

W.O. 988-SD MARCH 29, 1989

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GeoSoils, Inc.

Geotechnical Engineering • Engineering Geology

5751 Palmer Way, Suite D • Carlsbad, California 92008 • (619) 438-3155 • FAX (619) 931-0915

March 29, 1988
W.O. 988-SD

THE BALDWIN COMPANY
11975 El Camino Real, Suite 200
San Diego, California 92130

Attention: Mr. Jim Harter

Subject: Preliminary Geological and Soils Engineering Study
Salt Creek, Chula Vista, California

Gentlemen:

This report presents the results of our geologic and soils engineering study of the Salt Creek Project, in the City of Chula Vista, California. The study area is an irregularly shaped parcel encompassing approximately 124 acres west of the adjoining Rancho Miguel. A portion of the study area has previously been discussed in conjunction with a geotechnical investigation of the adjoining Eastlake Business Center.

This report outlines the geotechnical environment on the study area and provides construction recommendations to aid in the proposed grading plan design. Geologic conditions and pertinent field data are shown on the Geotechnical Maps enclosed as Plate 1 which utilize a 1 inch = 100 feet scale tentative map as a base, prepared by the McIntire Group. Geologic Cross-Sections are presented on Plates 2a and 2b.

SITE DESCRIPTION

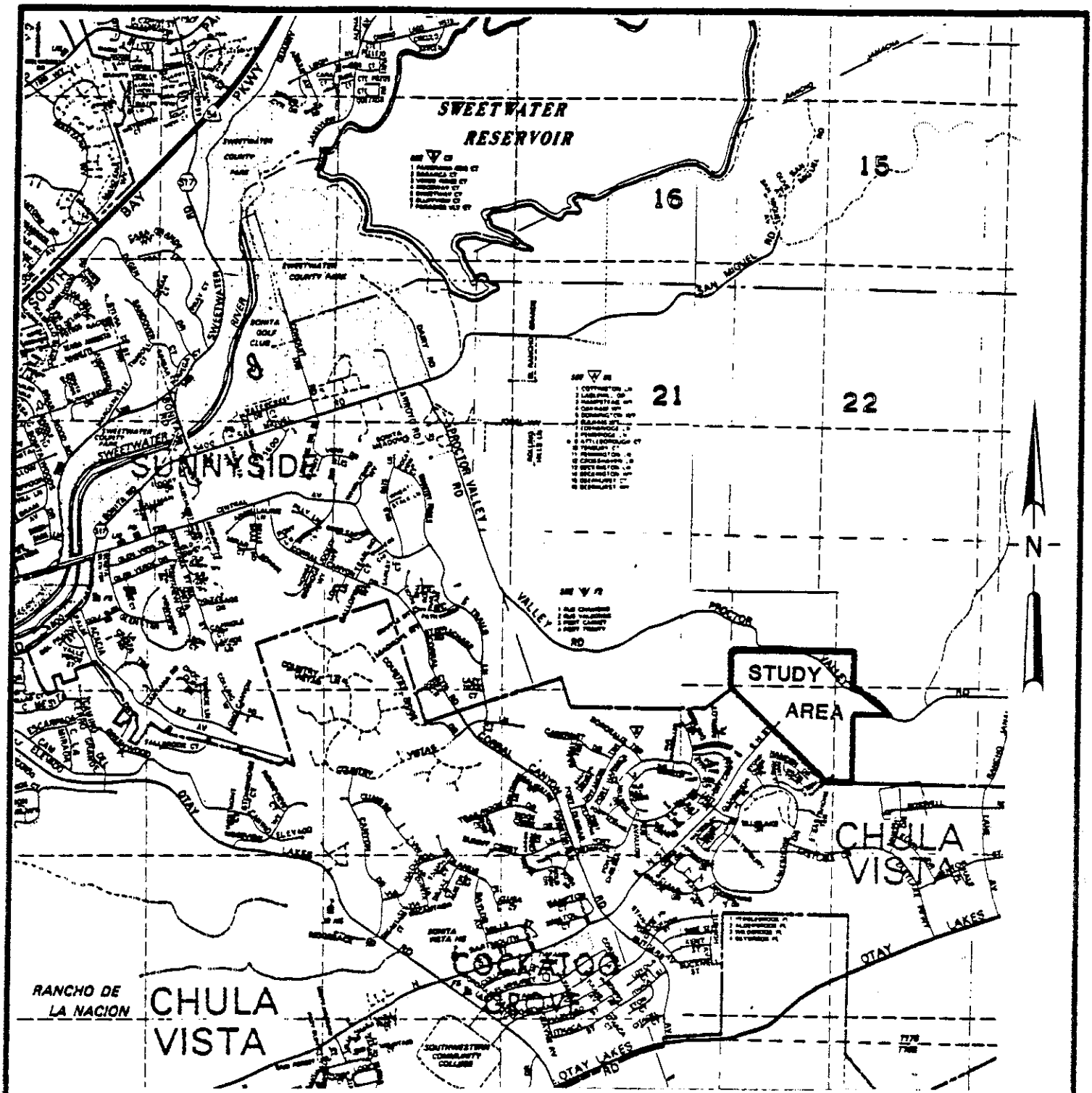
Location

The study area includes a roughly triangular area, the base dimension of which runs northwest-southeast within the southern foothills of Mother Miguel Mountain, west of Upper Otay Reservoir. Proctor Valley Road runs northwest-southeast through the northeastern portion of the property. The site is in the northeasternmost corner of Chula Vista City Limits. The approximate location of the site is indicated on Figure 1.

Topography

The site consists of gently rolling terrain dominated by a central east-west trending ridge. This ridge is flanked on the north and southwest by stream canyons. Both of these drainage courses flow towards the west. Elevations range from approximately 665 feet at the southeastern corner to 425 feet at the northwestern corner.

Natural slopes are generally 5:1 or flatter, with the steeper gradients occurring on side slopes of the ridges. Steeper slopes, generally up to approximately 3:1 with sections up to about 1 3/4:1 occur along the northern slope of the central ridge.



FROM: THE THOMAS GUIDE
1988 UPDATED EDITION
composite from pages:
67,67M,70, and 70M

1 INCH TO 2900 FEET

0 1/4 1/2 3/4 1 2 MILES
0 1 2 .5 1 2 KILOMETERS

GeoSoils, Inc.

SITE LOCATION MAP

SALT CREEK PROJECT

DATE 3/89 | W.O. NO. 988-SD | BY

Soil Mechanics • Geology • Foundation Engineering

FIGURE 1

Vegetation

Annual grasses cover most of the site. Some bushes are found in and near the canyon bottoms and a thicker growth of brush occurs where the northeastern and northwestern corners of the site are underlain by metavolcanic rock. Scattered trees are present along the drainage near the northern property line.

Existing Improvements

The property remains in its natural condition for the most part. Man made features include the various dirt roads that cross the area, fences, and two electric power line towers that lie within a San Diego Gas and Electric easement. This easement crosses the center of the property in a roughly north-south direction. Most of the roads have been lightly graded on existing contours, without major excavation. Minor fill has been placed probably to dam a livestock watering pond adjacent to Proctor Valley Road. The dam has been breached and no longer contains water. Minor grading has occurred for the construction of Proctor Valley Road.

PROPOSED DEVELOPMENT

Salt Creek I will be a multi-use residential development. Several lots in the eastern portion of the site are proposed to remain ungraded or be sheet graded for future urban lot usage. Generally, speaking the highland areas are proposed to be cut and

lowland areas mostly fill. Several access routes are proposed around and through the property. The entire southwestern limits of the property is to be dedicated for the proposed extension of State Highway 125. The eastern limits of the property is proposed for the construction of San Miguel Road, while East "H" Street is proposed to extend northeast-southwest through the center of the property. Proctor Valley Road will be improved to connect with San Miguel Road.

The highest proposed cut slope is to be approximately 80 feet in height. The highest proposed fill slope is to be 50 feet in height.

DRAINAGE/GROUNDWATER

Drainage on the property is generally westerly from the surrounding hillsides. Runoff drains to the west onto adjoining properties. No evidence was observed of any springs or seeps that are perennial in nature.

At the present time, it is apparent that most of the property is under going erosion rather than deposition, as indicated by the generally shallow incised channels and relatively thin alluvial deposits encountered during our subsurface exploration. Some deposition may be periodically occurring in the stream channel south of the central ridge.

Groundwater was encountered in several of our test excavations within alluvium and bedrock material.

Average precipitation in San Diego is on the order of 10± inches per year. However, extreme increases in the effective precipitation will occur when the proposed development is occupied by homeowners. Irrigation equivalent to 150 inches per year is not uncommon on some Southern California yards. Although that amount is excessive, it can reasonably be expected to be the case on some properties within the proposed development. This amount of irrigation should be controlled and not allowed to occur.

In effect the climate acting on earth materials would change from semi-arid to subtropical rain forest. After entering the surface, the water can reasonably be expected to migrate into the underlying fill and bedrock, and laterally along fractures in the bedrock. The result of this can be seepage, a reduction of soil shear strengths, increasing hydrostatic pressure, and the possibility of slope instability or excessive settlements. Subdrain devices should be constructed in order to transmit subsurface water from beneath the overlying fill in an effort to mitigate potentially adverse results of the water.

SITE STUDIES

Our field studies were conducted between January and March, 1989. Prior studies, areal photographs and other pertinent data was reviewed before exploration began. The efforts undertaken in order to prepare this report are:

1. Geologic mapping of available outcrops and exposures both on and near the project.

2. Studies of stereoscopic aerial photographs of the project area.

3. The excavation of exploratory test pits throughout the property. These pits were logged by one of our staff geologists and subsurface samples of representative earth materials where retained from the trenches for laboratory testing. Logs of the trenching are presented in Appendix A Locations are indicated on Plate 1.

4. Seismic refraction profiling in volcanic rock areas of the site Appendix B.

5. The drilling of three bucket auger borings. These borings were logged by one of our staff geologists and subsurface samples of disturbed and undisturbed earth materials were retained for laboratory analysis.

6. A review of published and unpublished geologic literature on the Otay Lakes and San Miguel Mountain areas and surrounding environments.

7. Laboratory testing and analyses considered representative of onsite materials. Test results are found in Appendix C.

8. Slope stability analyses based upon laboratory test results.

9. Review of the 1"=100' scale tentative grading plans prepared by the McIntire Group, dated March 7, 1989.

10. Other appropriate geologic and soils engineer analyses.

DESCRIPTIVE GEOLOGY AND EARTH MATERIALS

The subject property lies within the northern peninsular range geomorphic province which consists of a north-south trending mountain mass stretching from Baja California into Southern California. The San Miguel Mountain area, of which the subject site lies on the periphery, includes a granitic core which has intruded the older Santiago Peak Metavolcanics. Although granitic material is not exposed on the property it likely underlies the site at depth. Sedimentary deposits of the Otay and Sweetwater Formations have been draped over the metavolcanic and granitic rock mountainous core by Tertiary sea and river

activity. The relationship between various rock types and earth materials are shown on the enclosed Geotechnical Map, Plate 1.

The following earth materials were encountered and recognized on the property:

Bedrock - Santiago Peak Volcanics (map symbol Jsp)

Rocks of the Santiago Peak Volcanics are exposed in the northwestern and northeastern portions of the site. These rocks from the Jurassic Period consist primarily of basalts, andesites, and a variety of volcanic breccia and agglomerates. The Santiago Peak Volcanics have been intruded by granitic rocks to the northeast of the subject property. The intrusion of molten igneous material generated sufficient heat to slightly metamorphose original volcanic rocks which are the ancestral parents of the Santiago Peak Metavolcanics. Subsequent mountain building activity then caused fracturing of the brittle metamorphosed rocks.

These rocks are generally hard, fractured, and vary in color from shades of gray and orange brown to medium gray on fresh surfaces. Fractures are often filled with a sandy clay derived from the weathering of the adjacent bedrock units and mixed with the overlying topsoil. Joint surfaces typically exhibit weathering where water has seeped into cracks and some mineral decay has taken place.

Seismic profiles were performed during our studies on the northern portion of Salt Creek I to evaluate rock hardness within this unit. Hard rock was found at depths of 3 to 21 feet below the ground surface. Beyond these depths the velocities in the rock are very high and within the range that would normally require blasting to excavate. It is likely an area of deeply weathered volcanic rock exists, limited to the zone immediately adjacent to the sedimentary rocks.

Bedrock - Sedimentary

Sedimentary bedrock units encountered on site include the Sweetwater and Otay Formations. Previous published discussions of these two units have displayed lack of agreement as to their textural character (Berry, 1986 and Demere, 1988), environment of deposition (Artim and Pinckney, 1973; Berry, 1986; Kuper and Gastil, 1977) and stratigraphic contacts (Demere, 1988; Kuper and Gastil, 1977). Recent paleontologic studies by Demere (1988) on adjoining property has assigned on Oligocene age to the Otay Formation, which was previously thought to be contemporaneous with and perhaps a part of the Miocene age Rosarito Beach Formation (Schiedemann and Kuper, 1979). This diversity of information strongly supports Demere's (1988) statement that "additional field mapping is necessary" to define these units. For the purposes of this study, we will attribute formational status to both the Sweetwater and Otay sedimentary units and

identify lithologic characteristics used to recognize each in the field.

Sweetwater Formation (map symbol - Tsw)

The Sweetwater Formation is a mixed suite of sedimentary rocks and deposits including angular conglomerates, gritstones, mudstones, and sandstones.

The conglomerate beds are comprised of a poorly sorted sand and pebble matrix with cobble up to approximately 12 inches. The clasts consist predominantly of metamorphosed volcanic rocks of the Santiago Peak Formation, with minor granitic clasts.

The gritstones are white, tan and olive lithic arkose, containing coarse sands and pebbles of quartz, feldspar, and rock fragments. Sediments of this deposit are commonly massive and poorly sorted. Gritstones interfinger with both the angular conglomerate and the mudstone facies.

Mudstones within the Sweetwater Formation are medium brown and red brown to tan, olive and pink. The mudstones contain variable amounts of silt and sand particles. Mudstones are expansive. Siliceous lamination were observed in some of the darker mudstones. On site, mudstones appear to be the most abundant rock type in the Sweetwater Formation.

Lenses of red brown clayey sandstone interfinger with mudstones. These sandstones are friable, moderately sorted and occasionally micaceous.

Within the subject property, the Sweetwater Formation commonly occupies ridge flanks and canyon bottoms and is overlain by Otay Formation. Identification of the contact between the Sweetwater and Otay Formation can be difficult as the lithologic transition between the two can be gradational however it can also exhibit an erosional surface or paleosol. Better age controls for the Sweetwater Formation could serve to reveal the nature of this contact.

Otay Formation (map symbol Tot)

The Oligocene age Otay Formation consists of white to light gray silty fine sandstone with occasional gravel lenses and thin beds of siltstone and mudstone. The sandstones are relatively well sorted, lithic and feldspathic. Bedding is crudely graded to massive. Bentonitic mudstone have been described within the Otay Formation (Berry, 1988; Cleveland, 1960). Small scale channeling is present, commonly overlain by matrix supported angular conglomerates composed of metavolcanic clasts of locally derived Santiago Peak Volcanics. The upper 3 to 4 feet of near surface sediments have frequently been heavily burrowed by rodents and contain abundant caliche. On site, Otay Formation occupies ridge top area.

Surficial Soil Deposits

Surficial soil deposits mantle much of the surface area of the property. The soils have resulted chiefly from weathering and erosion of the underlying bedrock from which they have been derived. For purposes herein, topsoil indicates both the inplace soil horizons and the soil subject to downslope transport and deposition (i.e. colluvial deposits).

Most of the soil is silty and sandy clay that is porous, soft, slightly moist. It is considered to be highly to very highly expansive. Cobbles of volcanic rock are common. Abundant roots are found in the upper 12 inches. Test pits in the areas underlain by metavolcanic rock reveal a topsoil is a porous, gravelly, silty sand.

Based upon exploration, the topsoil is typically 1 to 4 feet thick, however, there are some areas where the exploratory trenches exposed as much as 10 feet of topsoil. Where the topsoil thickens, it represents melding of the topsoil into colluvial deposits.

Alluvium (map symbol Qal)

Alluvial soils occupy canyon bottoms on the property. The alluvium consists of medium to dark brown, moist, soft and porous sandy clay, mixed with scattered cobbles and pebbles. Generally, thicker accumulations of alluvium were encountered in southern

swales on the property. Test Pit TP-27 in the southeaster corner of the site encountered alluvium greater than 12 feet in depth, including the overlying topsoil. Generally, the combined thickness of the topsoil and alluvium encountered in most swales was on the order of 4 to 6 feet.

Both, alluvium and the topsoil should be removed during the grading process. Neither of these deposits are of sufficient density or quality to be left in place where fills are planned over them.

Artificial Fill (map symbol Af)

A minor fill exists in the northwestern portion of the site. This fill formed a small dam which has been breached. The fill is of unknown origin and quality and should be removed during grading.

GEOLOGIC STRUCTURE

For the most part, both the Sweetwater and Otay Formations possess no distinct structural characteristics that could be identified in the exploratory excavations. Based on the limited structure observed in trenches and borings, regional characteristics, and aerial photograph reviewed, bedding within these formations appears to be horizontal to gently dipping (less than 10°) with undulatory bedding surfaces common.

No faults or other structural features were indicated in the literature reviewed. However, a fault plane was encountered in Boring B-1. Observations of fault plane orientation and direction of slip indicate a moderately high angle surface (approximately 50°) with relative motion in a north-south direction. This feature is believed representative of a local bedrock shear. Other similar features might be encountered during site grading. Local joint and fracture patterns were observed in northeastern exposures of the Santiago Peak Volcanic rocks.

In the course of the grading operation, the exposed bedrock materials should be mapped to evaluate geologic structure. Where structures are well defined, and adverse appropriate recommendations related to structural orientation will be made.

MASS WASTING/LANDSLIDING

The most significant mass wasting process identified is that of slumping and landsliding. Several of these features had been broadly defined in a previous study by San Diego Soils. In their 1984 report, much of the north flanks of the central ridge was designated as slide mass, extending up to the top of the ridge. Much of the investigation work by this office was done to better define and evaluate these features. The data indicates a series

of individual slide masses and smaller scale slumping (see Plate 1).

Surficial slumps and landslides have been identified both in exploration trenches and borings. Where observed, slide planes range in depth from 5 to 12 feet from existing surface and can be projected to approximately 20 feet deep on larger slide features. At the surface, slide masses ranged in width from 150 to 300 feet. The upper breakaways or scarps of the slides did not extend to the top of the ridge but are located between one-third and one-half the slope height from the top. It is likely that most of the surficial slumping material will be excavated during normal grading operations. Recommendations regarding the landslide features will be discussed in the landslide stabilization section of this report.

Boring B-1 was excavated near San Diego Soils Boring B-14 to evaluate apparent discrepancies between our data and theirs. Based upon detailed downhole inspection of B-1 and data from Trench TP-22, it is apparent that the shearing present is tectonically related, not associated with landsliding.

FAULTING AND REGIONAL SEISMICITY

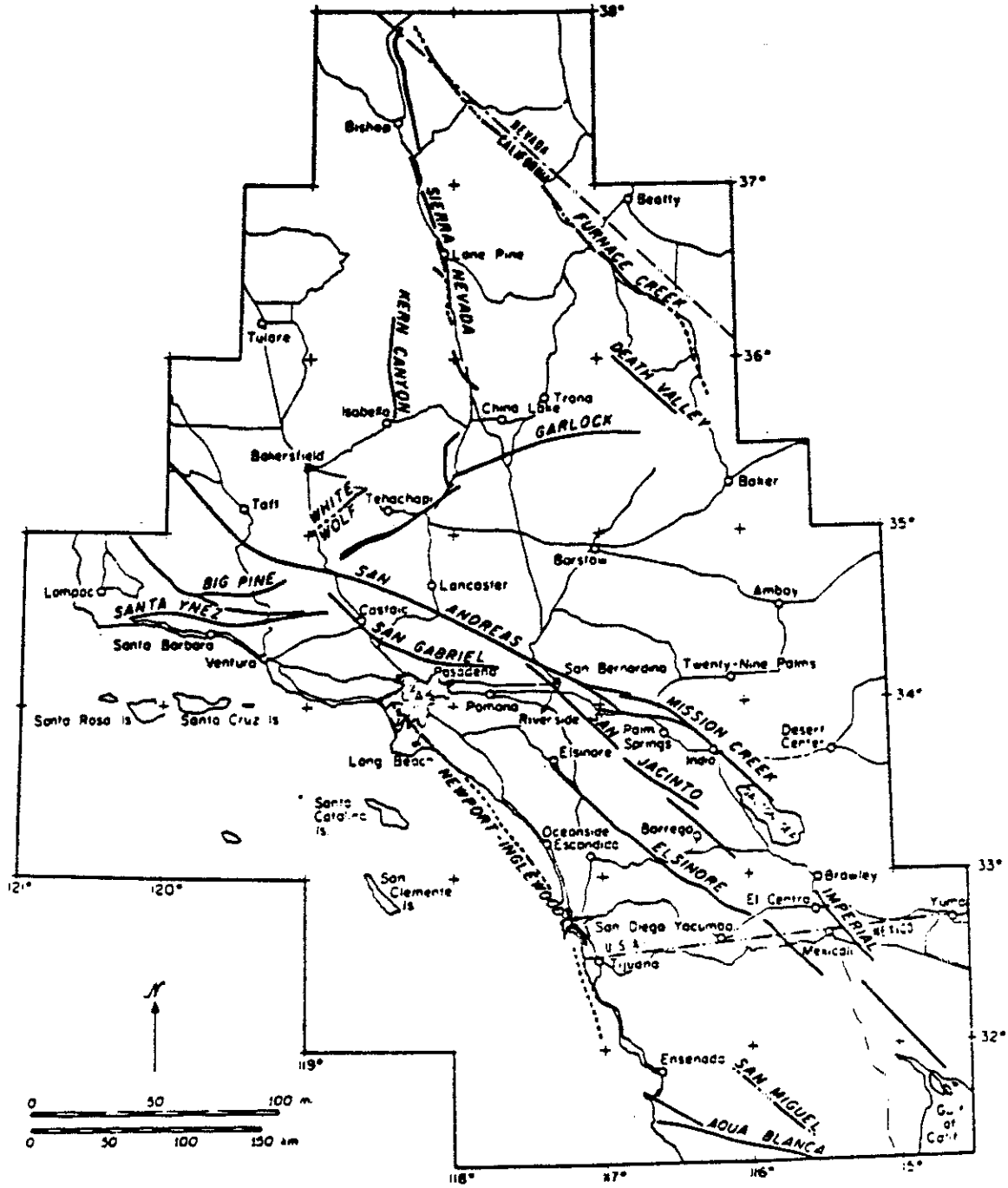
Faults are known to have affected the older basement rocks of the Peninsular Range province. No active or potential faults in the

vicinity of the site are shown on published maps. A fault was encountered in Boring B-1 but there is no indication of any geologically recent activity associated with it.

There are a number of faults in the Southern California area which are considered active and which would have an effect on the site in the form of ground shaking, should they be the source of an earthquake.

The San Jacinto Fault seems to be the most consistently active zone within a 100 mile radius of the subject site, and of course the San Andreas is the largest fault zone in California. The Coronado Banks Fault zone represents the closest active feature; the Rose Canyon Fault is possibly active and La Nacion Fault is considered as potentially active.

The possibility of ground acceleration at the site may be considered as approximately similar to the probability for the Southern California region as a whole. The relationship of the site location to the major mapped faults within Southern California is indicated on the Fault Map of Southern California, Figure 3 and distances to major faults are shown on Table 1 below. Ground acceleration on the property will likely not exceed 0.17g assuming a magnitude 6.6 earthquake on the Coronado Banks Fault 20 miles from the site.



Modified after Friedman and Others, 1976

GeoSoils, Inc.

FAULT MAP
OF SOUTHERN CALIFORNIA

DATE 3/89	W.O. NO. 988-SD	BY

Soil Mechanics • Geology • Foundation Engineering

FIGURE 2

TABLE 1

Fault	Miles from Site
La Nacion	3
Rose Canyon	12
Coronado Banks	20
Elsinore	37
San Jacinto	58
San Andreas	86

Secondary Seismic Hazards

Surface Fault Rupture:

Hazard from surface fault rupture is not anticipated on site. Due to the proximity of known active faults and possible active faults, moderate to severe ground shaking may reasonably be expected during the life of the development.

Ground Lurching, or Shallow Ground Rupture: Ground lurching or shallow ground rupture occur as a result of strong, earthquake induced ground shaking. The phenomenon often occurs along contacts between material types with contrasting physical properties (e.g., sedimentary rock versus igneous rock). It can also occur along pre-existing planes of weakness (i.e., bedding planes, joint/fracture systems, or inactive faults). While this potential exists it is our opinion that the subject property is at no greater risk from this phenomenon than other nearby property given similar site conditions.

Seiche: Seiche is a phenomena which occurs as result of earthquake shaking which induces a periodic oscillation or

standing wave in a body of water. Seiche is not expected to affect the site.

Other Hazards Considered: The following listing includes other seismic related hazards that have been considered for our evaluation of the site. These hazards are considered negligible and/or completely mitigated as a result of typical site development procedures:

* Liquefaction
* Seismic settlement or consolidation
* Potential for tsunamis

NATURAL SLOPE STABILITY

Most of the natural slopes on the project are 5:1 or flatter in gradient and appear stable in the gross and surficial sense. Northern facing flanks of the central ridge, 3:1 in gradient and locally steeper, displayed areas of creep motion and surficial slumping in the upper 4 to 6 feet. Several small landslides were also identified on these steeper slopes, extending to depths of 10 to 20 feet below the surface. The central ridge is underlain by sedimentary bedrock of the Otay and Sweetwater Formations.

GRADED SLOPE STABILITY

Based on our geologic and engineering analysis, the graded slopes as proposed are anticipated to be grossly and surficially stable, provided recommendations contained herein are implemented during construction. Pertinent stability calculation data and laboratory test results are enclosed in Appendix C.

Cut Slopes

The Sweetwater and Otay Formations include interbeds of siltstone and/or mudstone generally overlain by permeable sands and/or conglomerates. These conditions inhibit the downward migration of subsurface water resulting in the buildup of hydrostatic pressures which can reduce overall slope stability. If these conditions are exposed in any cut slopes onsite, remedial grading measures may be necessary which may include, construction of stabilization or buttress fills with subdrain systems, or additional excavations to remove the limited area of a potential failure mass. Specific recommendations, based upon field conditions, can be provided as necessary during grading.

The highest planned cut slope (80 ± feet) is located northeast of the proposed State Route 125 and southeast of the proposed East "H" Street extension. Significant claystone units are anticipated to be encountered within this slope and remedial grading will be necessary.

The cut slopes surrounding the northernmost electric power tower, might also encountered adverse conditions. Sheared surfaces and claystone (near toe grade) were encountered in Boring B-3. As such, the potential for stabilization of these slopes is very high. Redesign might be considered to minimize the height of these slopes. It does not appear highly likely that backcuts for stabilization fills would be prone to failure.

Metavolcanic bedrock stability is primarily affected by joint and fracture surfaces which, when continuous and adversely oriented, represents planes of weakness upon which failures can occur. Sedimentary bedrock in contact with metavolcanic rock may also pose cut slope stability problems. When continuous and adversely oriented formational contacts are exposed, failures can result. While not currently anticipated, if such features are exposed during grading, remedial grading may be necessary in order to remove and/or stabilize the potential failure mass.

There is a potential for adverse joint and fracture surfaces to be exposed in the fill over cut slope which lies west of the proposed San Miguel Road extension above Lots 13-18, potentially requiring remedial grading. A fairly consistent system of near surface joints have been identified which might present adverse conditions. These types of joints are often not consistent at depth.

All cut slopes should be mapped by the project engineering geologist during grading to allow amendments to recommendations, should adversely oriented structure, or other exposed conditions warrant alteration of the design or stabilization.

Fill Slopes

Fill slopes are proposed at gradients of 2:1 or flatter. The highest proposed fill slope, 50 (±) feet. Stability analysis indicate this slope should have a factor of safety of at least 1.5.

EARTH MATERIALS

Fill Suitability

Topsoil/colluvium, and alluvium should produce good quality fill material. Some drying or mixing may be needed for wet alluvial materials.

Deposits of the Otay and Sweetwater Formations should generally produce good quality fill material. Some materials derived from coarser grained sandstones would likely have little or no cohesion and may not be suitable for higher fill slopes. If localized deposits of bentonite clay are encountered, they should be buried in deeper fill areas or otherwise treated to minimize their potential effects on future structures. Likewise, while mudstones are acceptable in the body of large fills, they should

be kept away from fill slope areas and finished pad surfaces. It is anticipated that the majority of bedrock cut materials can be used as fill throughout the site, with consideration given to the localized deposits mentioned above.

Metavolcanic rock of the Santiago Peak Formation should produce poor to good quality fill material, depending upon the degree of weathering, fracturing and general rippibility. Any areas where blasting is required would produce poor to moderate quality fill due to oversize materials. Very hard rock may require mixing with granular material from other sources if sufficient fines to fill void spaces are not generated. Methods for handling over size material are discussed in the enclosed Grading Guidelines, Appendix D.

Rock Hardness and Rippability

The metavolcanic rock will excavate with varying degrees of difficulty. Based upon available exposures, test excavations, and the results of seismic refraction surveys previously performed (see Appendix B), much of the rock would require blasting within 3 to 10 feet of the existing surface, or effectively from the surface in areas where boulders outcrop. Close to the contact with the sedimentary units however, deeper excavation may be possible.

The results of a seismic traverse are valid only for the location at which they are run, and are subject to varying interpretations. As such, it may be advisable to perform further evaluation of rock hardness, whether by seismic traverse or other method, should grading plans undergo significant change.

Trenching into the metavolcanic rock for utilities or footings would likely be difficult. This can be mitigated by over-excavating to below the deepest anticipated excavation and rebuilding to design grades with properly compacted fills.

Sedimentary rocks of the Otay and Sweetwater Formation should excavate to proposed grades with light to moderate ripping utilization conventional heavy equipment (D-9 or equivalent). Locally occurring, well cemented beds may present difficulty during grading and utility trench excavations.

EARTH WORK BALANCING

Shrinkage is typical of the alluvial and colluvial/topsoil materials and bulking is expected in the bedrock units. It would be advisable on a project of this size to evaluate these factors during earthwork construction so that grade adjustments can be made to compensate for actual shrinkage-bulk factors and for variations of pre-construction topographic maps. For preliminary purposes the following factors could be applied:

Colluvium/Topsoil:	10-15% shrinkage
Alluvium:	10-12% shrinkage
Santiago Peak Volcanics:	5-15% bulking
Sedimentary bedrock:	0-4% bulking

LABORATORY TESTING

Laboratory tests were performed on selected bulk and relatively undisturbed samples to evaluate physical characteristics including water content, dry density, shear strength and maximum dry density. Tests procedures utilized and test results are presented in Appendix C.

Expansive Soils

Based on our observations and test results, earth materials on the site range from low to very highly expansive. Typically the topsoils and alluvial materials are medium to very highly expansive, and bedrock materials appear to be mostly low to moderately expansive with some very highly expansive zones.

CONCLUSIONS AND RECOMMENDATIONS

The site is suitable for development as proposed from a geotechnical viewpoint. The recommendations given below have been formulated based upon the geotechnical data collected during our site evaluations, our experience with similar material types and general conditions. These recommendations should be

considered during the preparation of the finalized plans and implemented during construction of the project.

Slope Stability

Natural Slope:

Natural slopes remaining at the completion of grading are anticipated to be stabile.

Cut Slopes:

The largest proposed cut slopes are along the northeast side of Highway 125 and southeast of "H" Street. Both of these slopes are anticipated to exposed significant claystones. As such, stabilization should be anticipated.

The lowest claystone identified in SDS B-11 was at elevation 574± and at elevation 560± in SDS B-10. It may therefore be reasonable to stabilize the entire slope along "H" Street but only the upper portion of the slope above Highway 125. If this is attempted the lower cut portion of the slope must be made prior to any fill placement.

The cut slopes surrounding the power tower in Open Space Lot B are anticipated to expose some adverse conditions, necessitating stabilization of at east the west and south facing slopes and possible the north facing slope.

The cut slope separating the levels of "A", "B", "C", and "D" Street all are anticipated to expose one or more claystone beds. Stabilization is therefore anticipated.

Assuming no unanticipated, consistently, adverse conditions are encountered, stabilization fills may be constructed in accordance with the following Table.

Slope Height	Minimum Fill Width	Key Width	Key Depth
≥15'	12'	12'	3'
20'	12'	12'	4'
30'	12'	15'	4'
40'	12'	17'	4'
50'	12'	20'	5'
60'	15'	25'	7'
80'	15'	30'	7'

All cut slopes should be carefully mapped for geologic conditions during grading.

Fill Slopes:

All fill slope are at gradients of 2:1 of flatter and analysis indicate acceptable factors of safety. The design of keys for fill slopes would depend upon the materials exposed. In sandstones or conglomerates, key depths should be one quarter the slope height or 5 feet, which ever is less. If claystone is encountered, keys depth should be equal to one third the slope

height or 7 feet, which ever is less. Key widths should be a minimum of one equipment width (12± feet). For slopes greater than 25 feet high, increased key widths may be recommended based on slope heights and earth materials exposed in key excavations.

All slopes should be constructed in accordance with the minimum requirements of the City of Chula Vista, the Uniform Building Code and the Grading Guidelines presented in Appendix D.

Landslide Corrective Grading

Several landslides and slumps have been identified these are fairly small features. They are located near Open Space Lot "A".

The easternmost slide is relatively small and shallow; it is located in a fill area. Complete removal is recommended; depths of 10 to 12 feet should be anticipated.

The central landslide appears to have the most affect on site grading. It will be necessary to extend the key for the fill slope through the slide mass. The depth of the slide is approximately 20 feet. The key should extend at least 5 feet below the slide plane. The key should be located based upon a 1:1 projection from the toe of the proposed fill downward. As such the key would be about 25 feet outside the toe of the fill slope as shown on the plan. A 1:1 slope should also be planned for the opposite side. Grading would therefore extend about 50

feet horizontally below the proposed toe of slope. This will essentially remove the entire upper portion of the landslide.

The lower portion of the central slide is to have fill placed against it. As for the upper fill complete slide removal with 1:1 projections downward are recommended.

The mass of his slide that will remain after recommended corrective grading is not considered to present a risk to any lot as currently proposed.

The western landslide area is a series of smaller slide features. The upper 8 to 10 feet is disrupted, soft, and weathered. This zone should be removed prior to fill placement. The remaining landslide mass is anticipated to be essentially an intact block of bedrock which will be effectively buttressed by proposed grading.

Perimeter Shear Key - Lots 62 through 70

The landslides discussed above reflect the weakness of the Sweetwater Formation claystones on site. The claystones should be encountered along the northern edge of Lot 62 through 72. In order to provide additional support for these lots the upper 10 feet of the descending slope should be overexcavated and reconstructed as compacted fill. This is shown on Plate GS-2 in Appendix D.

Slope Design

All slopes should be designed and constructed in accordance with the minimum requirements of the City of Chula Vista, the Uniform Building Code, the recommendations contained in Appendix D and the following:

1. Fill slopes should be designed at 2:1 (horizontal to vertical) gradients. Fill slopes should be properly built and compacted. Guidelines for slope construction are presented in Appendix D.

2. Cut slopes should be generally designed at gradients of 2:1.

3. Should blasting be necessary in the metavolcanic rocks, care should be taken in proximity to proposed cut slopes. Over-blasting of hard rock would result in weakened rock conditions which could require remedial grading to stabilize the affected cut slopes.

4. Loose rock debris remaining on the face of cut slopes in hard rock should be removed during grading. This can be accomplished by high pressure water washing or by hand scaling, as warranted.

5. All slopes should be mapped by the project engineering geologist during grading to allow amendments to the

recommendations should exposed conditions warrant alteration of the design or stabilization.

Grading Guidelines

All grading should conform to the guidelines presented in Appendix D, Chapter 70 of the Uniform Building Code, and the requirements of the City of Chula Vista. Specific guidelines and comments pertinent to the Salt Creek I are offered below:

Removals

In general, all topsoil, colluvium, alluvium old fill (dam), and upper portion of landslides (see above discussion) should be removed in areas to receive fill or where exposed at grade in cut areas. In addition, near surface areas of weathered bedrock and caliche development which are less dense and/or have been heavily burrowed by rodents may require removal. These materials may be reused as compacted fill provided they are free of deleterious materials (organics, trash, etc.).

Removal depths over most of the site should generally be on the order of 2 to 4 feet for topsoil and 5 to 12 feet in alluvial areas. Locally deeper removals of colluvium and alluvium should be anticipated in swale areas and canyons. Additionally, portions or all of landslide deposits should be removed as discussed in Landslide Stabilization section.

As removal quantity estimates depend largely upon interpretation of geotechnical data applied to a specific grading plan, we suggest that this office be contacted regarding this interpretation. We would be glad to provide assistance in preparation of these estimates.

Rock Excavation and Fill

1. Excavated metavolcanic rock materials are expected to generate large rock debris which may require special handling during grading. Seismic/rippability studies indicate blasting will likely be necessary. Large rocks generated may be placed within deeper compacted fills in accordance with the guidelines in Appendix D.

2. Where blasting is necessary, care should be taken in proximity to proposed cut slopes. Over-blasting of hard rock would result in weakened rock conditions which could require remedial grading to stabilize the affected cut slopes.

3. Decreasing shot-hole spacings can result in better quality fill materials which may otherwise require specialized burial techniques. It is important that blasting procedures, when utilized, be such that generally minus 2 foot sized materials is produced and that sufficient fines (sands and gravels) to fill all void spaces are present.

This procedure would facilitate fill placement and decrease the need to drill and shot large rocks produced. If blasting results in a lack of fines, mixing with granular material would be required.

4. Consideration should be given to over-excavating street and pad areas underlain by hard rock (metavolcanics) to the depth of proposed excavations (utilities, foundations, etc.) and rebuilding to grade with properly compacted fill. This is intended to minimize difficulty in excavating for footings and utility lines.

Subdrains

1. Canyon underdrain systems, consisting of pipe and filter material should be placed within bedrock materials beneath fills compacted in the major on-site canyons. Tentative subdrain locations are indicated on the Geotechnical Maps.

2. Groundwater seeps, if encountered on canyon sidewalls during clean-out operations, should be drained with lateral systems which connect into the main canyon subdrains. The need for these additional systems can be evaluated during grading when subsurface conditions are exposed.

3. Subdrain systems should extend up canyon to levels of ten feet below the finished fill grade. However, they might be terminated deeper if they cross beneath streets and conflict

with future utilities. The systems should be constructed in accordance with one of the alternative designs given in Appendix D. Perforated pipe within the drains should be 6 inch diameter at the upstream end, increasing to 8 inch diameter beyond 500 feet. Where two subdrain systems connect, the downstream pipe size should be based on the combined lengths of the upstream systems.

4. Subdrains should be provided behind all stabilization fills; including the perimeter key of Lots 62 through 70 and for landslides.

Lot Capping/Street Overexcavation

Care should be taken to avoid placing highly expansive materials encountered within three feet of finish grade. Transition lots (cut/fill) should be over excavated to a minimum depth of three feet to provide more uniform foundation support conditions. The need to cap cut lots should be evaluated during grading, as undercutting may be beneficial to facilitate utility and foundation trenching in areas of hard metavolcanic rock or cemented sandstones, or due to the presence of materials with significantly different expansive potential (e.g. claystones and sandstones).

Consideration should be given to overexcavation of street areas where hard rock is exposed. Accordingly, provisions for the

potential need of a Cat 245 or equivalent during trenching operations should be included into project planning. Overexcavation should extend at least one foot below the lowest utility invert.

Foundation Recommendations

Based on our observations and test results, onsite soils appear to vary from low to very highly expansive in nature. Both cut and fill lots will be constructed. Preliminary recommendations for foundation construction are presented below. The specific criteria to use for each lot or building pads should be based on evaluation and expansion testing performed after grading is complete. Consideration should be given to burying expansive materials in deeper fill areas as feasible.

Design:

1. An allowable soil bearing pressure of 1,500 pounds per square foot may be used for the design of continuous footings with a minimum width of 12 inches and depth of 12 inches. The bearing pressure may be increased by one-third for seismic or other temporary loads.

2. An allowable coefficient of friction between concrete and compacted fill or bedrock of 0.4 may be used with the deadload forces.

3. Where footings are proposed adjacent to descending slopes, we

recommend the footings be set back from the slope or deepened to provide a minimum horizontal distance from the outside bottom edge of the footing to the adjacent slope face. The setback should be equal to one-third of the slope height, to a maximum of 20 feet, but not less than 7 feet. This is not intended to supercede any required building set back from slopes as set forth by the City of Chula Vista or the Uniform Building Code.

Construction:

The following recommendations may be applied to construction of foundations for typical one and two story residential structures, based upon anticipation that very highly expansive materials will not be placed at finish grades.

Low Expansive Soils:

1. Footings may be constructed according to standard building code requirements regarding width and depth. No reinforcement is necessary due to expansion. However, consideration should be given to placing one No. 4 reinforcing bar near the top and bottom of footings.

2. Concrete slabs, where moisture condensation is undesirable, should be underlain with a vapor barrier consisting of a minimum of six mil polyvinyl chloride or equivalent membrane with all laps sealed. This membrane should be covered with a

minimum of one inch of sand to aid in uniform curing of the concrete.

3. Concrete slabs, except in garage areas, should be reinforced with six inch by six inch, No. 10 by No. 10 welded wire mesh. All slab reinforcement should be supported to ensure proper positioning during placement of concrete. Garage slabs should be poured separately from the residence footings. A positive separation should be maintained with expansion joint material to permit relative movement.

4. No specific presaturation is required, however, footing trenches and soil at pad grade should be well watered prior to pouring concrete.

Moderately Expansive Soils:

1. Exterior footings should be founded at a minimum depth of 18 inches below the lowest adjacent ground surface. Interior footings may be founded at a depth of 12 inches below the lowest adjacent ground surface. All footings should be reinforced with two No. 4 reinforcing bars, one placed near the top and one placed near the bottom of the footing.

2. A grade beam, reinforced as above, and at least 12 inches wide should be provided across garage entrances. The base of the grade beam should be at the same elevation as the bottom of adjoining footings.

3. Concrete slabs, where moisture condensation is undesirable, should be underlain with a vapor barrier consisting of a minimum of six mil polyvinyl chloride or equivalent membrane with all laps sealed. This membrane should be covered with a minimum of one inch of sand to aid in uniform curing of the concrete.

4. Concrete slabs, except in garage areas, should be reinforced with six inch by six inch, No. 10 by No. 10 welded wire mesh. All slab reinforcement should be supported to ensure placement near the vertical midpoint of the concrete.

5. Garage slabs need not be reinforced with the above criteria; however, they should be poured separately from the residence footings and be quartered with expansion joints or saw cuts. A positive separation from the footings should be maintained with expansion joint material to permit relative movement.

6. Presaturation is recommended for these soil conditions. The moisture content of the subgrade soils should be equal to or greater than optimum moisture to a depth of 18 inches below grade in the slab areas and verified by this office within 48 hours of pouring slabs and prior to placing visqueen or reinforcement.

Highly Expansive Soils:

1. Exterior footings should be founded at a minimum depth of 18 inches below the lowest adjacent ground surface. Interior footings should have a minimum embedment of 18 inches below the top of the lowest adjacent concrete slab surface. However, a minimum penetration of 12 inches into the soil is required.

   All footings should be reinforced with a minimum of four No. 4 reinforcing bars two placed near the top and two placed near the bottom of the footing.

2. A grade beam, reinforced as above and at least 12 inches wide, should be utilized across garage entrances. The base of the grade beam should be at the same elevation as the bottom of the adjoining footings.

3. Concrete slabs should be underlain with a minimum of four inches of washed sand or crushed rock. In addition, where moisture condensation is undesirable, a vapor barrier consisting of a minimum of six mil polyvinyl chloride or equivalent membrane with all laps sealed should be provided. One inch of the sand should be placed over the membrane to aid in uniform curing of the concrete.

4. Concrete slabs, including garages, should be reinforced with six inch by six inch, No. 6 by No. 6 welded wire mesh or its

equivalent. All slab reinforcement should be supported to ensure placement near the vertical midpoint of the concrete.

5. Garage slabs should be poured separately from the residence footings and be quartered with expansion joints or saw cuts. A positive separation from the footings should be maintained with expansion joint material to permit relative movement.

6. Presaturation is recommended for these soil conditions. The moisture condition of each slab area should be equal to or greater than 120 percent of optimum to a depth of 18 inches below slab grade and verified by this office within 48 hours of pouring slabs and prior to placing visqueen or reinforcement.

Post Tensioned Slabs

Recommendations for post tensioned foundations systems can be provided if desired.

Retaining Wall Design

The recommendations presented below are for walls up to 15 feet high backfilled with low to medium expansive, granular backfill. Plans for footings designed utilizing these recommendations should be reviewed by GeoSoils, Inc., prior to construction.

All retaining walls should be provided with an adequate backdrain system, designed in accordance with minimum standards of the City

of Chula Vista, to prevent buildup of hydrostatic pressures. In addition, gravel used in backdrain systems should be a minimum of 12 inches of Class II filter material or 3/4 inch clean crushed rock wrapped in filter fabric. Retaining walls should be backfilled with properly compacted fill, allowing a minimum two foot thick compacted fill blanket of native material at the surface. Proper surface drainage should be provided.

Active Earth Pressure:

Active earth pressure may be used for retaining wall design, provided the top of the wall is not restrained from minor deflections. An equivalent fluid pressure approach may be used to compute the horizontal pressure against the wall. Appropriate fluid unit weights are given below for specific slope gradients of the retained material. These do not include other superimposed loading conditions such as traffic, structures, seismic events or adverse geologic conditions. Active earth pressure recommendations for expansive soils can be determined by specific laboratory testing of on-site materials.

SLOPE RETAINED MATERIAL (HORIZONTAL TO VERTICAL)	EQUIVALENT FLUID UNIT WEIGHT TO BE USED TO COMPUTE ACTIVE EARTH PRESSURE POUNDS PER CULIC FOOT
Level	35
2 to 1	50
1-1/2 to 1	60

Passive Earth Pressures:

1. Passive earth pressure may similarly be computed using an equivalent fluid unit weight of 200 pounds per cubic foot with a maximum earth pressure of 2,000 pounds per square foot.

2. An allowable coefficient of friction between soil and concrete of 0.4 may be used with dead load forces.

3. When combining passive earth pressure and frictional resistance, the passive pressure component should be reduced by one-third.

Graded Slope Maintenance

Water has been shown to weaken the inherent strength of all earth materials. Slope stability is significantly reduced by overly wet conditions. Positive surface drainage away from graded slopes should be maintained and only the amount of irrigation necessary to sustain plant life should be provided for planted slopes. Overwatering should be avoided.

Graded Slope Planting

1. Graded slopes constructed within and utilizing weathered bedrock materials are considered erosive. Eroded debris may be minimized and surficial slope stability enhanced by establishing and maintaining a suitable vegetation cover soon after construction.

2. Plants selected by the project landscape architect should be light weight, deep rooted types which require little water and are capable of surviving the prevailing climate.

3. Graded cut slopes exposing volcanic rocks are expected to be relatively non-erosive and will present difficulty establishing vegetation on the hard rock. Jute-type matting or other fibrous covers may help allow the establishment of a sparse plant cover.

PLAN REVIEW

Specific grading plans should be submitted to this office for review and comment as they become available, to minimize any misunderstandings between the plans and recommendations presented herein. In addition, foundation excavations and earthwork construction performed on the site should be observed and tested by this office. If conditions are found to differ substantially from those stated, appropriate recommendations would be offered at that time.

LIMITATIONS

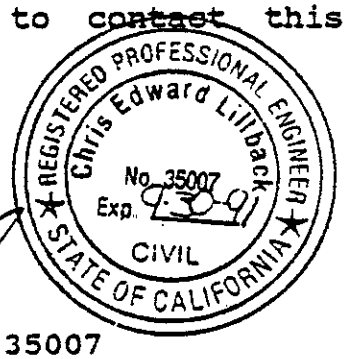
The materials encountered on the project site and utilized in our laboratory study are believed to representative of the total area. However, soil and bedrock materials may vary in character between excavations and natural outcrops. On a project of this size, variations from the anticipated conditions and actual field conditions should be expected. Test excavations are reflective of the soil and rock materials only at the specific location explored. Site conditions may vary due to seasonal changes or other factors.

Since our study is based on the site materials observed, selective laboratory testing and engineering analyses, the conclusions and recommendations are professional opinions based upon those parameters. These opinions have been derived in accordance with the current standards of practice and no warranty is expressed or implied.

If you should have any questions regarding this report, or our preliminary report, please do not hesitate to contact this office.

Respectfully submitted,

GeoSoils, Inc.



Michael A. McDowell
Staff Geologist

Chris E. Lillback, RCE 35007
Principal Engineer

Timothy E. Metcalfe, CEG 1142
Principal Geologist

MAM/CEL/TEM/mlc

Enclosures: Reference List
Appendix A, Boring and Trench Logs
Appendix B, Rock Hardness Studies
Appendix C, Laboratory Testing
Appendix D, Grading Guidelines
Plate 1, Geotechnical Map
Plates 2a and 2b, Geologic Cross-Sections

REFERENCE LIST

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5) Demere, Thomas A., 1988, Early Arikareean (Late Oligocene) vertebrate fossils and biostratigraphic correlations of the Otay Formation at Eastlake, San Diego County, California: in (Filewiez, M.V. and Squires, R.L., eds.) Paleocene Stratigraphy, West Coast of North America, Pac. Sect. S.E.P.M., West Coast Paleocene Symposium, Vol. 58, p. 35-43.

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10) Kennedy, M.P., Clark, S.H., Greene, H.G., and Legg, M.R., 1980, Recency and Character of Faulting Offshore from Metropolitan San Diego, California, Point Loma to Baja California: California Division Mines and Geology Map Sheet 42.

11) Kennedy, M.P., and Tan, S.S., 1977, Geology of National City, Imperial Beach, and Otay Mesa Quadrangles, Southern San Diego Metropolitan Area, California: California Division Mines and Geology Map Sheet 29.

Appendices and oversized graphics on-file at city of Chula Vista Planning Dept.

APPENDIX B

TRANSPORTATION DATA/CORRESPONDENCE

FEB 21 1989

CITY OF
CHULA VISTA
PLANNING DEPARTMENT

February 16, 1989

Robert L. Santos
EastLake Business Center
900 Lane Avenue, Suite 100
Chula Vista, CA 92013

EASTLAKE BUSINESS CENTER - REZONE RELATIONSHIP TO RANCHO DEL REY SPA I

Thank you for your January 25, 1989 letter and request for clarification regarding the rezoning of a portion of the EastLake Business Center to a residential designation and the processing of related subdivision maps. We too have been working closely with the Baldwin Company in an attempt to formulate the best possible design on the site and resolve the various planning and engineering issues. We feel that much progress has been made to date. We anticipate receipt of a revised plan from the Baldwin Company shortly at which point Planning staff will prepare a status summary and our tentative recommendations on major issues we've been discussing.

To respond to the points in your letter, we are generally supportive of the conclusions you stated regarding traffic impacts. We concur that the subject rezoning of approximately 48 acres of industrial land to approximately 550 residential units is consistent with, and less than, trip generation assumptions made in conjunction with the original EastLake I approvals. Second, elimination of the roadway connection through the industrial area to the south, now planned for U.P.S., appears to be a neutral factor. While residential traffic is precluded from going southerly through the industrial, industrial trips from the south are likewise precluded from going northerly.

We further understand that you have not proposed to substitute ADT's from EastLake Greens for those associated with the parcel rezone. Regarding traffic associated with East "H" Street and Rancho del Rey SPA I, we assume that the traffic from this parcel would be included in the 4 percent cumulative growth included in the Rancho del Rey traffic modeling and would not compete with their "entitlements".

The only part of your letter we had some concern about had to do with the notion of the EastLake I Public Facilities Finance Plan and Development Agreement predating the Rancho del Rey Development Agreement. From a timing perspective this is certainly the case. However, the Baldwin parcel requires a SPA Plan

Amendment, Rezone and new tentative map, and as such does not automatically fall within the Eastlake I Development Agreement. The point though seems moot in light of our understanding as to the traffic impacts. Also, I spoke recently with Mr. Ken Baumgartner of McMillin, and he assured me that they were in the process of reviewing your letter and the January 27, 1989 Urban Systems Associates, Inc., traffic study attached thereto.

We would be happy to discuss any better techniques to ensure individual project commitments and are hopeful that our pending growth management plan will recommend a more comprehensive approach to development and transportation phasing. Thank you.

George Krempl
Director of Planning

GK:rms

cc: John Lippitt, Director of Public Works
Cliff Swanson, Deputy Director of Public Works/City Engineer
Ken Baumgartner, McMillin Communities Development, Inc.
Craig Fukiyama, McMillin Communities Development, Inc.
Jim Harter, The Baldwin Company

February 9, 1989
File # 6361841

TO: George Krempl, Planning Director

VIA: John Lippitt, Director of Public Works

FROM: Cliff Swanson, Deputy Director of Public Works/City Engineer

SUBJECT: "H" Street Traffic Analysis on Pepper Creek Subdivision

In the attached letter to you dated December 5, 1988, Rancho del Rey Partnership raised a concern regarding the timing of the contemplated change of land use designations in Eastlake Business Center from industrial to residential as proposed by Eastlake on behalf of the Baldwin Company. Per your request, we have reviewed the traffic situation and have the following responses:

1. Properties within Eastlake I, including subject parcel are subject to development thresholds as established by Eastlake I Public Facilities Financing Plan and the related Eastlake I Development Agreement.

2. The rezoning of the property of approximately 48 acres of industrial land to approximately 550 residential dwelling units will cause the trip generation for that area to be changed. Based on Sanddag trip generation rates the 48 acre industrial use would generate 9,600 ADT. The proposed use of 550 multiple family or attached units the trip generation would be 4,400 ADT. This represents a reduction in traffic generation of about 5,200 ADT.

3. Regarding the removal of Boswell Road as a connection between the two areas, we have determined that the impact is minimal on the traffic on "H" Street. Without Boswell Road it is true that a percentage of the traffic generated in the Pepper Creek area would go south to Telegraph Canyon Road. However, it is also true that a portion of the industrial traffic in the existing Eastlake Business Park would come north to "H" Street. An analysis done by Urban Systems shows that the most important factor is the change in land use and not the connection. Further, Urban Systems has predicted that the ADT on "H" Street from this area without the Boswell Road connection would be approximately 2,840 trips generated from this development. Likewise, with the industrial use and the connection of Boswell Road as currently planned 4,800 trips

would be generated on "H" Street from the project area and Eastlake Business Park.

4. It is obvious from the traffic generation rates of the two areas that there is no need to substitute any ADTs from any other Eastlake project in order to meet the requirements for this project.

5. While the trips on "H" Street would be generated sooner under the Pepper Creek proposal than previously proposed under the Business Park, the total number of trips is fewer. Also, the growth projection for "H" Street traffic utilized a general 4% per year growth in addition to the specific developments. The earlier development would be adequately covered under the general growth projection.

In summary, it appears that the proposed residential project will lead to fewer trips on "H" Street than the existing industrial alternative with the Boswell Road connection. You may respond to Craig Fukuyama's letter with the above information. Baldwin and Eastlake would like a copy of your replay.

Attached are copies of pertinent information we have reviewed for this response. You may wish to respond to Rancho del Rey's letter with this information.

CLS:llb

Attachments

(A\MEMOS\PEPPER.DOC)

RANCHO DEL REY
2727 HOOVER AVE.
NATIONAL CITY
CA 92050-6625
(619) 477-4117

Procter Valley to be basis of traffic + telegraphic. — (Spawn to EIR — Timing of Develop — Closure of Boswell Miller RW

December 5, 1988

SCI - traffic

Mr. George Krempl, Director
Planning Department
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010

RE: RANCHO DEL REY - SPA I TRAFFIC REPORT

Dear George:

The purpose of this letter is to express Rancho Del Rey Partnership's concerns regarding the timing of the contemplated change of land use designations in the Eastlake Business Center from Industrial to Residential, as proposed by Eastlake on behalf of the Baldwin Company. With the approval of the UPS project, which abandoned the future northerly street extension of Boswell Road, access through the remainder of the Business Center by the subject property was eliminated. The redesign requires access to the property via SR-125, Procter Valley Road, East "H" Street, or extensions of Miller Drive or Lane Avenue. We have the following concerns regarding the traffic impacts of this land use redesignation on the Rancho Del Rey project and East "H" Street specifically.

1. The redesignation could be inconsistant with the Rancho Del Rey and City of Chula Vistas' Development Agreement (Paragraph 4.8) which states in part:

   > "In consideration of Developer improving the widening of East "H" Street to a full six (6) lanes, the City shall, during the term of this Agreement, exclude 12,100 ADT's from its determination of available East "H" Street capacity immediately east of Hidden Vista Way when the City considers approvals for development projects other than SPA I."

The Eastlake Business Center has an approved tentative tract map. This redesignation because it is complicated with a road redesign and a modification of traffic patterns should be treated as a new project, which requires environmental analysis. Prior to UPS, traffic would have gone southerly through the Eastlake Business Center to Telegraph Canyon Road delaying the connection to "H" Street and the resulting impact to Rancho Del Rey until a north-south road in the SR-125 corridor was constructed. Also, if the property were to remain Industrial the development timing would occur later after SR-125 is constructed or other regional road improvements are completed.

We are anxious to review the detailed traffic analysis of this redesignation. A condition requiring the improvement of a roadway within the SR-125 alignment from the project south to at least Otay Lakes Road (Telegraph Canyon Road) or an extension of Miller Drive or Lane Avenue should be considered as a mitigation measure whose construction should be required to serve this property and that the connection of East "H" Street from SR-125 to Eastlake Drive not be made or delayed.

2. It is our understanding that Eastlake intends to substitute 1229 ADT's from the Greens for this project. We believe that any substitution impacting East "H" Street should be analyzed before approvals are granted.

We are looking forward to commenting on an EIR for the redesignation and request notification of the public review period so we may comment. If you may have any questions or comments regarding this matter, please do not hesitate to contact me,

Sincerely,
RANCHO DEL REY PARTNERSHIP

Craig Fukuyama

CF/rlt

WILLDAN ASSOCIATES ☐ ENGINEERS & PLANNERS

April 12, 1989

Ms. Jeanne Muñoz
ERC
5510 Morehouse Drive
San Diego, CA 92121

Dear Jeanne,

This letter is to supplement our Traffic Analysis for EastLake II in the City of Chula Vista dated April 7, 1989. After a brief preliminary review of our traffic analysis, City staff had concerns regarding specific development thresholds and network assumptions regarding the construction of [redacted].

According to the preliminary Transportation Phasing Plan for East Chula Vista, the construction of State Route 125 will be needed to accommodate cumulative traffic flows in [redacted]. This assumes the development of 9100 dwelling units, 172 acres of industrial, and 85 acres ot commercial uses. The EastLake II project was assumed to represent 3,753 dwelling units and 15 acres of commercial uses of the above mentioned land use total.

It should be noted that the EastLake II was phased in six development increments along with other assumed developments. Table 3 (page 15) in our analysis indicates the development increments and shows approximately 1,500 to 2,000 dwelling units along with associated industrial and commercial uses per phase in the overall East Chula Vista area. As this anticipated development occurs, the phased improvement of circulation streets will be necessary to accommodate these newly generated trips at acceptable levels of service.

Improvements to the street system prior to the construction of State Route 125 are listed in Table 5 (pages 18 and 19) of our traffic analysis. The attached table to this letter indicates the preliminary street improvements required for each development phase.

In conclusion, the EastLake II project can develop to 3,753 dwelling units and 15 acres of commercial uses prior to the construction of State Route 125 assuming land use phasing and street improvements are consistent with assumptions utilized in the draft East Chula Vista Transportation Phasing Plan. EastLake II can buildout, however State Route 125 will require construction between Telegraph Canyon Road and State Route 54 as a four lane freeway to achieve acceptable levels of service within the study area.

6363 GREENWICH DRIVE • SUITE 250 • SAN DIEGO, CALIFORNIA 92122-3939 • (619) 457-1199 • FAX (619) 452-6680

Should you have any questions or comments, please feel free to contact Joe Oliva or me.

Sincerely,

WILLDAN ASSOCIATES

for

Robert M. Sergeant
Division Manager

RMS:JJO:ld
JN 36041

cc: City of Chula Vista - George Krempl
Hal Rosenberg
Doug Reid

A

EAST CHULA VISTA TRANSPORTATION PHASING PROGRAM

	Street Segment	C.E. Class	1987 Counts Config	Vol	LOS	Base Year(1-1-89) Config	Vol	LOS	Phase 1 Config	Vol	LOS	Phase 2 Config	Vol	LOS
	Telegraph Canyon Road													
1.	I-805 - Oleander	6P	6P	38.0	B	6P	37.9	B	6P	41.0	B	6P	29.5	A
	Oleander - Paseo del Rey	6P	4M	25.0	B	4M	25.0	B	4M	28.6	C	4M	14.3	A
	Paseo del Rey - Medical Ctr	6P	4M	25.2	B	4M	22.9	B	4M	25.9	B	4M	12.6	A
	Medical Ctr - Paseo Ladera	6P	4M	15.7	A	4M	12.6	A	4M	14.0	A	4M	19.4	A
2.	Paseo Ladera - Buena Vista	6P	2C11	14.2	C*	2C11	11.0	C	4M	12.5	A	4M	17.5	A
	Buena Vista - Otay Lakes Rd	6P	2C11	12.7	C*	2C11	9.4	B	4M	11.4	A	4M	16.3	A
3.	Otay Lakes Rd - Rutgers	6P	2C11	7.4	A	2C11	14.1	C*	4M	19.5	A	4M	25.1	B
	Rutgers - EastLake	6P	2C11	6.5	A	2C11	14.6	C*	4M	20.8	A	4M	25.3	B
	EastLake - Hunte	6P/4M	2C11	4.3	A	2C11	11.9	C	4M	16.4	A	4M	19.2	A
	Hunte - East City Limits	4C	2C11	2.4	A	2C11	2.5	A	2C11	2.5	A	2C11	2.7	A
	Otay Lakes Road													
4.	Bonita Rd - Canyon Dr	6P	4M/2C11	18.2	C	4M/2C11	19.7	C	4M	20.3	A	4M	25.2	B
	Canyon Dr - East "H" St	6P	4M/2C11	16.6	C	4M/2C11	18.9	C	4M	19.4	A	4M	22.3	A
5.	East "H" St - Gotham	6P	4M	12.1	A	4M	15.2	A	4M	18.2	A	4M	23.2	B
	Gotham - Telegraph Canyon Rd	6P	4M	10.7	A	4M	12.9	A	4M	16.5	A	4M	23.3	B
	East "H" Street													
7.	I-805 - Ridgeback	6P	4D	29.6	C	6P	36.2	A	6P	42.2	B	6P	39.9	B
	Ridgeback - Paseo del Rey	6P	2C11	20.1	D*	6P	26.9	A	6P	31.5	A	6P	29.2	A
	Paseo del Rey - Buena Vista	6P	2C11	20.5	D*	6P	30.2	A	6P	32.3	A	6P	32.5	A
	Buena Vista - Otay Lakes Rd	6P	4D	19.7	A	6P	29.0	A	6P	31.3	A	6P	26.9	A
8.	EastLake Pkwy - SR-125	4M	4M	6.8	A	[illegible]	9.6	A	[illegible]	9.2	A	[illegible]	9.0	A
	San Miguel Road													
9.	Bonita Rd - SR-125	4C	2C11	4.9	A	2C11	4.9	A	2C11	4.9	A	2C	5.8	A
	Central Avenue													
10.	Bonita Rd - Frisbie	4C	4C	10.0	A	4C	11.4	A	4C	13.1	A	4C	12.5	A
	Frisbie - Corral Canyon		2C11	8.0	A	2C11	9.4	B	2C11	10.3	B	2C11	10.3	B

* Capacities tend to by higher on rural roadways. The City's General Plan capacities are for urban conditions and tend to be conservative. Levels of service for rural conditions are estimated based on field observation.

EAST CHULA VISTA TRANSPORTATION PHASING PROGRAM

Street Segment	C.E. Class	1987 Counts Config	Vol	LOS	Base Year(1-1-89) * Config	Vol	LOS	Phase 1 Config	Vol	LOS	Phase 2 Config	Vol	LOS
Bonita Road													
11. Otay Lakes Rd - Acacia	4M	2C11	21.7	E**	2C11	21.7	E**	2C11	21.7	E**	2C11	22.0	E**
Acacia - Central	4M	2C11	20.1	E**	2C11	20.2	E**	2C11	20.2	E**	2C11	21.0	E**
Central - San Miguel	4M	2C11	12.2	D**	2C11	13.4	D**	2C11	14.0	E**	4M	17.2	A
San Miguel - Sweetwater	4M	2C11	9.8	B	2C11	10.9	C	2C11	11.6	C	2C11	13.9	D**
Sweetwater Road													
12. Bonita Rd - SR-54	4C1	2C11	10.0	B	2C11	11.0	C	2C11	11.6	C	2C11	13.4	D**
[redacted]													
SR-54 - San Miguel	8 Ln Fwy	N/A	N/A	N/A	[redacted]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
San Miguel - East "H" St	8 Ln Fwy	"	"	"		"	"	"	"	"	"	"	"
East "H" St - Telegraph Cyn	8 Ln Fwy	"	"	"		"	"	"	"	"	"	"	"
Telegraph Cyn - Orange Ave	8 Ln Fwy	"	"	"	"	"	"	"	"	"	"	"	"

** Levels of service estimated due to rural conditions. These roadway segments are currently under County jurisdiction and are not significantly impacted by development in early TPP phases.

6P - 6 lane Prime Arterial
4M - 4 lane Major
4C1 - 4 lane Class I Collector
2C11 - 2 lane Class II Collector

EAST CHULA VISTA TRANSPORTATION PHASING PROGRAM

	Street Segment	C.E. Class	Phase 3 Config	Phase 3 Vol	Phase 3 LOS	Phase 4 Config	Phase 4 Vol	Phase 4 LOS	Phase 5 Config	Phase 5 Vol	Phase 5 LOS	Phase 6 Config	Phase 6 Vol	Phase 6 LOS
	Telegraph Canyon Road													
1.	I-805 - Oleander	6P	6P	32.2	A	6P	34.4	A	6P	30.3	A			
	Oleander - Paseo del Rey	6P	4M	17.4	A	4M	19.4	A	4M	17.1	A			
	Paseo del Rey - Medical Ctr	6P	4M	15.2	A	4M	17.3	A	4M	15.4	A			
	Medical Ctr - Paseo Ladera	6P	4M	22.2	A	4M	24.0	B	4M	21.4	A			
2.	Paseo Ladera - Buena Vista	6P	4M	20.3	A	4M	22.2	A	4M	19.1	A			
	Buena Vista - Otay Lakes Rd	6P	4M	19.2	A	4M	21.0	A	4M	17.7	A			
3.	Otay Lakes Rd - Rutgers	6P	6P	30.9	A	6P	34.0	A	6P	27.5	A			
	Rutgers - EastLake	6P	6P	31.6	A	6P	33.9	A	6P	26.9	A			
	EastLake - Hunte	6P/4M	4M	23.8	B	4M	25.9	B	4M	21.2	A			
	Hunte - East City Limits	4CI	2CII	2.8	A	2CII	2.8	A	2CII	2.8	A			
	Otay Lakes Road													
4.	Bonita Rd - Canyon Dr	6P	4M	27.2	C	4M	29.3	C	4M	17.3	A			
	Canyon Dr - East "H" St	6P	4M	24.0	B	4M	26.0	B	4M	18.0	A			
5.	East "H" St - Gotham	6P	4M	26.2	B	4M	27.5	C	4M	22.8	B			
	Gotham - Telegraph Canyon Rd	6P	4M	25.5	B	4M	26.9	C	4M	22.0	A			
	East "H" Street *													
7.	I-805 - Ridgeback	6P	6P	45.1	C	6P	48.5	C	6P	38.9	B			
	Ridgeback - Paseo del Rey	6P	6P	29.2	A	6P	36.8	A	6P	24.6	A			
	Paseo del Rey - Buena Vista	6P	6P	32.4	A	6P	34.5	A	6P	28.1	A			
	Buena Vista - Otay Lakes Rd	6P	6P	30.7	A	6P	32.4	A	6P	26.5	A			
8.	EastLake Pkwy - SR-125	4M	4M	12.3	A	4M	14.9	A	4M	B	B			
	San Miguel Road													
9.	Bonita Rd - SR-125	4CI	2CII	5.0	A	2CII	5.2	A	2CII	9.4	B			
	Central Avenue													
10.	Bonita Rd - Frisbie	4CI	4CI	14.1	A	4CI	14.1	A	4CI	12.2	A			
	Frisbie - Corral Canyon		4CI	13.2	D	4CI	13.4	A	4CI	11.7	A			

* Capacities tend to by higher on rural roadways. The City's General Plan capacities are for urban conditions and tend to be conservative. Levels of service for rural conditions are estimated based on field observation.

EAST CHULA VISTA TRANSPORTATION PHASING PROGRAM

	Street Segment	C.E. Class	Phase 3 Config	Phase 3 Vol	Phase 3 LOS	Phase 4 Config	Phase 4 Vol	Phase 4 LOS	Phase 5 Config	Phase 5 Vol	Phase 5 LOS	Phase 6 Config	Phase 6 Vol	Phase 6 LOS
	Bonita Road													
11.	Otay Lakes Rd - Acacia	4M	4M	25.1	E**	4M	26.3	B	4M	19.6	A			
	Acacia - Central	4M	2C11	23.4	E**	4M	25.4	B	4M	16.7	A			
	Central - San Miguel	4M	2C11	18.0	E**	4M	19.9	A	4M	12.7	A			
	San Miguel - Sweetwater	4M	2C11	14.5	E**	4M	16.3	A	4M	5.7	A			
	Sweetwater Road													
12.	Bonita Rd - SR-54	4C1	2C11	14.2	E**	4C1	15.9	A	4C1	6.6	A			
	SR-125													
	SR-54 - San Miguel	8 Ln Fwy	[illegible]	N/A	N/A	[illegible]	[illegible]	N/A	4 Ln Fwy	39.0	-			
	San Miguel - East "H" St	8 Ln Fwy		"	"			"	[illegible] Fwy	[illegible]				
	E. "H" St - Telegraph Cyn	8 Ln Fwy		"	"			"	[illegible] Fwy	[illegible]				
	Telegraph Cyn - Orange Ave	8 Ln Fwy		"	"	"	"	"	N/A	----	-			

** Levels of service estimated due to rural conditions. These roadway segments are currently under County jurisdiction and are not significantly impacted by development in early TPP phases.

6P - 6 lane Prime Arterial
4M - 4 lane Major
4C1 - 4 lane Class 1 Collector
2C11 - 2 lane Class II Collector

APPENDIX C

ONSITE NOISE ANALYSIS

NOISE ANALYSIS FOR SALT CREEK 1

CITY OF CHULA VISTA

Report # 89-24-3 MM R
March 24, 1989

Prepared For:

THE BALDWIN COMPANY
11975 El Camino Real
Suite 200
San Diego, CA 92130

Prepared By:

Vincent Mestre, P.E.
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NOISE ANALYSIS FOR SALT CREEK 1
CITY OF CHULA VISTA

1.0 INTRODUCTION

The purpose of this report is to demonstrate compliance of the Salt Creek 1 project with the noise related "Conditions of Approval" placed on the project by the City of Chula Vista. The project calls for the development of single family homes and multi-family units. The report addresses the future exterior and interior noise levels within the project site.

The project is located in Chula Vista. The vicinity map is shown in Exhibit 1. The project site is exposed to traffic noise from the Proposed State Route 125 (SR 125), East H Street, and San Miguel Road. There are no aircraft or railroad noise sources impacting the site. This study determines the need for any exterior or interior mitigation measures to provide adequate protection from noise levels associated with the ultimate traffic volume projected for these roadways.

2.0 NOISE CRITERIA

The Noise Element of the General Plan of the City of Chula Vista and the Conditions of Approval specify outdoor and indoor noise limits for residential land-uses. Both standards are based upon the CNEL index. CNEL or Community Noise Equivalent Level is a 24 hour time weighted annual average noise level. Time weighting refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. The evening time period (7 PM to 10 PM) penalizes noises by 5 dB while nighttime (10 PM to 7 AM) noises are penalized by 10 dB. These time periods and penalties were selected to reflect peoples sensitivity to noise as a function of activity.

The project must comply with the outdoor noise standard for exterior living areas of 65 dB CNEL. The indoc. noise standard is 45 dB CNEL. This report presents measures that are necessary to comply with these noise standards.

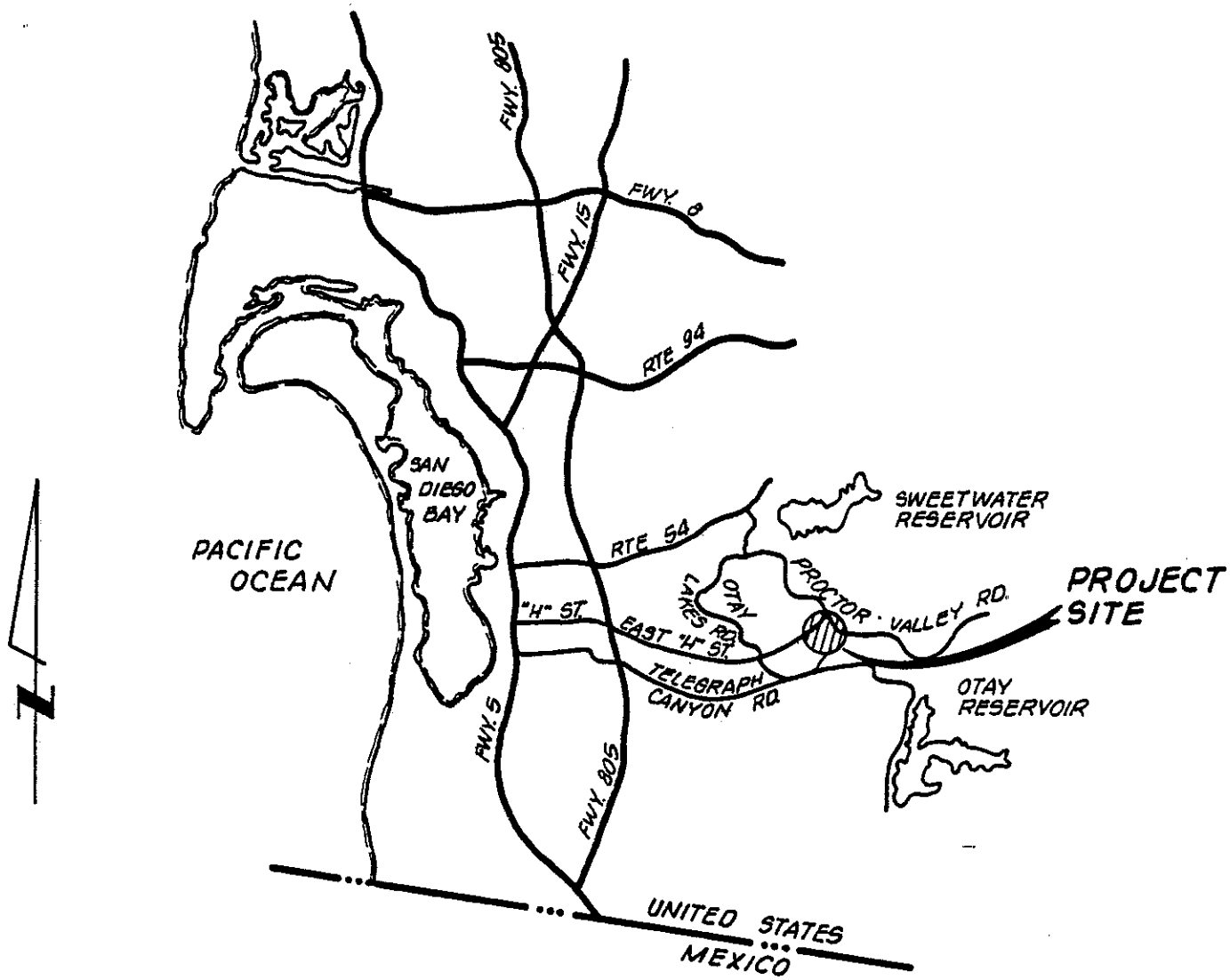


Exhibit 1

Vicinity Map

MESTRE GREVE ASSOCIATES

3.0 METHODOLOGY

The noise levels projected in this report were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model", FHWA-RD-77-108, December 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level". A computer code has been written which computes equivalent noise levels for each of the time periods used in CNEL. Weighting these noise levels and summing them results in the CNEL for the traffic projections used. CNEL contours are found by iterating over many distances until the distance to 60, 65, and 70 CNEL contours are found.

Mitigation through the design and construction of a noise barrier (wall, berm, or combination wall/berm) is the most common way of alleviating traffic noise impacts. The effect of a noise barrier is critically dependent on the geometry between the noise source and the receiver. A noise barrier effect occurs when the "line of sight" between the source and receiver is penetrated by the barrier. The greater the penetration the greater the noise reduction. The FHWA model was also used here in computerized format to determine barrier heights.

4.0 UNMITIGATED NOISE EXPOSURE

Future traffic volumes for SR 125, East H Street, and San Miguel Road have been obtained from the traffic study prepared by P & D Technologies, in December, 1988. The traffic volumes are presented in Table 1. Arterial truck mixes for each of the time periods used in the CNEL calculation are presented in Table 2. The arterial traffic distribution estimates are based upon traffic surveys, and are considered typical for arterials in Southern California. The truck mixes for each of the time periods used for the proposed SR 125 is shown in Table 3.

Table 1
FUTURE TRAFFIC VOLUMES AND SPEEDS

ROADWAY SEGMENT	TRAFFIC VOLUME (ADT)	SPEED (MPH)	ROADWAY GRADIENT
SR 125			
- Northwest of East H St	182,300	60	6%
East H Street			
- SR 125 to San Miguel Rd	48,700	45	5%
San Miguel Road			
- North of East H St	15,100	35	1.2%

Table 2
TRAFFIC DISTRIBUTION PER TIME OF DAY IN PERCENT OF ADT FOR ARTERIALS

VEHICLE TYPE	DAY	EVENING	NIGHT
Automobile	75.51	12.57	9.34
Medium Truck	1.56	0.09	0.19
Heavy Truck	0.64	0.02	0.08

Table 3
TRAFFIC DISTRIBUTION PER TIME OF DAY IN PERCENT OF ADT FOR SR 125

VEHICLE TYPE	DAY	EVENING	NIGHT
Automobile	74.10	11.40	9.50
Medium Truck	1.95	0.30	0.25
Heavy Truck	1.95	0.30	0.25

Using the assumptions presented above, the future noise levels were computed. The results are reported here in Table 4 in terms of distances to the 60, 65, and 70 CNEL contours. These represent the distances from the centerline of the roadway to the contour value shown. Note that the values given in Table 4 do not take into account the effect of the topography that may affect the roadway noise exposure. Topographic effects are included in subsequent analyses to determine the actual noise exposure on the project site. In addition, these projections do not include any future vehicle noise reduction assumptions to take into account the effects of legislation requiring quieter vehicles in the future.

Table 4
DISTANCE TO FUTURE NOISE CONTOURS

ROADWAY	DISTANCE TO CNEL CONTOUR (FT) -70-	-65-	-60-
SR 125	453	976	2,102
East H Street	88	190	409
San Miguel Road	25	54	117

The results in Table 4 and the site plan indicate that all of the single family homes and the multi-family units in the first row along SR 125 and some of the single family homes and multi-family units along East H Street will be exposed to noise levels in excess of 65 CNEL. A worst case exterior noise exposure of 78.2 CNEL occurs in the rear yard of Lot 130 due to traffic along SR 125, and a worst case exterior noise exposure of 69.6 CNEL occurs in the rear yard of Lot 77 due to traffic along East H Street. The lots along San Miguel Road experience a worst case exterior noise exposure of 63.4 CNEL. Mitigation measures are discussed in section 5.

5.0 MITIGATION

5.1 Exterior Noise Mitigation

The grading plan shows that the primary outdoor living areas are the rear yards, patios, and second floor balconies. The results in Table 4 indicate that the outdoor living areas in the first row along

SR 125, and some of the outdoor living areas in the first row along East H Street will fall inside the future 65 CNEL contour for these roadways. Noise barriers must be provided for the outdoor living areas which lie inside the 65 CNEL contour. The FHWA Model was used to determine the necessary noise barrier heights (data provided in Appendix). The lot numbers requiring noise barriers are shown in Table 5 below.

Table 5
REQUIRED NOISE BARRIER HEIGHTS

LOT NUMBER(S)	BARRIER HEIGHT ABOVE PAD (FT)
SINGLE-FAMILY LOTS	
Lots 77-78	5.0
Lots 90-91	5.0
Lots 92-97	8.0
Lots 112-114	9.0
Lots 128-133	11.0
Lots 134-136	9.0
MULTI-FAMILY LOTS	
1st Floor Patios	
MF 6	7.0
MF 7-8	6.5
MF 9	5.0
MF 14	5.0
MF 16	5.0
2nd Floor Balconies	
MF 6	7.0
MF 7	6.5
MF 8	5.5
MF 9	5.0
MF 12	5.0
MF 14	5.0
MF 16	5.0

The multi-family lots (MF 1-5) will be exposed to unmitigatted noise levels of greater than 65 CNEL, but due to the 9 feet high parking structure separating these lots from SR-125, the noise levels at both the first floor patios and the second floor balconies of these lots will be exposed to noise levels below 65 CNEL. However, for the parking structures to act as a noise barrier for lots MF 1-5, the barrier must be continuous with no openings between the separate parking blocks. Therefore, if the openings between the parking structures are sealed with a wall of the same height as the structure and meets the requirements for noise barriers in the following paragraph, the parking structures will act as sufficient noise barrier for Lots MF 1-5.

The barriers for the single-family houses should be located at the top of slope along the edge of the roadway from Lot 27 to Lot 77 and at the top of slope along the edge of the rear yard for the rest of the lots (from Lot 77 to Lot 141) as shown in Exhibit 2. The barriers for the multi-family units should be located at the pad elevation for patio barriers and at the 2nd floor finished floor elevation for balcony barriers. The multi-family unit number identification is shown in Exhibit 3.

The noise barriers are required to have a surface density of at least 3.5 pounds per square foot, and have no openings or cracks. It may be constructed of 1/4 inch plate glass, 5/8 inch plexiglass, any masonry material, or a combination of these materials. Wood and other materials may also be acceptable if properly designed as a noise barrier.

5.2 Indoor Noise Mitigation

The proposed project must comply with the interior noise standard of 45 CNEL. To comply with the interior noise standard the buildings must provide sufficient outdoor to indoor building attenuation to reduce the noise levels down to acceptable levels. The outdoor to indoor noise reduction characteristics of a building are determined by combining the transmission loss of each of the building elements which make up the building. Each unique building element has a characteristic transmission loss. For residential units the critical building elements are the roof, walls, windows, doors, attic configuration and insulation. The total noise reduction achieved is dependent on the transmission loss of each element and the area of that element in relation to the total surface area of the room. Room absorption is the final factor used in determining the total noise reduction.

For the proposed project, a worst case noise exposure of 78.2 CNEL occurs at Lot 130 along SR 125, and a worst case noise exposure of 69.6 CNEL occurs at Lot 77 along East H Street. To meet the interior standard of 45 CNEL, the buildings along SR 125 must provide a maximum building attenuation of 33.2 dB, and the buildings along East H Street must provide a maximum building attenuation of 24.6 dB. Note that 33 dB is a significant amount requiring extraordinary windows and stucco construction. Detailed engineering calculations to demonstrate the noise reduction levels achieved by the buildings are necessary for residential building attenuation requirements of greater than 20 dB. Building upgrades will be required for the homes along SR 125 and for some of the homes along East H Street. The actual noise attenuation supplied by the buildings as well as the

building upgrades required will be calculated when architectural plans become available.

When calculating the noise reduction achieved by the buildings, windows are assumed to be closed. In order to assume that windows can remain closed to achieve this required attenuation, adequate ventilation with windows closed must be provided per Uniform Building Code. This can be achieved with mechanical ventilation to provide fresh air. The system must supply two air changes per hour to each habitable room including 20% fresh make-up air obtained directly from the outside. The fresh air inlet duct shall be of sound attenuating construction and shall consist of a minimum of ten feet of straight or curved duct, or six feet plus one sharp 90 degree bend. All the lots along SR 125, East H Street, and San Miguel Road will require mechanical ventilation. Air conditioning will fulfill this requirement.

APPENDIX

DATA USED TO DESIGN NOISE BARRIERS ALONG SR 125

Lot	Road Elevation	Distance To Wall	Base Of Wall	Dist. To Observer	Pad Elevation	Observer Height
93	526	233	534	238	534	5
95	517	230	533	235	533	5
97	507	229	532	234	532	5
112	502	179	508	184	508	5
114	488	173	508	178	508	5
128	481	125	483	130	483	5
130	471	123	483	128	483	5
134	456	150	482	155	482	5
139	460	273	481	278	481	5
141	460	405	481	410	481	5
2	577	393	619	398	619	5
4	574	272	617	277	617	5
5	571	287	615	292	615	5
6	567	237	617	242	617	5
7	564	295	618	300	618	5
8	560	398	620	403	620	5
9	556	546	620	551	620	5

DATA USED TO DESIGN NOISE BARRIERS ALONG EAST H STREET

Lot	Road Elevation	Distance To Wall	Base Of Wall	Dist. To Observer	Pad Elevation	Observer Height
92	514	112	534	117	534	5
78	525	120	550	125	550	5
77	541	88	549	93	549	5
74	543	245	546	250	546	5
29	555	183	555	188	550	5
26	562	98	562	103	547.5	5
23	568	118	568	123	545.5	5
19	578	142	578	147	544	5
9	541	388	614	393	614	5
10	546	215	613	220	613	5
11	555	258	612	263	612	5
12	563	203	610	208	610	5
13	565	237	609	242	609	5
14	572	183	608	188	608	5
15	575	224	607	229	607	5
16	581	167	605	172	605	5

APPENDIX D

PUBLIC SERVICES AND UTILITIES/CORRESPONDENCE

5510 Morehouse Drive
San Diego, California 92121
Telephone 619-458-9044
Fax 619-458-0943

ERC
Environmental
and Energy
Services Co.

89-658-E
March 24, 1989

Mr. Cliff Swanson
City of Chula Vista
Engineering Department
276 4th Street
Chula Vista, California 92010

Dear Mr. Swanson:

ERC Environmental and Energy Services Company, Inc. (ERCE), is currently preparing an Environmental Impact Report (EIR) for the Salt Creek One development. The proposed project encompasses 124.2 acres and is shown on the enclosed map. Included within the requested discretionary actions would be a General Development Plan and Sectional Planning Area (SPA) amendments via a zone change. This effectively results in a City of Chula Vista General Plan Amendment. An application is being made concurrently for a Tentative Map and Principal Plan/Site Plan approval.

The project site is incorporated in the EastLake Business Center and is currently designated for employment park uses. Important to note is that the proposed re-zone to residential uses has been discussed with the City extensively and is reflected in the Chula Vista General Plan update, currently under public review.

The proposed plan would result in approximately 550 new dwelling units. A preliminary statistical summary of the land use categories and acreages is broken down as follows:

Land Use Designation	Maximum Number of Units
Single Family Residential (low density)	181
Townhomes (medium density)	225
Condominiums (medium-high density)	144
Future Residential	*
Total Units	550

Non-residential uses:
- Park
- Open Space
- Circulation/Streets

* This area of 5.1 acres is included in project boundaries; it is being analyzed and developed as a component of Salt Creek Ranch (Salt Creek Ranch Draft EIR, under preparation).

To adequately address the proposed project's impacts to the City s sewer service, we will need your department's comments. Please indicate the extent of impact you would expect this development to have and include any additional comments or information that may be of use in preparing the EIR. Specific information regarding existing facilities lines, purchased capacity rights, amount of current capacity now used or committed and threshold standards would also be helpful.

We would appreciate receiving your response prior to April 5th. If you have any questions please call me or Karlee Nevil at 458-9044. Thank you for your time and cooperation.

Sincerely,

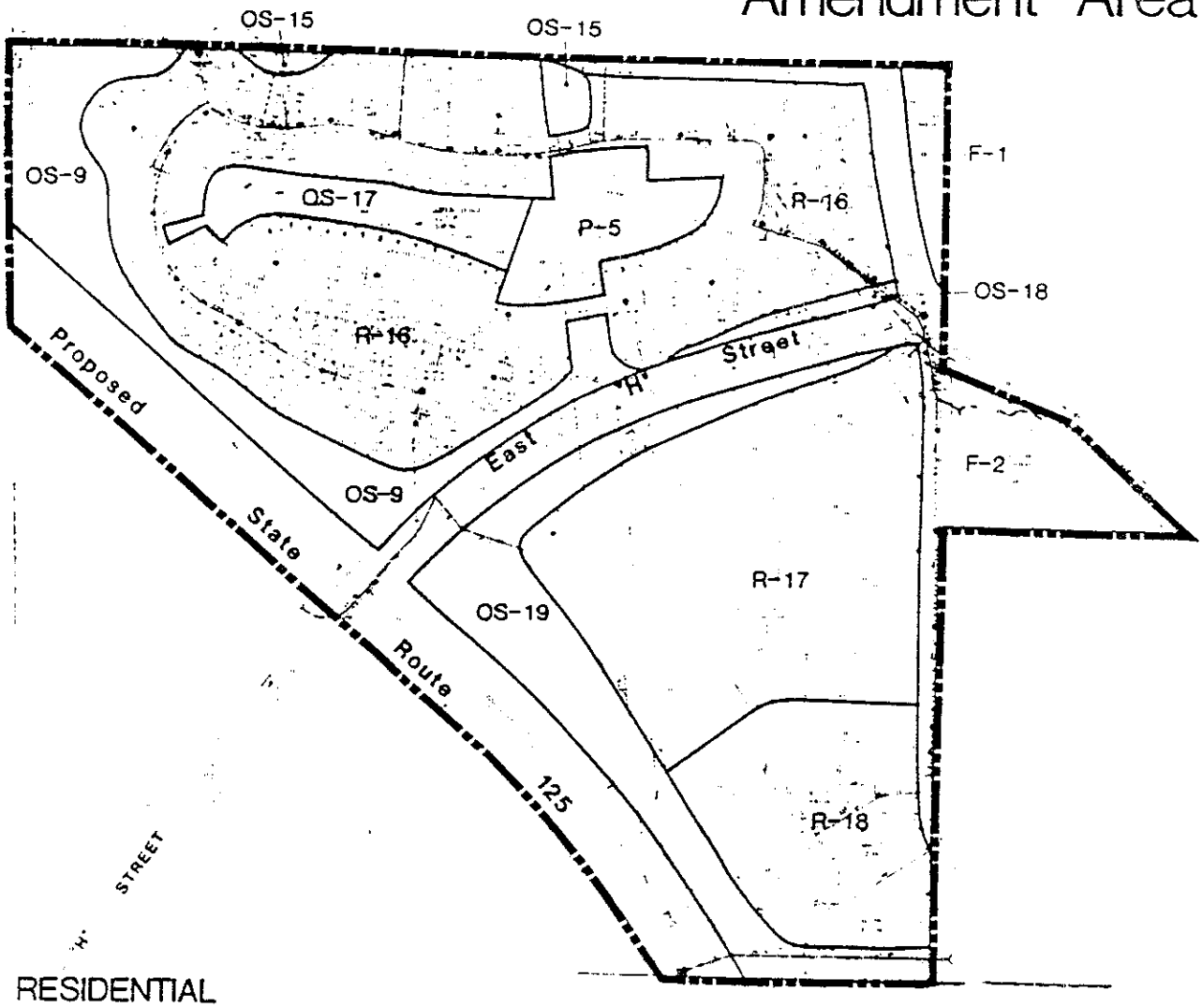
Jeanne Muñoz
Senior Project Manager

JM/dp

Enclosure

cc: John Hardesty, Permit Engineer
File #39015000

SPA PLAN
Amendment Area



RESIDENTIAL

Parcel No.	Attached (A) Detached (D)	Density Range	Acres	Target Density	DU
R-16	D	0-5	37.3	4.8	181
R-17	A	5-15	20.5	11.6	225
R-18	A	15-25	9.6	18.3	144
Total			67.4	8.2 avg.	550

OPEN SPACE/PARKS

Parcel No.	Land Use	Acres
OS-9	Open Space	8.9
OS-15	Open Space	.8
OS-17	Open Space	3.4
OS-18	Open Space	.7
OS-19	Open Space	10.2
P-5	Park	4.0
Total		28.0

FUTURE URBAN

Parcel No.	Land Use	Acres
FU-1	Future Urban	1.1
FU-2	Future Urban	4.0
Total		5.1

EASTLAKE 1

200' 800'

CITY OF
CHULA VISTA

MANAGEMENT SERVICES DEPARTMENT

April 5, 1989

Ms. Jeanne Munoz
ERC
5510 Morehouse Drive
San Diego, California 92121

RE: Fire Coverage for the Salt Creek I Development

The City of Chula Vista has currently completed a draft Fire Station Master Plan, as part of the General Plan update. The Master Plan, which is currently undergoing initial environmental review, delineates the fire station network which would serve Chula Vista's Planning Area through buildout. Additionally, the Master Plan proposes adoption of specific fire coverage guidelines for residential and commercial/industrial projects, to better facilitate implementation of the fire service threshold. A review of Salt Creek I indicates that the project would meet all of the proposed fire coverage guidelines. It is important to note that the Master Plan proposes that a fire station be located in the Salt Creek I development. This fire station would provide the primary fire coverage for both the Salt Creek I and II developments. The Master Plan is recommending that a citywide developmental impact fee be established to pay for the fire related facilities outlined in the study.

If I can be of any further assistance, please call me at 691-5296.

Sincerely,

Marty Chase
Asst. Director

CC: Carol Gove
Ken Lee
Sam Lopez

CITY OF
CHULA VISTA

PARKS AND RECREATION DEPARTMENT

April 6, 1989

Ms. Jeanne Munoz
Senior Project Manager
ERC Environmental and Energy Services Company
5510 Morehouse Drive
San Diego, CA 92121

Dear Ms. Munoz:

This letter is written in response to your letter of March 24, 1989, requesting information on impacts to parks and recreational uses from the Salt Creek One Development. Based on the information provided on the number and type of dwelling units, the Department would require the dedication of 4.68 acres. However, the Department requires a minimum size of six to seven acres for a neighborhood park. Additional comments are offered below.

1. The Department previously provided you with a copy of the park acquisition and development fee schedule and the City's parkland dedication ordinance with regard to the Salt Creek Ranch project. This information should be consulted for the current project.

2. The threshold standard of three acres per 1,000 people will be applicable for this project.

3. The SPA Plan should show the actual design of the park. This design must be approved by the Parks and Recreation Commission as well as the City Council.

4. The Department will not accept park acreage if it is located solely under SDG&E easements or has significant slopes (greater than 10%).

5. No park credit is given for dedicated open space.

6. The Department is interested in trail connections through the open space to link on-site open space, off-site open space areas as well as off-site neighborhood and community parks.

If you have any questions, or need additional information, please do not hesitate to call.

Sincerely,

Manuel A. Mollinedo, Director
Department of Parks and Recreation

MAM/scs

OTAY WATER DISTRICT
ESTABLISHED 1956
Dedicated to Community Service
10595 JAMACHA BOULEVARD, SPRING VALLEY, CALIFORNIA 92078
TELEPHONE: 670-2222 AREA CODE 619

April 26, 1989

Ms. Jeanne Munoz
Senior Project Manager
ERC Environmental and Energy Services Co.
5510 Morehouse Drive
San Diego, CA 92121

Subject: Salt Creek One Development's EIR (W.O. 1940)

Dear Ms. Munoz:

This is in response to your letter of March 24, 1989, regarding the proposed Salt Creek One Development's Environmental Impact Report. Since this property was purchased from EastLake and was part of their Business Center development, it has already been annexed into Improvement District No. 22. It is therefore entitled to water service. Additionally, water service to the EastLake Business Center had already been committed, therefore, the proposed development will not have to comply with the recently approved water allocation report for the Otay Water District. The anticipated water demand for the proposed change to residential development is not expected to exceed the capacity of the water facilities that have been constructed to serve the Business Center development for the 124.2 acres.

This development will be served through the Central Area water system's facilities. More specifically, the residential development north of East "H" Street will lie in the 710 pressure zone which will be provided service through the Central Area pump station. The portion of the development south of East "H" Street lies in the 980 pressure zone and will be served off of the EastLake pump station and the two 980 5.0 mg reservoirs. Plans are under way to build an additional two to three terminal reservoirs for a total storage capacity of 150 mg.

If you have any questions, please call Manuel Arroyo at 670-2238.

Very truly yours,

Gary E. Decker
Chief Engineer

GED/MA:cp

cc: Claudia Troisi, The Baldwin Company
Dexter Wilson, Wilson Engineering