DRAFT

Environmental Impact Report

State Clearinghouse Number: 91103064

Eastern Dublin General Plan Amendment and Specific Plan

PART I

CITY OF DUBLIN
CALIFORNIA

AUGUST 28, 1992

Wallace Roberts & Todd

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TABLE OF CONTENTS

#	CHAPTER/SECTION	PAGE
	SUMMARY	
1.0	INTRODUCTION	1-1
	1.1 Legal Basis for the EIR	1-1
	1.2 EIR Requirement	1-1
	1.3 Program EIR	1-2
	1.4 EIR Scope	1-3
	1.5 Organization of the EIR	1-4
	1.6 Review and Approval Process	1-4
	1.7 Future Environmental Analysis	1-6
2.0	PROJECT DESCRIPTION	2-1
	2.1 Project Location	2-1
	2.2 Project Site Features	2-2
	2.3 Project Components	2-4
	2.4 Project Concept	2-4
	2.5 Statement of Project Objectives	2-5
	2.6 Project Characteristics	2-5
	2.7 Interagency Use of this EIR	2-14
3.0	ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES	3-1
	Introduction	3-1
	3.1 Land Use	3.1-1
	Project Site Land Use	3.1-2
	Agriculture	3.1-8
	Previous Development and Improvement Proposals for the Project Site	3.1-5
	Land Use in the Project Site Vicinity	3.1-9
	Tri-Valley Land Use Plan and Development Projects	3.1-12
	Jurisdictional Boundaries	3.1-15
	Sphere-of-Influence	3.1-15
	Planning Areas	3.1-16
	Other Special Districts	3.1-16
	Consistency With Relevant Land Use Plans and Policies	3.1-17
	City of Dublin	3.1-17
	Other Applicable County, City and Agency Plans	3.1-19
	3.2 Population, Employment and Housing	3.2-1
	Regional Overview	3.2-1
	Dublin and the Tri-Valley Subregion	3.2-3
	Regional Housing Needs Determination	3.2-5
	Jobs/Housing Balance	3.2-9

#	CHAPTER/SECTION	PAGE
3.3	Traffic and Circulation	3.3-1
	Existing Roads	3.3-1
	Existing Traffic Operations	3.3-2
	Future Road Improvements	3.3-5
	Existing Transit	3.3-6
	Future Transit	3.3-7
	Existing Pedestrian and Bicycle Facilities	3.3-8
	Analysis Methodology	3.3-8
3.4	Community Services and Facilities	3.4-1
	Police Services	3.4-1
	Fire Protection	3.4-3
	Schools	3.4-7
	Parks and Recreation	3.4-13
	Solid Waste	3.4-19
	Electricity, Natural Gas and Telephone Service	3.4-23
	Postal Service	3.4-25
	Library Service	3.4-26
3.5	Sewer, Water and Storm Drainage	3.5-1
	Sewer	3.5-1
	Water	3.5-12
	Storm Drainage	3.5-22
3.6	Soils, Geology and Seismicity	3.6-1
	Introduction	3.6-1
	Regional Geologic Setting	3.6-1
	Regional Seismic Conditions	3.6-1
	Project Site Conditions	3.6-3
3.7	Biological Resources	3.7-1
	Regional Overview	3.7-1
	Habitat Types	3.7-1
	Special Status Species	3.7-3
	Special Status Species: Botanical	3.7-3
	Special Status Species: Wildlife	3.7-4
3.8	Visual Resources	3.8-1
	Visual Resources and CEQA	3.8-1
	Visual Character	3.8-1
	Community Identity	3.8-2
3.9	Cultural Resources	3.9-1
	Prehistoric Resources	3.9-1
	Historic Resources	3.9-2
	Archaeological Research	3.9-3
3.10	Noise	3.10-1
	Existing Noise Conditions	3.10-1

#	CHAPTER/SECTION	PAGE
3.11	Air Quality	3.11-1
	Meteorology/Climate	3.11-1
	Air Quality	3.11-2
3.12	Fiscal Considerations	3.12-1
	Operating Costs and Revenues	3.12-1
	Capital Facilities	3.12-1
4.0	**ALTERNATIVES ANALYSIS**	**4-1**
4.1	Introduction: Requirement and Purpose of Alternatives	4-1
4.2	Organization of Alternatives Analysis	4-1
4.3	Alternative 1: "No Project"	4-1
4.4	Alternative 2: Reduced Planning Area ("RPA")	4-9
4.5	Alternative 3: Reduced Land Use Intensities ("RLUI")	4-15
4.6	Alternative 4: No Development	4-19
4.7	Environmentally Superior Alternatives	4-19
4.8	Alternatives Not Selected	4-20
5.0	**CEQA-MANDATED CONSIDERATIONS**	
5.1	Cumulative Impacts	5-1
5.2	Growth-Inducing Impacts	5-14
5.3	Unavoidable Adverse Impacts	5-15
5.4	Short-Term Versus Long-Term Productivity	5-16
5.5	Significant Irreversible Changes	5-16
5.6	Impacts Found Not to be Significant	5-18
6.0	**REFERENCES**	
	Section 6.1: EIR Preparers	6.2-1
	Section 6.2: Individuals and Agencies Contacted	6.2-1
	Section 6.3: Bibliography	6.3-1

LIST OF TABLES

#	CHAPTER/SECTION		PAGE
1.0	**INTRODUCTION**		
	No Tables		
2.0	**PROJECT DESCRIPTION**		
	2.0-1:	Land Use Summary: *Eastern Dublin General Plan Amendment*	2-7
	2.0-2:	Land Use Summary: *Eastern Dublin Specific Plan*	2-8
	2.0-3:	Potentially Applicable Permits and Plans by Agency	2-16
3.0	**ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES**		
3.1	**LAND USE**		
	3.1-1:	Williamson Act: Ownership and Contract Status	3.1-4
	3.1-2:	Williamson Act: Summary of Contract Status (1992; 2000)	3.1-5
	3.1-3:	Recommended Prezoning for Land Use Designations	3.1-18
	3.1-4:	Project Consistency with City of Dublin General Plan	3.1-23
3.2	**POPULATION, HOUSING AND EMPLOYMENT**		
	3.2-1:	Regional and Tri-Valley Population Projections	3.2-1
	3.2-2:	Tri-Valley and Regional Area Households	3.2-2
	3.2-3:	Existing and Projected Employed Residents	3.2-3
	3.2-4:	Existing Housing Stock and Projected Housing Needs	3.2-6
	3.2-5:	Eastern Dublin Specific Plan: Population and Employment Generation	3.2-7
	3.2-6:	GPA Area: Population and Employment Generation	3.2-9
	3.2-7:	Existing and Projected Jobs/Housing Balance	3.2-11
3.3	**TRAFFIC AND CIRCULATION**		
	3.3-1:	Level of Service Definitions: Roadway Segments	3.3-3
	3.3-2:	1992 Existing Freeway Operations	3.3-3
	3.3-3:	Level of Service Definitions for Signalized Intersections	3.3-4
	3.3-4:	Existing Intersection Operations: P.M. Peak Hour Levels of Service and Average Vehicle Delay	3.3-5
	3.3-5:	Tri-Valley Land Uses	3.3-16
	3.3-6:	Traffic Generation Rates	3.3-13
	3.3-7:	Eastern Dublin Traffic Generation	3.3-13
	3.3-8:	Eastern Dublin Trip Distribution (2010)	3.3-16
	3.3-9:	Freeway Operations	3.3-20
	3.3-10:	P.M.Peak Hour Intersection Operations Without Mitigation Levels of Average Vehicle Delay	3.3-24

#	CHAPTER/SECTION	PAGE

3.4 COMMUNITY SERVICES AND FACILITIES

3.4-1:	Dublin Unified School District: Current Capacity and Enrollment (March 1992)	3.4-8
3.4-2:	New Student Yield	3.4-10
3.4-3:	Provision of New Schools	3.4-11
3.4-4:	City of Dublin Inventory of Park and Recreation Facilities (1992)	3.4-15
3.4-5:	Parks and Open Space Provision	3.4-17

3.5 SEWER, WATER AND STORM DRAINAGE

3.5-1:	Specific Plan Area: Estimated Water Flows	3.5-28
3.5-2:	General Plan Amendment Area: Estimated Wastewater Flows	3.5-29
3.5-3:	Summary of Zone 7's Existing Water Supplies Available to Meet Municipal and Industrial Needs	3.5-30
3.5-4:	Specific Plan Area: Estimated Water Demands	3.5-31
3.5-4:	General Plan Amendment Area: Estimated Water Demands	3.5-32

3.6 SOILS, GEOLOGY AND SEISMICITY

3.6-1:	Earthquake Parameters	3.6-3

3.7 BIOLOGICAL RESOURCES

3.7-1:	Special Status Plant Species	3.7-19
3.7-2:	Special Status Wildlife Species	3.7-20

3.8 VISUAL RESOURCES

No Tables

3.9 CULTURAL RESOURCES

No Tables

3.10 NOISE

No Tables

3.11 AIR QUALITY

3.11-1:	Project Area Ambient Air Quality Monitoring Summary (1986-1990)	3.11-7
3.11-2:	Eastern Dublin Specific Plan Mobile Source Burden	3.11-8
3.11-3:	Microscale Impact Analysis	3.11-9
3.11-4:	Eastern Dublin Stationary Source (Energy Consumption) Air Pollutant Emissions	3.11-10

3.12 FISCAL CONSIDERATIONS

No Tables

#	CHAPTER/SECTION	PAGE

4.0 ALTERNATIVES ANALYSIS

4.0-1:	Alternatives Analysis: Land Use, Population and Employment Summary	4-2
4.0-2:	Alternative 1: *No Project*	4-6
4.0-3:	Alternative 2: *Reduced Planning Area*	4-12
4.0-4:	Alternative 3: *Reduced land Use Intensities*	4-17

5.0 CEQA-MANDATED CONSIDERATIONS

No Tables

LIST OF FIGURES

CHAPTER/SECTION

1.0 **INTRODUCTION** Note: Figures are located at the end of each chapter or section.

No Figures

2.0 PROJECT DESCRIPTION

2-A: Regional Location
2-B: Subregional Location: The Tri-Valley
2-C: Project Site
2-D: Ownership Patterns
2-E: General Plan Amendment Area: Land Use
2-F: Specific Plan: Land Use

3.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

3.1 LAND USE

3.1-A: Existing Land Use: Project Site and Vicinity
3.1-B: Agricultural Suitability
3.1-C: Williamson Act Agreements
3.1-D: Airport Referral Area
3.1-E: Jurisdictional Boundaries
3.1-F: Dublin General Plan: Primary and Extended Planning Areas
3.1-G: Existing Zoning
3.1-H: Surrounding Plan Designations

3.2 POPULATION, HOUSING AND EMPLOYMENT

No Figures

3.3 TRAFFIC AND CIRCULATION

3.3-A: Existing Daily Traffic Volumes
3.3-B: Future Road Improvements
3.3-C: Existing 1992 Transit
3.3-D: Future Transit Improvements
3.3-E: Future Daily Traffic Volumes
3.3-F: Proposed Intersection Lanes

3.4 COMMUNITY SERVICES AND FACILITIES

3.4-A: Community Services
3.4-B: Park and Recreation Facilities

CHAPTER/SECTION

3.5 SEWER, WATER AND STORM DRAINAGE

3.5-A: Wastewater Treatment and Disposal
3.5-B: Conceptual Backbone Wastewater Collection System
3.5-C: Conceptual Backbone Recycled Water Distribution System
3.5-D: Conceptual Backbone Water Distribution System
3.5-E: Conceptual Backbone Storm Drainage System

3.6 SOILS, GEOLOGY AND SEISMICITY

3.6-A: Regional Geology and Fault Map
3.6-B: Regional Fault and Epicenter Map
3.6-C: Geology
3.6-D: Soil Types

3.7 BIOLOGICAL RESOURCES

3.7-A: Habitat
3.7-B: Riparian Habitat and Springs
3.7-C: Sensitive Species

3.8 VISUAL RESOURCES

3.8-A: Site Photos: Views A & B
3.8-B: Site Photos: Views C & D
3.8-C: Site Photos: Views E & F
3.8-D: Site Photos: Views G & H
3.8-E: Site Photos: Views I & J
3.8-F: Site Photos: Views K & L
3.8-G: Views from Scenic Routes: Views M & N
3.8-H: Visually Sensitive Ridgelands

3.9 CULTURAL RESOURCES

No Figures

3.10 NOISE

3.10-A: Existing Noise Contours
3.10-B: Future Noise Contours

3.11 AIR QUALITY

No Figures

3.12 FISCAL CONSIDERATIONS

No Figures

CHAPTER/SECTION

4.0 ALTERNATIVES ANALYSIS

4-A: Alternative 1: *"No Project"*
4-B: Alternative 2: *Existing Sphere-of-Influence*
4-C: Alternative 3: *Reduced* Land Use Intensities

5.0 CEQA-MANDATED CONSIDERATIONS

5-A: Subregional Land Use Planning and Development

SUMMARY

SUMMARY

This Environmental Impact Report (EIR) assesses the potential environmental effects ("*impacts*") of the *Eastern Dublin General Plan Amendment and Specific Plan* ("*the Project*") on the existing and future environment ("*the setting*") of the Eastern Dublin planning area. The EIR analyzes on-site, vicinity and community-wide impacts. The significant impacts of the proposed Project are briefly summarized on the following pages. The corresponding actions ("*mitigation measures*") recommended to diminish or eliminate these impacts are given following each impact.

The purpose of this *Summary* is to present a condensed overview of the principal environmental impacts and mitigation measures of the EIR. A more detailed analysis of these impacts and mitigation measures is given in each chapter and section of this report. For possible questions of interpretation, the reader should consult the text of the applicable chapter or section which takes precedence in authority over this *Summary*.

CHAPTER 1: INTRODUCTION

1.1 LEGAL BASIS FOR THE EIR

This EIR was prepared in conformance with the objectives of *CEQA* to inform the public and public agency decision-makers of the potential environmental effects of the *Eastern Dublin General Plan Amendment and Specific Plan* (the "Project") and to identify means of reducing or eliminating these potential impacts.

1.2 EIR REQUIREMENT

The City of Dublin, acting as the Lead Agency, conducted an Initial Study in September 1988 on the potential environmental effects of the Project and determined that the Project would have a significant effect on the environment. A subsequent Initial Study and Notice of Preparation were prepared in October 1991 in response to minor revisions to the Project description. This EIR was authorized to assess the environmental impacts identified in the two Initial Studies and to identify appropriate mitigation measures.

State Clearinghouse Number

The *Eastern Dublin General Plan Amendment and Specific Plan EIR* has been recorded with the State of California Governor's Office of Planning and Research (OPR) and has been given State Clearinghouse Number (SCH#) 91103064. All correpondence and comments regarding this Project should include this number for reference and identification purposes.

1.3 PROGRAM EIR

Because this EIR assesses the impacts of a series of actions that can be characterized as one comprehensive "project", it was determined to be most appropriately a "program EIR".

1.4 EIR SCOPE

The environmental and related issues ("scope") of the EIR were identified by the City of Dublin through its Initial Studies, responses to the Notices of Preparation ("NOP"), and public comments. The EIR addresses environmental impacts and related planning concerns in the following areas: land use; population, housing and employment; traffic and circulation; community services and facilities; public utilities; soils, geology, hydrology and seismicity; biological resources; visual resources; cultural resources; noise; air quality; and fiscal considerations.

1.5 ORGANIZATION OF THE EIR

This EIR is organized into a *Summary*, six **chapters**, and a technical *Appendix*. *Chapter 3: Setting, Impacts and Mitigation Measures*, is divided into twelve **sections**, each of which analyzes specific topical environmental concerns. *Chapter 4: Alternatives Analysis* discusses a range of alternatives to the Project, including the required "*No Project*" Alternative. *Chapter 5: CEQA-mandated Considerations* contains the mandatory discussion of different types of impacts, including cumulative impacts, and *Chapter 6: References* provides lists of EIR preparers and sources consulted for this report.

1.6 REVIEW AND APPROVAL PROCESS

For the Project to be implemented, this EIR must be certified following a public comment and response period. The City of Dublin will make *Findings* on any significant impacts identifed in the

EIR after which it can certify the Final EIR. The City may also need to make a Statement of Overriding Considerations and will have to approve a Mitigation Monitoring Program in accordance with *CEQA* requirements.

1.7 FUTURE ENVIRONMENTAL ANALYSIS

Future activities under the Project not assessed for environmental impacts may require additional environmental assessment. Prepartion of this EIR does not preclude the need for further analysis of environmental impacts.

CHAPTER 2: PROJECT DESCRIPTION

2.1 PROJECT LOCATION

Terms Used to Designate the Project Site

The EIR clarifies the terms used to designate discrete areas of the Project site.

Regional Location

The Project site is located approximately 35 miles east of the City of San Francisco in the Tri-Valley, a subregion of the San Francisco Bay Region.

Boundaries of the Project Site

The Project consists of a General Plan Amendment (GPA) for a 6,920-acre study area and a Specific Plan (SP) for 3,328 acres within the larger study area. The "Project site" refers to the entire GPA area which is bounded by I-580 to the south, the Alameda County/Contra Costa County line to the north, Parks Reserve Forces Training Center to the west, and the ridgeline between Doolan Road and Collier Canyon Road to the east. The southern, western and northern boundaries of the Specific Plan area coincide with those of the GPA. The eastern boundary of the Specific Plan area follows a stepped alignment east of Croak Road (refer to Figure 2-B.)

2.2 PROJECT SITE FEATURES

The Project site consists of a valley plain and rolling foothills. Flatter portions are cultivated; the hillsides are generally grasslands. Riparian corridors support stands of associated vegetation and isolated trees are scattered throughout the site. Rural residences are found on Tassajara Road and Doolan Road. The County property in the southwestern corner is urbanized.

Ownership

The Project site consists of 49 parcels. Five landowners own more than fifty percent of the site. Alameda County owns approximately 600 acres in the southwestern portion. Ownership is shown on Figure 2-D.

2.3 PROJECT COMPONENTS

The Project consists of an amendment to the City of Dublin General Plan (*Eastern Dublin General Plan Amendment*) and a specific plan (*Eastern Dublin Specific Plan*) for a 3,328-acre site within the General Plan Amendment area. A number of procedural steps (*Project Implementation*) required to implement the Project are also part of the Project.

2.4 PROJECT CONCEPT

The Project calls for the development of a mixed-use community in eastern Dublin that will be a vital, self-sustaining urban environment with a strong sense of identity and community. Housing and employment-generating uses will be balanced to provide residents with the opportunity to live near work. Higher density housing has been located adjacent to commercial centers and transportation corridors to encourage walking, transit-use, street activity and "neighboring." Significant portions of the Project site have been designated for new parks and open space uses to provide enhanced outdoor recreational opportunities.

Additionally, the Project sets aside principal ridgelands and riparian corridors to preserve the natural features that give the area its unique visual quality and constitute important habitat for animal and plant species.

2.5 STATEMENT OF PROJECT OBJECTIVES

In making its decision to approve or deny approval to the Project, the City of Dublin will consider how the Project fulfills the following stated objectives:

- To ensure responsible and environmentally-sensitve development in Eastern Dublin.
- To respond to community needs for housing, employment and leisure opportunities.
- To protect visually-sensitive ridgelands and biologically-sensitive habitat.
- To encourage higher density housing in more level portions of the site and discourage major alterations to distinctive hill forms.
- To encourage development patterns that support transit use and facilitate safe and efficient traffic flow.
- To maintain a jobs/housing balance in the area as a means of reducing traffic congestion and air pollution.

2.6 PROJECT CHARACTERISTICS

Land Use Development Plans

Eastern Dublin General Plan Amendment

The General Plan Amendment area encompasses 6,920 acres and constitutes the entire area referred to as the "Project site" in the EIR. Approximately one-half of the Project site (3,327.8 acres) is designated as the Specific Plan area. That portion of the Project site that lies outside the Specific Plan area is referred to in the EIR as the General Plan Amendment Increment area (3,592 acres.) Most (3290.8 acres: 91 percent) of the GPA Increment area is devoted to Residential land use with a full 62 percent (2262.9 acres) in Rural Residential use. A small portion (6.8 acres) is designated as Neighborhood Commercial and 58 acres are reserved for Industrial Park use along the I-580 corridor. The GPA Increment area adds 2.75 schools and 7.8 parks to these land uses under the Specific Plan.

Eastern Dublin Specific Plan

The Specific Plan provides a more-detailed land use concept for the 3,327.8 western portion of the General Plan Amendment area. Residential uses (1,702.6 acres) will occupy more than half the Specific Plan area with Medium-Density and Single Family housing predominating. Residential areas

are envisioned as compact "villages" with neighborhood-serving commercial and retail uses (69.7 acres) located along pedestrian-oriented streets.

At buildout, the Specific Plan is projected to provide 12,458 new housing units (70% of the Project) and Dublin's population will increase by 27,794 new residents.

The Specific Plan includes 10.928 million square feet of new commercial space and will provide an estimated 28,288 new jobs. All employment-generating land uses are located along major arterials with convenient transit access.

Seventeen new parks and 412.4 acres of Open Space will be provided by the Specific Plan. The Specific Plan includes a proposal for a 56.3-acre City Park near the Project site's center ("Town Center").

Policies

Eastern Dublin General Plan Amendment

The General Plan Amendment includes text amendments as well as a new land use map for the Eastern Dublin Planning Area (See Figure 2-E). The text amends the following elements of the *City of Dublin General Plan.*

Land Use Element: Proposed policy amendments support the development of a mixed-use community in the Eastern Extended Planning Area including commercial and employment-generating land uses.

Parks and Open Space: Specifies the need for more parks in Dublin's Primary and Extended Planning Areas and recommends conformance with the *City of Dublin Park and Recreation Master Plan of 1992.* Adds policies for acquistion and maintenance of parks and trails.

Schools, Public Lands and Utilities: Policies underscore the need to provide adequate schools in Eastern Dublin and recommend a revision in the jurisdictional boundaries of the Dublin Unified School District.

Circulation and Scenic Highways: Recommends extensive improvements to the City's roadways and circulation system with an emphasis on connections between Dublin and the Eastern Extended Planning Area and transit use.

Conservation: Policies describing the suitablity of the Eastern Extended Planning Area for agricultural use would be amended to indicate its value as an area of locally-important farmlands. Historic resource policies would be amended to recognize the potential for historic sites.

Eastern Dublin Specific Plan

The *Eastern Dublin Specific Plan* is organized into twelve chapters which define the planning concept for the Specific Plan area and the goals, policies and action programs designed to implement this concept. The seven policy chapters are: Land Use; Traffic and Circulation; Resource Management; Community Design; Community Services and Facilities; Sewer, Water and Storm Drainage; and Financing.

CHAPTER 3:

ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

This chapter forms the "core" of the environmental analysis of the EIR. Pursuant to *CEQA*, existing environmental conditions ("*the Setting*") are described from a regional and local perspective. The potential effects ("I*mpacts*") of the Project on the *Setting* are analyzed and actions designed to reduce or eliminate ("*Mitigation Measures*") are identified. Often, the *Mitigation Measures* are policies included in the *Eastern Dublin General Plan Amendment* or *Eastern Dublin Specific Plan.* In this case, the Project is considered "*self-mitigating*". In cases where no applicable *Mitigation Measure* has been included in either document, the EIR proposes an appropriate action.

Chapter 3 is divided into twelve **sections**, each of which conforms to the *Setting*, *Impacts and Mitigation Measures* format.

For organizational and reference purposes, *Impacts* are stated in **bold type** as **IM 3.3/X** with the prefix IM preceding a number (ie. 3.3) and a letter indicating the section and alphatetical order in which the impact is given in the text. *Mitigation Measures* are stated in *italics* as *MM 3.3/#* with the prefix *MM* preceding a number for the section in which the measure is found and a letter indicating the numerical order in which the measure is given.

SECTION 3.1: LAND USE

This section discusses land use impacts and land use planning concerns of the Project. The section also addresses planning issues related to jurisdictional boundaries and discusses the consistency of the Project with relevant land use plans and policies.

IMPACTS AND MITIGATION MEASURES: PROJECT SITE

IM 3.1/A Substantial Alteration to Existing Land Use

The alteration of existing land uses from primarily rural to urban uses is identified as an important planning concern of the Project but an insignificant impact, pursuant to *CEQA*.

No mitigation is required.

IM 3.1/B On-Site Project Land Use Conflicts

The land use plans for both the Specific Plan area and General Plan Amendment Area avoid abrupt transitions between potentially incompatible land uses and provide adequate buffer and open space areas. This is an insignificant impact.

No mitigation is required.

IMPACTS AND MITIGATION MEASURES: AGRICULTURE

IM 3.1/C Discontinuation of Agricultural Uses

This impact is identified as insignificant due to the high percentage of Williamson Act contracts that have been non-renewed and the limited value of non-prime soils on the Project site.

No mitigation is required.

IM 3.1/D Loss of Farmlands of Local Importance

Because the farmlands on the Project site are not classified as "prime", their loss is judged to be insignificant.

No mitigation is required.

IM 3.1/E Indirect Impacts Resulting from the Non-Renewal of Williamson Act Contracts

Non-renewal is not an environmental impact, as defined by *CEQA*.

No mitigation is required.

IMPACTS AND MITIGATION MEASURES; TRI-VALLEY NON-URBAN LANDS

IM 3.1/F Conversion of Non-Urban Lands

Areas of the Project site that adjoin non-urban lands have been designated for Open Space and Rural Residential land uses to reduce growth pressures on these lands. This is an insignificant impact.

No mitigation is required.

IMPACTS AND MITIGATION MEASURES: AJACENT LANDS

IM 3.1/G Potential Conflicts with Land Uses to the West

This is a potentially significant impact due to the possibility that the U.S. Army will increase its training activities at the Parks Reserve Forces Training Area ("Camp Parks"), located due west of the Project site.

> *MM 3.1/1.0* calls for the City of Dublin to coordinate its planning activities with the Army to achieve compatibility with adjacent land uses.

Implementation of *MM 3.1/1.0* will reduce this impact to a level of insignificance.

IM 3.1/H Potential Conflicts with Land Uses to the South

Project site land uses are compatible with existing and projected land uses to the south. This is an insignificant impact.

No mitigation is required.

IM 3.1/I Potential Conflicts with Land Uses to the East

Project site land uses are compatible with existing and projected land uses to the east. This is an insignificant impact.

No mitigation is required.

IM 3.1/J Potential Conflicts with Land Uses to the North

The presence of the new Santa Rita Rehabilitation Center to the north of the County Property is seen as more of a marketing concern than an environmental impact. This impact is, therefore, insignificant.

No mitigation is required.

JURISDICTIONAL BOUNDARIES

The Project site is affected by a number of jurisdictional, planning and service district boundaries including; city and county limits, spheres-of-influence, planning areas and special service districts.

SPHERE-OF-INFLUENCE

The Project entails an expansion of the City of Dublin sphere-of-influence to eventually encompass the entire Project site, including the Doolan Canyon Road area. This portion of the Project site lies outside the current City of Dublin sphere-of-influence and is also the subject of a City of Livermore

general plan amendment study. The Alameda County Local Agency Formation Commission has indicated that it will consider the requests of both Dublin and Livermore to annex the Doolan Canyon Road area in May 1993.

PLANNING AREAS

The Project site constitutes a plannning area. A portion of this planning area boundary overlaps with the planning area boundary established for the North Livermore General Plan Amendment area.

OTHER SPECIAL DISTRICTS

A number of special districts are current or future providers to the Project site including: Dougherty Regional Fire Authority; Dublin Unified School District; Livermore Valley Joint Unified School District; East Bay Regional Park District; Dublin San Ramon Services District; and Livermore Area Recreation and Park District. Service issues related to these districts are discussed in the applicable section of *Chapter 3*.

CONSISTENCY WITH RELEVANT LAND USE PLANS AND POLICIES

This subsection discussees the consistency of the Project with City of Dublin plans and policies such as the *General Plan* and *Zoning Ordinance*. Also discussed are the applicable plans and policies of other counties, cities and agencies.

Table 3.1-4 provides a detailed matrix of the Project's consistency with the City of *Dublin General Plan*.

SECTION 3.2:

POPULATION, HOUSING & EMPLOYMENT

This section provides the demographic, housing and employment context of the Project at the regional (Bay Area), subregional (Tri-Valley) and local (City of Dublin) level. This section does not analyze these projections in terms of potential environmental impacts which are addressed in the relevant environmental sections of *Chapter 3*.

SECTION 3.3: TRAFFIC AND CIRCULATION

Traffic and circulation conditions are evaluated under four analysis scenarios: *Existing 1992 Conditions*; *Year 2010 Without Project*; *Year 2010 With Project*; and *Cumulative Buildout With Project*. Impacts are discussed in terms of changes in daily traffic volumes, peak hour intersection operations, transit operations, and bicycle and pedestrian impacts.

IMPACTS AND MITIGATION MEASURES: DAILY TRAFFIC VOLUMES (*YEAR 2010 WITHOUT PROJECT*)

IM 3.3/A I-580 Freeway, Tassajara-Fallon

Year 2010 growth without the Project would cause freeway volumes to exceed level of service E on I-580 between Tassajara Road and Fallon Road. This is a significant cumulative impact.

Implementation of *MM 3.3/1.0* to construct auxiliary lanes would provide LOS D operations and reduce the impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: DAILY TRAFFIC VOLUMES (*YEAR 2010 WITH PROJECT*)

IM 3.3/B I-580 Freeway, I-680-Hacienda

Year 2010 growth with the Project would cause I-580 between I-680 and Hacienda Drive to exceed level of service E. This is a significant impact.

This impact is also a significant cumulative impact as discussed in *Chapter 5*.

MMs 3.3/2.0-3.3/2.1 propose participation in TSM programs and sharing of costs for regional mitigation measures. Implementation would reduce the impact, but the impact would remain significant.

IM 3.3/C I-580 Freeway, Tassajara-Fallon Airway

Year 2010 growth with the Project would cause freeway volumes to exceed level of service E on I-580 between Tassajara Road and Airway Boulevard. This is a significant impact.

This impact is also a significant cumulative impact as discussed in *Chapter 5*.

MM 3.3/3.0 calls for the construction of auxiliary lanes. Implementation of this mitigation measure would reduce the impact to a level of insignificance but LOS on the Tassajara-Fallon Road segment would remain potentially significant.

IM 3.3/D I-680 Freeway, North of I-580

Year 2010 growth with the Project would cause freeway volumes to exceed level of service E on I-680 north of the I-580 interchange. This is a significant impact.

This impact is also a significant cumulative impact as discussed in *Chapter 5*.
MM 3.3/4.0 calls for contributions to planned improvements. Implementation of this mitigation measure would reduce the impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: DAILY TRAFFIC VOLUMES *(CUMULATIVE BUILDOUT WITH PROJECT)*

IM 3.3/E Cumulative Freeway Impacts

Cumulative Buildout with the Project would cause additional freeway sections to exceed level of service E compared to Year 2010 With Project, including I-580 west of I-680 (from E to F), and I-580 east of Airway Boulevard (from E to F). This is a significant cumulative impact.

Implementation of *MM 3.3/5.0* would reduce the impact, but the impact would remain **significant** and an unavoidable adverse impact.

IMPACTS AND MITIGATION MEASURES: PEAK HOUR INTERSECTION OPERATION *(YEAR 2010 WITH PROJECT)*

IM 3.3/F Dougherty Road & Dublin Boulevard

Year 2010 development with the Project would cause level of service F operations at the intersection of Dougherty Road with Dublin Boulevard. This is a significant impact.

MM 3.3/6.0 calls for the consturction of additonal lanes on approaches to the intersection. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.3/G Hacienda Drive & I-580 Eastbound Ramps

Year 2010 development with the Project would cause level of service F operations at the intersection of Hacienda Drive with the I-580 eastbound ramps. This is a significant impact.

MM 3.3/7.0 calls for restriping. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.3/H Tassajara Road & I-580 Westbound Ramps

Year 2010 development with the Project would cause level of service F operations at the intersection of Tassajara Road with the I-580 westbound ramps. This is a significant impact.

MM 3.3/8.0 calls for the widening of I-580. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.3/I Santa Rita Road & I-580 Eastbound Ramps

Year 2010 development with the Project would cause level of service F operations at the intersection of Santa Rita Road with the I-580 eastbound ramps. This is a significant impact and an unavoidable adverse impact.

MM 3.3/9.0 calls for widening of freeway. Implementation of this mitigation measure will reduce the impact but will introduce out-of-direction travel for certain drivers, thereby resulting in a potentially significant impact.

IM 3.3/J Airway Boulevard & Dublin Boulevard

Year 2010 development with the Project would cause level of service E operations at the intersection of Airway Boulevard with Dublin Boulevard/North Canyons Parkway. This is a **significant impact**.

MM 3.3/10.0 calls for improvements to provied LOS C. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.3/K Airway Boulevard & I-580 Westbound Ramps

Year 2010 development with the Project would cause level of service F operations at the intersection of Airway Boulevard with the I-580 westbound ramps. This is a significant impact.

MM 3.3/11.0 calls for widening the Airway Boulevard overcrossing. Implementation of this mitigation measure would reduce the impact to a level of insignificance.

IM 3.3/L El Charro Road

Project traffic could introduce stops and delays for loaded trucks from the quarries on El Charro Road south of I-580. This is a potentially significant impact.

Implementation of *MM 3.3/12.0* calls for coordination with Caltrans to modify the I-580 interchange. This would reduce the impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: PEAK HOUR INTERSECTION OPERATIONS

(CUMULATIVE BUILDOUT WITH PROJECT)

IM 3.3/M Cumulative Impacts on Dublin Boulevard

Cumulative buildout with the Project would cause level of service F operations at the intersection of Hacienda Drive with Dublin Boulevard and level of service E operations at the intersection of Tassajara Road with Dublin Boulevard. This is a significant cumulative impact and an unavoidable adverse impact.

Implementation of *MM 3.3/13.0* calling for grade-separated interchanges would reduce the impact, but the impact would remain significant.

IM 3.3/N Cumulative Impacts on Tassajara Road

Cumulative Buildout with the Project would cause level of service F operations at the intersections of Tassajara Road with Fallon Road, Gleason Road and the Transit Spine. These impacts would be caused primarily by traffic from the Tassajara connection to Dougherty Valley, and full buildout of the Tassajara Valley. This is a significant cumulative impact and an unavoidable adverse impact.

Implementation of *MM 3.3/14.0* requiring the widening of Tassajara Road to six lanes would not be compatible with planned land uses, resulting in a potentially significant impact.

IMPACTS AND MITIGATION MEASURES: TRANSIT

IM 3.3/O Transit Service Extensions

The Project would introduce significant development in an area not currently served by public transit, creating the need for substantial expansion of existing transit systems. This is a significant impact.

MMs 3.3/15.0-3.3/16.3 calls for coordinating improvements to transit service with LAVTA and BART. Implementation of these mitigation measures will reduce the impacts on transit to a level of insignificance.

IMPACTS AND MITIGATIONS MEASURES: PEDESTRIANS AND BICYCLES

IM 3.3/P Street Crossings

Pedestrians and bicycles would cross major streets in eastern Dublin with high projected traffic volumes, such as Dublin Boulevard, Tassajara Road and Fallon Road, introducing potential safety hazards for pedestrians and bicyclists. This is a potentially significant impact.

MMs 3.3/16.0-3.3/16.1 call for the provision of Class I paths. Implementation of these mitigation measures will reduce the impact to a level of insignificance.

SECTION 3.4: COMMUNITY SERVICES AND FACILITIES

IMPACTS AND MITIGATION MEASURES: POLICE SERVICES

IM 3.4/A Demand for Increased Police Services

The Project will increase demand for police protection and services from the Dublin Police Department. This is a potentially significant impact on existing police services.

As mitigation to a level of insignificance, adequate budgeting for increased police services will be required.

IM 3.4/B Police Services Accessibility

The hilly topography of most of the Project site may present some accessibility and crime-prevention problems and result in potentially significant impacts.

Design standards which take safety and crime prevention into account will mitigate this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: FIRE PROTECTION SERVICES

IM 3.4/C Demand for Increased Fire Services

Buildout of the Project will substantially expand the DRFA service area and increase demand for new fire stations and firefighting personnel. This is a significant impact of the Project.

IM 3.4/D Fire Response to Outlying Areas

Based on DRFA's preliminary locations for new fire stations, the northern-most portions of the GPA increment area would be outside the District's standard response area. This would result in potential significant impacts.

IM 3.4/E Exposure to Wildfire Hazards

Settlement of population and construction of new communities in proximity to high fire hazard open space areas would pose an increasing wildfire hazard to people and property if open space areas are not maintained for fire safety. This is a significant impact of the Project.

This is also a significant cumulative impact as further discussed in *Chapter 5.0*.

The potential significant impacts relative to fire services, response time and wildfire exposure will be mitigated to a level of insignificance by measures calling for adequate fire personnel staffing, urban interface lands management practices, and design standards for development that take fire safety into account.

IMPACTS AND MITIGATION MEASURES: SCHOOLS

IM 3.4/F Demand for New Classroom Space

Buildout of the Project will increase the demand for new classroom space and school facilities. This is a significant impact.

The Project provides 9 new elementary schools, 2 new junior high schools and 1 new high school. This impact is reduced to insignificant.

IM 3.4/G Demand for Junior High Schools

Project buildout could result in potentially significant impacts on junior high school classroom capacity. Projected need is for 2.7 junior high schools and the Project provides 2 new junior high schools.

This impact is mitigated to insignificant by proposing that junior high schools be designed to accomodate the project number of junior high school students.

IM 3.4/H Overcrowding of schools

Another potential impact of the Project is the potential for overcrowding at existing schools if insufficient new classroom space is provided.

Mitigation Measures 3.4/13.0, 14.0 and 15.0 are applicable to the entire Project site and when implemented, would reduce overcrowding and school space impacts to a level of insignificance.

IM 3.4/I Impact on School Financing District Jurisdiction

Development of eastern Dublin under existing jurisdictional boundaries would result in the area being served by two different school districts and would adversely affect financing of schools. This is considered a potentially significant impact.

This issue will require resolution by the Dublin Unified School District and the Livermore Valley Joint Unified School District to reduce impacts to a level of insignificance.

IM 3.4/J Financial Burden on School Districts

The cost of providing new school facilities could adversely impact local school districts by creating an unwieldy financial burden. This is a potentially significant impact.

Mitigation will be provided by fees and appropriate funding mechanisms to reduce this impact to insignificant.

IMPACTS AND MITIGATIONS: PARK FACILITIES

IM 3.4/K Demand for Park Facilities

Without the addition of new parks and facilities, the increased demand for new park and recreation facilities resulting from buildout of the Project would create potentially significant impacts and significant cumulative impacts discussed in Section 5.1.

Mitigation measures calling for adequate funding, phasing and implemention of the *City of Dublin Park and Recreation Master Plan 1992* will reduce this impact to insignificant.

IMPACTS AND MITIGATIONS: PARK FINANCING

IM 3.4/L Park Facilities Fiscal Impact

Acquisition and improvement of new park and recreation facilities may place a financial strain on existing City of Dublin revenue sources. This is a potentially significant impact.

In-lieu fees and the provision of parklands at the time of development reduce the impact on City financial resources to a level of insignificance.

IMPACTS AND MITIGATIONS: PUBLIC ACCESS AND TRAIL SYSTEM

IM 3.4/M Impact on Regional Trail System

Development of residential and commercial areas without adequate provision of trail easements may prevent implementation of a regional trail system. This is a potentially significant impact.

The Specific Plan supports establishment of a trail system with regional connections. This impact is mitigated to a level of insignificance.

IM 3.4/N Impact on Open Space Connections

Urban development in eastern Dublin may eliminate recreational opportunities if not adequately designed and implemented. This is a potentially significant impact.

A continous open space network will be provided on the Project site. This impact is reduced to insignificant.

IMPACTS AND MITIGATIONS: SOLID WASTE

IM 3.4/O Increased Solid Waste Production

Increased population and commercial land use will cause a proportional increase in the total projected amount of solid waste and household hazardous waste generated by the City of Dublin. This is a potentially significant impact of the Project.

IM 3.4/P Impact on Solid Waste Disposal Facilities

The disposal of the projected increment of solid waste and household hazardous waste generated by the Project may accelerate the closing schedule for Altamont landfill unless additional capacity is developed or alternate disposal sites are identified. This is a potentially significant impact of the Project. It is also potentially significant cumulative impact.

Solid waste generation and solid waste disposal capacity impacts are reduced to a level of insignificance by implementation of the City's recycling and solid waste programs.

IMPACTS AND MITIGATIONS: EXTENSION OF UTILITY LINES

IM 3.4/Q Demand for Utility Extensions

Development of the Project site will significantly increase demand for gas, electric and telephone services. This is considered a significant growth-inducing impact and an unavoidable adverse impact.

Extension of utility lines are necessary if the Project is to approved and built. There is no mitigation to this impact.

IM 3.4/R Utility Extension Visual and Biological Impacts

Expansion of electrical, gas and telephone lines could result in potentially significant impacts to visual and biological resources if not appropriately sited.

Undergrounding of utilities would reduce impacts to a level of insignificance.

IM 3.4/S Consumption of Non-Renewable Natural Resources

Natural gas and electrical service would increase consumption of non-renewable natural resources. This impact is considered a significant impact of the Project and an unavoidable impact.

Despite energy-conserving design standards, the Project will still cause the consumption of non-renewable resources and therefore the residual impact of the Project is considered an unavoidable adverse impact.

IMPACTS AND MITIGATION MEASURES: POSTAL AND LIBRARY SERVICES

IM 3.4/T Demand for Increased Postal Service

The Project will increase the demand for postal service. This is a potentially significant impact.

Mitigation is provided to a level of insignificance by policies which call for a new post office in eastern Dublin.

IM 3.4/U Demand for Increased Library Service

Without additional library facilities and staff, the increase in population resulting from the project would create significant impacts on existing library service and facilities.

The Project supports adequate library service in eastern Dublin, including a new library. This impact is reduced to insignificant.

SECTION 3.5: SEWER, WATER AND STORM DRAINAGE

IMPACTS AND MITIGATION MEASURES: SERVICE PROVISION

IM 3.5/A Indirect Impacts Resulting from the Lack of a Wastewater Service Provider to the Project Site

The Project assumes annexation of the Project site to the DSRSD which will provide wastewater service. No indirect impacts resulting the lack of a wastewater service provider are identified.

No mitigation is required.

IMPACTS AND MITIGATION MEASURES: WASTEWATER COLLECTION

IM 3.5/B Lack of a Wastewater Collection System

Estimated wastewater flow for the Specific Plan area is 4.2 MGD-ADWF (See Table 3.5-1) and the estimated wastewater flow for the General Plan amendment area is 5.6 MGD (see Table 3.5-2). This will be a significant impact.

The Project provides measures for wastewater collection to this impact to insignificant.

IM 3.5/C Extension of a Sewer Trunk Line with Capacity to Serve New Developments.

Construction of a wastewater collection system could result in the development of other projects that would connect to the Project's collection system. This is a potentially significant impact.

This impact is also a potentially significant growth-inducing impact as discussed in *Chapter 5*.

The proposed wastewater system has been sized only for the Project site. This reduces impacts to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: WASTEWATER TREATMENT

IM 3.5/D Current Limited Treatment Plant Capacity.

There is a limited available treatment capacity at the DSRSD Wastewater Treatment Plant. Available export capacity limits wastewater treatment plant expansion. This is a significant impact.

A Design Level Water Investigation will be required to reduce this impact to a level of insignificance.

IM 3.5/E Future Lack of Wastewater Treatment Plant Capacity

Development of the Specific Plan and the Project will require an increase in wastewater treatment plant capacity to adequately treat the additional wastewater flows to meet discharge standards. This is a significant impact.

As mitigation, it can be shown that DSRD has the funds available to design and construct wastewater treatment plant expansions once export capacity is available which will reduce this impact to insignificant.

IM 3.5/F Increase in Energy Usage Through Increased Wastewater Treatment.

Development of the Project will result in increased wastewater flows (as shown in Tables 3.5-1 and 3.5-2) and will require increased energy use for treatment of wastewater. This is a potentially significant impact.

This impact is also a potentially significant irreversible change as discussed in *Chapter 5*.

Despite energy-conserving measures, energy use will increase and this impact will remain potentially significant.

IMPACTS AND MITIGATION MEASURES: WASTEWATER DISPOSAL

IM 3.5/G Lack of Wastewater Current Disposal Capacity.

The increase in wastewater flows through the development of the Specific Plan and the Project will require an increase in wastewater disposal.

Additional wastewater disposal can be achieved through developing additional export capacity and/or recycled water projects. Implementation of these mitigation measures will reduce this impact to insignificant.

IM 3.5/H Increase in Energy Usage Through Increased Wastewater Disposal.

Development of the Project will result in increased wastewater flows (as shown in Tables 3.5-1 and 3.5-2) and will require increased energy use for disposal of wastewater. Energy for wastewater disposal will be required for 1) pumping of raw wastewater to CCCSD for treatment under the TWA

proposed project; and/or 2) operation of an advanced treatment and distribution system for recycled water. This is potentially significant impact.

This impact is also a potentially significant irreversible change as discussed in *Chapter 5*.

Despite mitigation, energy consumption will still increase and the impact will still be potentially significant.

IM 3.5/I Potential Failure of Export Disposal System.

A failure in the operation of the proposed TWA wastewater pump stations would have serious impacts on the overall operation of the wastewater collection system for the Tri-Valley subregion as well as the eastern Dublin Project. This is a potentially significant impact.

Engineering redundancy will reduce the impact to a level of insignificance

IM 3.5/J Pump Station Noise and Odors.

The proposed TWA wastewater pump stations could generate noise during their operation and could potentially produce odors. This is potentially significant impact.

Local noise standards and odor control equipment will reduce the impact to a level of insignificance.

IM 3.5/K Storage Basin Odors and Potential Failure.

The proposed TWA Emergency Wastewater Storage Basins could potentially emit odors and/or the basins could have structural failure due to landslides, earthquakes or undermining of the reservoir from inadequate drainage. This is potentially significant impact.

Basins will be covered to reduce the impact to a level of insignificance.

IM 3.5/L Recycled Water System Operation.

The proposed recycled water system must be constructed and operated properly in order to prevent any potential contamination of or cross-connection with potable water supply systems. This is a potentially significant impact.

Distribution system will meet all applicable standards to reduce the impact to a level of insignificance.

IM 3.5/M Recycled Water Storage Failure.

Loss of storage through damage from landslide, earthquakes, and undermining of the reservoir through inadequate drainage. This is a potentially significant impact.

Reservoir construction standards will reduce the impact to a level of insignificance.

IM 3.5/N Loss of Recycled Water System Pressure.

Loss of pressures in the proposed recycled water distribution systems could result in the system being unable to meet peak irrigation demand. This is a potentially significant impact.

Emergency power generation backup will reduce the impact to insignificance.

IM 3.5/O Secondary Impacts from Recycled Watersystem Operation

Failure to identify and implement required improvements may increase salinity in the groundwater basin. This is a potentially significant impact.

Reycled water projects shall incorporate salt mitigation measures to reduce this impact is a level of insignificance.

IMPACTS AND MITIGATION MEASURES: SERVICE PROVISION

IM 3.5/P Overdraft of Local Groundwater Resources.

This is a potentially significant impact.

Coordination with DSRSD will reduce this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: WATER SUPPLY

IM 3.5/Q Increase in Demand for Water.

Estimated average day water demands for the Specific Plan Area is 5.8 MGD (see Table 3.5-4) and the estimated average water demand for the General Plan Amendment Area is 7.7 MGD (see Table 3.5-5).

Measures to reduce this impact to a level of insignificance include water conservation, water recycling, and new capital facilities improvements for Zone 7, including groundwater wells.

IMPACTS AND MITIGATION MEASURES: WATER TREATMENT

IM 3.5/R Additional Treatment Plant Capacity.

The increase in water demands through development of the Specific Plan and the Project will require an expansion of existing water treatment facilities in order to deliver safe and potable water. This is a significant impact.

Two new chlorination/fluoridation stations and other Zone 7 improvements will reduce this impact to the level of insignificance.

IMPACTS AND MITIGATION MEASURES: WATER DISTRIBUTION

IM 3.5/S Lack of a Water Distribution System.

A water distribution system is need for the Project site. This is a significant impact.

A Water System Master Plan will reflect the Project and reduce the impact to a level of insignificance.

IM 3.5/T Inducement of Substantial Growth and Concentration of Population.

The proposed water distribution system has been sized to potentially accommodate the Dougherty Valley Development to the north. This is a significant impact.

This impact is also a potentially significant growth-inducing impact as discussed in *Chapter 5*.

This impact will remain significant, despite mitigation.

IM 3.5/U Increase in Energy Usage Through Operation of the Water Distribution System.

Development of the Project will result in increased water demands requiring a water distribution system which will require additional energy, primarily for pumping of a water to the system and to storage. This is a potentially significant impact.

This impact is also a potentially significant irreversible change as discussed in *Chapter 5*.

Energy-conserving technology will partially reduce this impact; however, energy consumption will still increase and the impact will still be potentially significant.

IM 3.5/V Potential Water Storage Reservoir Failure.

Loss of storage in proposed water distribution reservoirs from landslides, earthquakes, and/or undermining of the reservoir through inadequate drainage would impact the ability of the water supply system to maintain water pressures and to meet fire flows. This is a potentially significant impact.

Reservoir construction takes safety hazards into account and will reduce the impact to a level of insignificance.

IM 3.5/W Potential Loss of System Pressure.

Loss of pressure in the proposed water distribution systems could result in contamination of the distribution system and would not allow adequate flows and pressures that are essential for fire flow conditions. This is a potentially significant impact.

All applicable pressure standards will be required to reduce the impact to a level of insignificance.

IM 3.5/X Potential Pump Station Noise.

Proposed water system pump stations would generate noise during their operation that could impact the surrounding community. This is a potentially significant impact.

Design of pump stations will reduce this impact to insignificant.

IMPACTS AND MITIGATION MEASURES: STORM DRAINAGE IMPROVEMENTS

IM 3.5/Y Potential Flooding.

Development of the Project will result in an increase in runoff to creeks and will result in an increased potential for flooding. This is a potentially significant impact.

Flood control measures and a Storm Drainage Master Plan will reduce the impact to a level of insignificance.

IM 3.5/Z Reduced Groundwater Recharge.

The Project is located in area of minimal groundwater recharge. This is a potentially significant impact.

The City will support groundwater recharge programs to reduce the impact to a level of insignificance.

IM 3.5/AA Non-Point Sources of Pollution.

Development of the Project could result in a deterioration of the quality of stormwater due to an increase in non-point sources of pollution including 1) urban runoff; 2) non-stormwater discharges to storm drains; 3) subsurface drainage; and 4) construction site runoff (erosion and sedimentation). This is a potentially significant impact.

This impact is also a potentially significant cumulative impact as discussed in *Chapter 5.0*.

The requirement to conduct a Water Quality Investigation will reduce the impact to a level of insignificance.

SECTION 3.6: SOILS, GEOLOGY AND SEISMICITY

IMPACTS AND MITIGATION MEASURES: SEISMICITY

IM 3.6/A Fault Ground Rupture

The exposure of people or structures to hazards from fault ground rupture is insignificant.

No mitigation is required.

IM 3.6/B Earthquake Ground Shaking: Primary Effects

The primary effects remain potentially significant.

IM 3.6/C Earthquake Ground Shaking: Secondary Effects

Seismically-induced landsliding, differential compaction and/or settlement are considered potentially significant.

Design and engineering standards will reduce these impacts to insignificant.

IMPACTS AND MITIGATION MEASURES: TOPOGRAPHY AND LANDFORMS

IM 3.6/D Substantial Alteration to Project Site Landforms

Permanent change to the Project site's existing topography is considered a potentially significant impact.

Grading standards that minimize cut-and-fill will reduce this impact to insignificant.

IM 3.6/E Elimination of Future Use of Project Site Aggregate Resources

This impact is considered insignificant. No mitigation is required.

IMPACTS AND MITIGATION MEASURES: DRAINAGE

IM 3.6/F Groundwater Impacts

Shallow groundwater conditions may create geotechnical hazards which are potentially significant.

IM 3.6/G Groundwater Impacts Associated with Irrigation

This is considered potentially significant.

Characterization of groundwater conditions and construction of subdrains, among other recommended improvements, will reduce IM 3.6/F and IM 3.6/G to insignificant.

IMPACTS AND MITIGATION MEASURES: GEOLOGY

IM 3.6/H Shrinking and Swelling of Expansive Soils and Bedrock

Geotechnical hazards are potentially significant.

Design and moisture-control measures will reduce this impact to insignificant.

IMPACTS AND MITIGATION MEASURES: SLOPE STABILITY

IM 3.6/I Natural Slope Stability

Geotechnical hazards are potentially significant.

Engineering for site-specific conditions can reduce this impact to insignificant.

IM 3.6/J Cut-and-Fill Slope Stability

Potentially-unstable cut-and-fill slopes may present safety hazards which are potentially significant.

Grading plans and periodic monitoring will reduce this impact to insignificant.

IMPACTS AND MITIGATION MEASURES: EROSION AND SEDIMENTATION

IM 3.6/K Erosion and Sedimentation: Construction-Related

Modification of the ground surface and vegetative cover may create potentially significant impacts.

Measures adopted during construction can reduce this impact to insignificant.

IM 3.6/L Erosion and Sedimentation: Long-Term

Long-term impacts are potentially significant.

Appropriate design and construction that takes subsurface drainage into account should reduce this impact to insignificant.

SECTION 3.7: BIOLOGICAL RESOURCES

IMPACTS AND MITIGATION MEASURES: HABITAT

IM 3.7/A Direct Habitat Loss

The Project will result in the loss, degradation, or disturbance of as much as 3,700 acres of existing vegetation. This substantial reduction of habitat and range is a potentially significant impact of the Project.

This impact is also a potentially significant cumulative impact and a significant irreversible change as discussed in *Chapter 5*.

Vegetation management will reduce this impact to a level of insignificance.

IM 3.7/B Indirect Impacts of Vegetation Removal

Construction activities on the Project site may cause dust deposition from construction activities, increased soil erosion and sedimentation, increased potential for slope failures, and alteration of surface and subsurface drainage patterns. These are potentially significant.

Revegetation measures reduce these impacts to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: RARE OR ENDANGERED PLANTS

No rare and endangered plants were documented in the GPA area; therefore, impacts to rare plant species are not anticipated and no mitigation measures are required.

IMPACTS AND MITIGATION MEASURES: BOTANICALLY SENSITIVE HABITATS

IM 3.7/C Loss or Degradation of Botanically Sensitive Habitat

The following impacts could occur to Northern Riparian Forest, Arroyo Willow Riparian Woodland, and Freshwater Marsh: Direct loss and degradation from grading, road construction, and culvert crossings. Indirect impacts could result from increased sedimentation or spoil deposition affecting stream flow patterns and damaging young seedlings and the roots of woody plants. Given the sensitive and unique nature of these habitats, pre-mitigation effects represent potentially significant impacts.

This impact is also a potentially significant cumulative impact as discussed in *Chapter 5*.

Extensive protection measures will reduce impacts to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: THREATENED AND ENDANGERED SPECIES

IM 3.7/D San Joaquin kit fox

Impacts of the Project on this species are potentially significant.

The Eastern Dublin Kit Fox Protection Plan (Appendix E) will reduce impacts to an insignificant level.

IM 3.7/E Bald eagle, peregrine falcon, and Alameda whipsnake

Potential impacts to these species are considered insignificant due to the lack of appropriate habitat on the Project site.

No mitigation measures are required.

IMPACTS AND MITIGATION MEASURES: FEDERAL CANDIDATES FOR LISTING

IM 3.7/F Red-legged frog.

The destruction and alteration of small water impoundments and stream courses on the Project site

threaten to eliminate habitat for the red-legged frog. This is considered a potentially significant impact to red-legged frog populations.

IM 3.7/G California tiger salamander.

This salamander is vulnerable to many of the same impacts as the red-legged frog. These impacts are potentially significant.

IM 3.7/H Western pond turtle.

Western pond turtles would be impacted by degradation of water courses and larger permanent water impoundments, similar to those discussed for the red-legged frog. Impacts are potentially significant.

IM 3.7/I Tri-colored blackbird

Potential destruction of riparian and freshwater habitat for this species is a potentially significant impact.

Mitigation measures which provide buffers and protect riparian habitat reduce potential impacts to red-legged frog, California tiger salamander, Western pond turtle, and tri-colored blackbird to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: CALIFORNIA SPECIES OF SPECIAL CONCERN

IM 3.7/J Golden Eagle: Destruction of Nesting Site

Construction and operation of a proposed road connecting Doolan Road to Tassajara Road could result in the loss of a golden eagle nesting site. This loss would constitute a significant impact to the pair of breeding eagles.

Nesting impacts to the golden eagle are reduced to a level of insignificance by the provision of a Golden Eagle Protection Zone.

IM 3.7/K Golden Eagle: Elimination of Foraging Habitat

The conversion of grasslands and the consequent reduction of potential prey are expected to reduce the amount and quality of foraging habitat for golden eagles. Impacts due to the reduction of foraging habitat are expected to be potentially significant.

This impact is also a potentially significant cumulative impact due to its contribution to the overall regional loss of foraging habitat for this species as discussed in *Chapter 5*.

The Project provides wide areas of undeveloped land which will reduce this impact to a level of insignificance.

IM 3.7/L Golden Eagle and Other Raptor Electrocutions

Direct mortality of golden eagles and other raptors which may perch or fly into high-voltage transmission lines is a potentially significant impact of the Project.

Undergrounding of utilities will reduce this impact to a level of insignificance.

IM 3.7/M Burrowing owl

Impacts from harassment and destruction of burrows are potentially significant.

IM 3.7/N American badger

Badgers could be directly affected by destruction of burrows, poisons, or reduce prey populations. Increased human activities could decrease badger populations. Impacts are potentially significant.

Buffer zones will be provided to reduce impacts to burrowing owls and badgers to a level of insignificance.

IM 3.7/0 Prairie falcon, northern harrier, and black-shouldered kite

Impacts due to loss of foraging habitat are potentially significant.

IM 3.7/P Sharp-shinned hawk and Cooper's hawk

Impacts due to loss of foraging habitat are considered potentially significant.

Protection and buffer zones for riparian and freshwater marsh habitats should reduce impacts to sharp-shinned hawk and Cooper's hawk to a level of insignificance.

IM 3.7/Q Short-Eared Owl

Impacts to Short-eared owl populations are considered insignificant due to the lack of appropriate habitat.

No mitigation is required.

IM 3.7/R California Horned Lizard

California horned lizard distribution is fairly extensive throughout California and therefore habitat loss anticipated in the planning area is considered to have an insignificant impact on this species.

No mitigation is required.

IMPACTS AND MITIGATION MEASURES: SPECIAL STATUS INVERTEBRATES

IM 3.7/S Special Status Invertebrates

Impacts to special status invertebrates cannot be estimated at this time and are potentially significant.

Species-specific surveys shall be conducted in appropriate riparian/wetland habitats 60 days prior to development will reduce this impact to a level of insignificance.

SECTION 3.8: VISUAL RESOURCES

IMPACTS AND MITIGATION MEASURES: VISUAL CHARACTER

IM 3.8/A Standardized "Tract" Development

Generic "cookie-cutter" development could obscure the specific natural features of the Project site

(such as its landforms, vegetation and watercourses) that make it a unique place with its own identity. This is a potentially-significant impact.

The Specific Plan calls for establishment of a visually distinctive community and reduces this impact to a level of insignificance.

IM 3.8/B Alteration of Rural/Open Space Visual Character

Urban development of the Project site will substantially alter the existing rural and open space qualities that characterize eastern Dublin. This is a potentially significant impact.

This impact is also a potentially significant irreversible change as discussed in *Chapter 5*.

Despite mitigation, this impact will remain potentially significant.

IMPACTS AND MITIGATION MEASURES: DISTINCTIVE NATURAL FEATURES

IM 3.8/C Obscuring Distinctive Natural Features

The characteristic unvegetated ("spare") landscape of the Project site heightens the visual importance of existing trees, watercourses, and other salient natural and cultural features. The Project has the potential to obscure or alter these existing features and thereby reduce the visual uniqueness of the site. This impact is potentially significant.

The Plan calls for preservation of distinctive natural features to reduce this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: HILLSIDES AND RIDGES

IM 3.8/D Alteration of Visual Quality of Hillsides

Grading and excavation of building sites in hillside areas will severely compromise the visual quality of the Project site. This is a potentially significant impact.

Sensitive grading policies reduce this impact to a level of insignificance.

IM 3.8/E Alteration of Visual Quality of Ridges

Structures built in proximity to ridges may obscure or fragment the profile of visually-sensitive ridgelines. This is a potentially significant impact.

Ridgelands protections reduce this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: VALLEY GRASSLANDS

IM 3.8/F Alteration of Visual Character of Flatlands

Commercial and residential development of the Project site's flatlands will completely alter the existing visual character resulting from valley grasses and agricultural fields. This is a potentially significant impact.

This impact is also a potentially significant irreversible change as discussed in *Chapter 5*.

No mitigation measure has been identified which can either fully or partially reduce this impact.

Development of the Project site's flatter areas is regarded as a "trade-off" measure designed to preserve slopes, hillsides and ridgelines. This impact remains potentially significant.

IMPACTS AND MITIGATION MEASURES: WATERCOURSES

IM 3.8/G Alteration of the Visual Character of Watercourses

Urban development of the Project site in proximity to watercourses may diminish or eliminate their visibility and function as distinct landscape elements. This is a potentially significant impact.

Revegetation of stream corridors and a comprehensive stream corridor restoration program will reduce this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: COMMUNITY IDENTITY

IM 3.8/H Alteration of Dublin's Visual Identity as a Freestanding City

The visual perception of Dublin and Livermore as freestanding cities will be substantially altered. This is a potentially significant impact.

Design guidelines in *Chapter 7: Community Design* will reduce this impact to a level of insignificance.

IM 3.8/I Scenic Vistas

Development on the Project site will alter the character of existing scenic vistas and may obscure important sightlines. This is a potentially significant impact.

Viewsheds will be identifed and preserved to reduce this impact to a level of insignificance.

IM 3.8/J Scenic Routes

Urban development of the Project site will significantly alter the visual experience of travelers on scenic routes in eastern Dublin. This is a potentially significant impact.

Designation of scenic routes will reduce this impact to a level of insignificance.

SECTION 3.9: CULTURAL RESOURCES

IMPACTS AND MITIGATION MEASURES: PREHISTORIC RESOURCES

IM 3.9/A Disruption or Destruction of Identified Prehistoric Resources

Due to the level of development proposed in the Project, it is assumed that all prehistoric sites identified in the 1988 inventory will be disturbed or altered in some manner. This potential disturbance is identified as a significant impact of the Project.

Protections under the guidance of a certified archaeologist will reduce this impact to a level of insignificance.

IM 3.9/B Disruption or Destruction of Unidentified Pre-Historic Resources

Previously unidentified pre-historic resources may exist on the Project site and would be subject to

potential disruption or destruction by construction and development activities associated with the Project. This is a potentially significant impact.

In-depth protections and measures will reduce this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: HISTORIC RESOURCES

IM 3.9/C Disruption or Destruction of Identified Historic Resources

Due to the level of development proposed in the Project, it is assumed that all historic sites identified in the 1988 inventory will be disturbed or altered in some manner. This potential disturbance is identified as a significant impact of the Project.

Inventories and preservation programs reduce this impact to a level of insignificance.

IM 3.9/D Disruption or Destruction of Unidentified Historic Resources

Previously unidentified historic resources may exist on the Project site and would be subject to potential disruption or destruction by construction and development activities associated with the Project. This is a potentially significant impact.

Preconstruction protection measures would reduce this impact to a level of insignificance.

SECTION 3.10: NOISE

IM 3.10/A Exposure of Proposed Housing to Future Roadway Noise

Proposed residential housing along Dublin Boulevard, Tassajara Road, Fallon Road, Hacienda Drive and Doolan Road will be exposed to future noise levels in excess of 60 dB CNEL. This is considered a significant impact.

Required acoustical studies will reduce this impact to a level of insignificance.

IM 3.10/B Exposure of Existing Residences to Future Roadway Noise

Increased traffic noise on local roads would result in noise level increases of 6 dB or more along Doolan and Fallon Roads. This would be considered a significant impact.

Impacts will be reduced to a level of potentially significant since mitigation may not be feasible at all locations due to site constraints such as driveways or proximity to roadways.

IM 3.10/C Exposure of Existing and Proposed Development to Airport Noise

The Project is located north and west of the Livermore Municipal Airport. According to the *Airport Land Use Policy Plan* for Alameda County, the future (1995) CNEL 60 contour for the airport would not extend into the Project area. Although the area would be exposed to occasional single-event noise from aircraft flyovers, average noise levels (CNEL) would not exceed Title 24 nor the City's standards. Consequently, aircraft noise would be considered an insignificant impact.

No mitigation required.

IM 3.10/D Exposure of Proposed Residential Development to Noise from Future Military

Training Activities at Parks Reserve Forces Training Area (Camp Parks RFTA) and the County Jail

Residential development on the Project site within 6000 feet of Camp Parks RFTA could be exposed to noise impacts from gunshots and helicopter overflights.[1] If development is to proceed in this area, then a detailed study should be made of the noise-generating activities and which mitigation measures should be imposed. Exposure of proposed development to noise from Camp Parks RFTA and the County Jail would therefore be considered a potentially significant impact.

This impact will remain potentially significant since mitigation of Camp Parks and jail noise may not be feasible at all locations.

IM 3.10/E Exposure of Existing and Proposed Residences to Construction Noise

Construction would occur over years on the Project site. Construction noise is considered a potentially significant impact.

A Construction Noise Management Program will reduce impacts to a level of insignificance.

IM 3.10/F Noise Conflicts due to the Adjacency of Diverse Land Uses Permitted by Plan Policies Supporting Mixed-Use Development

The presence of different land use types within the same development creates the possibility of noise impacts between adjoining uses, particularly when commercial and residential land uses abut. This is considered a potentially significant impact.

Noise management plans will reduce this impact to insignificant.

SECTION 3.11: AIR QUALITY

IMPACTS AND MITIGATION MEASURES: AMBIENT AIR QUALITY

IM 3.11/A Dust Deposition Soiling Nuisance from Construction Activity

Dust deposition soiling nuisance is a potentially significant impact near any individual construction site. Dust emissions also constitute a potentially significant cumulative impact as discussed in *Chapter 5*.

Measures adopted during the Project's construction phase will reduce project dust deposition soiling impacts to a level of insignificance but potentially significant cumulative impacts will remain.

IM 3.11/B Construction Equipment/Vehicle Emissions

Construction equipment operation constitutes a chronic source of equipment/vehicle emissions that is a potentially significant impact.

This impact is also a potentially significant cumulative impact as discussed in *Chapter 5*.

[1] Noise Element of the General Plan, Contra Costa County, 1990.

Mitigation measures that minimize construction interface with regional non-Projectc traffic movement and other emissions control measures will provide some reduction but this impact will remain potentially significant.

Because of the non-attainment status of the air basin, residual impacts will remain a potentially significant cumulative impact as discussed in *Chapter 5*.

IM 3.11/C Mobile Source Emissions: ROG or NOx

Project implementation/full buildout will cause 500,000 daily automobile trips to be generated within the air basin. This is a significant impact.

Mobile source emissions may result in regional impacts through emissions of ozone precursor pollutants. This impact is, therefore, a potentially significant cumulative impact as discussed in *Chapter 5*.

Implementation of mitigation measures will not achieve the 98% reduction in Project-related traffic needed to reduce emissions below the ozone precursor significance threshold. Residual air quality impacts will remain significant.

IM 3.11/D Mobile Source Emissions: CO

CO emissions are insignificant.

No mitigation is required.

IM 3.11/E Stationary Source Emissions

Specific Plan buildout will create emissions from a variety of miscellaneous sources which constitute a significant impact.

This impact is also a potentially significant cumulative impact as discussed in *Chapter 5*.

Implementation of mitigation measures cannot achieve the eight-fold reduction in stationary source emissions needed to meet the insignificant project threshold. Stationary source emissions air quality impacts remain significant.

SECTION 3.12: FISCAL CONSIDERATIONS

IMPACTS AND MITIGATION MEASURES: OPERATING COSTS AND REVENUES

IM 3.12/A Fiscal Impacts to the Cost/Revenue Balance of the City of Dublin Budget

Assuming at least a 25 percent share of property taxes, the fiscal analysis prepared for the Project indicates that, after shortfalls in the early years, Project-generated revenues would be more than sufficient to cover Project-generated costs. (See Table III-9 in Appendix 7 of the *Specific Plan* for more details). Therefore, the Project is expected to have an insignificant impact on the cost/revenue balance of the City's budget.

No mitigation is required.

IMPACTS AND MITIGATION MEASURES: CAPITAL FACILITIES

IM 3.12/B Fiscal Impacts related to the Cost and Provision of Project-related Infrastructure Improvements

The Project will require capital facilities improvements which could have potentially significant impacts on the City's budget if these improvements are not fully funded through sources other than City revenues from existing residents.

Implementation of new funding recommendations combined with implementation of existing City of Dublin impact fees and funding mechanisms available to developers would mitigate fiscal impacts related to provision of needed infrastructure to a level of insignificance.

No further mitigation is required.

CHAPTER 4.0: ALTERNATIVES ANALYSIS

4.1 INTRODUCTION: REQUIREMENT AND PURPOSE OF THE ALTERNATIVES

Four alternatives to the Project are analyzed: Alternative 1: "*No Project*"; Alternative 2: *Reduced Planning Area*; Alternative 3: *Reduced Land Use Intensities*; and Alternative 4: *No Development*.

4.2 ORGANIZATION OF THE ALTERNATIVES ANALYSIS

Each alternative is described and evaluated according to its chief characteristics and significant environmental impacts relative to those of the Project. A land use table (Table 4.0-1) summarizes key land use data for alternatives 1-3.

4.3 ALTERNATIVE 1: "*NO PROJECT*"

Pursuant to *CEQA*, this alternative provides a baseline condition for analysis of the Project's impacts. The "*No Project*" Alternative is not a "no development" alternative.

The most important reductions to Project impacts would be land use impacts related to alteration of existing land use conditions. Traffic and circulation impacts would be substantially reduced. Demands for sewer, water, recycled water, and storm drainage infrastructure would be substantially less than under the Project. Impacts to biological, visual, and cultural resources would be substantially reduced.

4.4 ALTERNATIVE 2: *REDUCED PLANNING AREA*

This alternative permits development in eastern Dublin within the current sphere-of-influence boundary. Some reductions to environmental impacts would result from a reduced planning area, especially impacts to the Doolan Canyon area. Traffic and circulation impacts from the Project on Tri-Valley freeways would be reduced by 10 percent. Sewer, water, recycled water and storm drainage impacts would be slightly reduced. Significantly less habitat would be lost under Alternative 2.

4.5 ALTERNATIVE 3: REDUCED LAND USE INTENSITIES

This alternative reduces land use intensities throughout the Project site by diminishing the amount of acreage devoted to large-scale commercial land uses. Residential land uses are concentrated in Single Family and Medium Density. Some improvements to traffic and circulation impacts are achieved. Alternative 3 would require sewer, water, recycled water and storm drainage improvements

similar to those in the Project. No reductions would be achieved for biological, visual, or cultural resources.

4.6 ALTERNATIVE 4: *NO DEVELOPMENT*

This alternative proposes that no development take place on the Project site.

4.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVES

This section ranks the alternatives according to each alternative's ability to achieve reductions in environmental impacts compared to the Project. In order of superiority the alternatives are: Alternative 4, Alternative 1, Alternaitve 2, and Alternative 3.

4.8 ALTERNATIVES NOT SELECTED

The alternatives not selected for discussion are: *Off-Site* Alternative, and the *Single Family* Alternative.

CHAPTER 5: *CEQA*-MANDATED CONSIDERATIONS

As part of its required contents, *CEQA* mandates that the EIR discuss the following six subjects: Cumulative Impacts; Growth-Inducing Impacts; Unavoidable Adverse Impacts; Short-Term Uses versus Long-Term Productivity; Significant Irreversible Changes; and Impacts Found Not to be Significant.

5.1 CUMULATIVE IMPACTS

Daily Traffic Volumes (*Year 2010 Without Project*)

IM 3.3/A I-580 Freeway, Tassajara-Fallon

This section of I-580 would exceed LOS E. This is a significant cumulative impact.

MM 3.3/1.0 calls for the cooperation of the City of Dublin with Caltrans' efforts to construct auxiliary lanes on I-580 between Tassajara and Fallon roads.

Implementation of this mitigation measure will reduce this impact to a level of insignificance.

Daily Traffic Volumes (*Year 2010 With Project*)

IM 3.3/B I-580 Freeway, I-680-Hacienda

This section of I-580 will exceed LOS F with the Project. This is a significant cumulative impact.

MM 3.3/2.0 and *MM 3.3/3.0* require business with 50 or more employees to participate in TSM programs and for the Project to contribute a proportionately to regional transportation mitigation measures.

Implementation of these mitigation measures will reduce this impact but not eliminate it. It will remain a significant cumulative impact.

IM 3.3/C I-580 Freeway, Tassajara-Fallon-Airway

LOS would exceed level E on this section of I-580 with the Project. This is a significant cumulative impact of the Project.

MM 3.3/3.0 calls for the Project's developers to contribute to the construction of auxiliary lanes on I-580 between Tassajara Road and Airway Boulevard.

Implementation of this mitigation measure would reduce this impact to a level of insignificance for the Fallon Road-Airway Boulevard segment. LOS on the Tassajara-Fallon segment would remain a significant cumulative impact.

IM 3.3/D I-680 Freeway, North of I-680

LOS on I-680 north of the I-580 interchange would exceed level E. This is a significant cumulative impact.

MM 3.3/4.0 calls for the Project to contribute proportionately to planned improvements at the I-580/I-680 interchange.

Implementation of this mitigation measure would achieve LOS D operations and reduce this impact to a level of insignificance.

Daily Traffic Volumes (*Cumulative Buildout With Project*)

IM 3.3/E Cumulative Freeway Impacts

Additional freeway sections would exceed LOS E under full buildout of cumulative projects including I-580 west of I-680 (from LOS E to LOS F), and I-580 east of Airway Boulevard (from LOS E to LOS F). This is a significant cumulative impact.

MM 3.3/5.0 calls for the participation of local jurisdictions in regional transportation mitigation programs.

Despite implementation of this mitigation measure, this impact would remain a significant cumulative impact.

Peak Hour Intersection Operations (*Cumulative Buildout With Project*)

IM 3.3/M Cumulative Impacts on Dublin Boulevard

At the intersection of Hacienda Drive with Dublin Boulevard, LOS would be at level F. At the intersection of Tassajara Road with Dublin Boulevard, LOS would be at level E. This is a significant cumulative impact.

MM 3.3/13.0 suggests the construction of grade-separated interchanges on Dublin Boulevard and/or establishment of alternative routes to redistribute traffic flow.

Implementation of this mitigation measure would reduce but not eliminate this impact. It would remain a significant cumulative impact.

IM 3.3/N Cumulative Impacts on Tassajara Road

LOS F operations would result at the intersections of Tassajara Road with Fallon and Gleason roads and the Transit Spine. This is a significant cumulative impact.

MM 3.3/14.0 states that buildout of non-Project-related development would require the widening of Tassajara Road to six lanes between Dublin Boulevard and the Contra Costa County line. This widening would not be compatible with the proposed land use plan.

Implementation of this mitigation measure would reduce the traffic impact. However, due to its conflict with the proposed land use plan of the Project, this impact remains a potentially significant cumulative impact.

Community Services and Facilities

Fire Protection

IM 3.4/E Exposure to Wildfire Hazards

The development of new residential development in ridgelands areas with difficult access exposes the new residential population to increased safety hazards from wildlands fires. This is a potentially significant cumulative impact.

Mitigation for this impact is provided by *MM 3.4/9.0*, *MM 3.4/10.0* and *MM 3.4/11.0* which call for project design that takes fire safety into account, buffer zones for homes which adjoin wildlands, and maintenance of buffer zones, and the integration of fire trails and fire breaks into the trail system.

Additional mitigation for this impact is provided by *MM 3.4/12.0* which calls for the preparation of a wildfire management plan.

Implementation of all of these mitigation measures will reduce this impact to a level of insignificance.

Parks and Recreation

IM 3.4/K Demand for Park Facilities

Increased population results in additional need for park and recreation facilities. The City of Dublin Recreation Department is currently unable to develop the Dougherty Hills Open Space due to a lack of sufficient financial resources. This is a potentially significant cumulative impact.

MM 3.4/24.0 requires that land be dedicated and improved or that in-lieu fees be collected for the 25 parks designated by the Project.

Mitigation for this impact is provided by MM 3.4/27.0 which requires that park development in eastern Dublin by consistent with the City of Dublin Park and Recreation Master Plan 1992. The Master Plan contains standards and phasing to ensure the adequate provision of park facilities.

Together, these two mitigation measures will ensure that adequate monies are available for park development and that park development is phased with residential development. Implementation of both of these mitigation measures will reduce this impact to a level of insignificance.

Solid Waste

IM 4.4/P Impact on Solid Waste Disposal Facilities

Solid waste generated by the Project would contribute to the cumulative demand for landfill capacity, and could accelerate the closure time for the Altamont landfill which is a regional facility handling waste from Alameda County and San Francisco County. Although the landfill operators are pursuing an expansion program which would provide 350 million cubic yards of capacity, the additional

capacity cannot be counted until all permits are granted. This is a significant cumulative impact.

MM 3.4/39.0 and *3.4/40* call for the preparation of a *Solid Waste Management Plan* for the Project and link approval for development in eastern Dublin to the availability of landfill capacity to absorb projected wastes generated by proposed development.

Implementation of both of these mitigation measures will reduce this impact to a level of insignificance.

Sewer, Water and Storm Drainage

IM 3.4/D Future Lack of Wastewater Treatment Capacity

Development of the Project will contribute to cumulative demand for treatment capacity from DSRSD.This is a potentially significant cumulative impact on these facilities.

This impact is reduced by *MM 3.5/8.0* and *3.5/9.0* which require that wastewater treatment facilities be available to meet the needs of future development in eastern Dublin and that DSRSD can construct the facilities it needs.

Implementation of both of these mitigation measures will reduce this impact to a level of insignificance.

IM 3.5/G Lack of Current Wastewater Disposal Capacity

The Project, combined with other subregional development, will result in an increase in subregional wastewater flows to the wastewater export facilities of the Tri-Valley. Until new capacity is developed, Project wastewater will continue to represent a significant adverse cumulative impact.

MM 3.5/11.0 through *MM 3.5/14.0* call for the City of Dublin to support the TWA in its current effort to implement a new wastewater export pipeline and to promote water recycling as a means of reducing wastewater flows.

Implementation of all of these mitigation measures will reduce this impact to a level of insignificance.

Water

IM 3.5/Q Increase in Demand for Water

The Project, combined with cumulative projects, will increase the overall demand for water in the Tri-Valley at a time when water supplies and deliveries are uncertain. The following discussion of water supply and potential cumulative impacts is taken from the *Western Dublin Specific Plan/General Plan Amendment Final EIR.*

Storm Drainage

IM 3.5/Y Potential Flooding

The increase of impervious surfaces associated with development on the Project site would increase the volume and rate of runoff in local creeks and watercourses, thus contributing to a potential increase in flood hazards.

IM 3.5/Z Reduced Groundwater Recharge

The Project would contribute to the increase in impervious surfaces in the Tri-Valley which could result in a reduction in groundwater recharge. This is identified as a potentially significant cumulative impact.

IM 3.5/AA Sources of Pollution

The Project would contribute to a subregional increase in non-point pollution sources, thus leading to a deterioration in the quality of runoff. This is a potentially significant cumulative impact.

Soils, Geology and Seismicity

IM 3.6/C Earthquake Ground Shaking: Secondary Effects

The Project site is located in a region subject to ground shaking from active faults. Further settlement of population in the area has the potential to expose residents to significant safety hazards and to strain the capacity of emergency response systems. This is a potential significant cumulative impact.

IM 3.6/D Substantial Alteration to Project Site Landforms

Grading and excavation will permanently alter the existing landform of the Project site. This impact will contribute to the cumulative process of landform alteration as hillsides and ridgelands of surrounding cities of the Tri-Valley are also graded and excavated for development projects. This is a significant cumulative impact as well as a significant irreversible change to the local environment.

IM 3.6/L Erosion and Sedimentation: Long Term

Grading and construction activities on the Project site will occur concurrent with development of similar sites throughout the Tri-Valley. At a subregional level, the Project will contribute to both short-term and long-term increases in erosion and sedimentation and potentially impact the hydrological conditions of subregional watercourses. This is a significant cumulative impact of the Project.

Biological Resources

IM 3.7/A Direct Habitat Loss

The Project will contribute to the ongoing process of habitat loss in the Tri-Valley region and is considered a significant cumulative impact.

IM 3.7/C Loss or Degradation of Botanically Sensitive Habitat

The continued loss and deterioration of botanically sensitive habitat.

IM 3.7/K Golden Eagle: Elimination of Foraging Habitat

The ongoing urban development of rangelands and hillsides in the Tri-Valley is contributing to the cumulative loss of foraging habitat for golden eagle and other raptors such as prairie falcon, northern harrier, and black-shouldered kite. This is a potentially significant cumulative impact.

Visual Resources

IM 3.8/B Alteration of Rural/Open space Visual Character

Development of the Project would contribute to the on-going process in which the natural rural character of the Tri-Valley is replaced with urban development.

Noise

IM 3.10/B Exposure of Existing Residences to Future Roadway Noise

The Project would contribute to cumulative traffic-related noise impacts in the region.

Air Quality

IM 3.11/A Dust Deposition Soiling Nuisance from Construction Activity

This is a potentially significant cumulative impact due to the non-attainment status of the air basin.

IM 3.11/B Construction Equipment/Vehicle Emissions

This is a potentially significant cumulative impact due to the non-attainment status of the air basin.

IM 3.11/C Mobile Source Emissions: ROG and NOx

Mobile source emission may result in regional impacts through emissions of ozone precursor pollutants. This impact is, therefore, a potentially significant cumulative impact.

IM 3.11/E Stationary Source Emissions

Stationary source emissions may create a potentially significant impact from regional electricity generation emissions, from on-site natural gas combustion, and from miscellaneous non-vehicular fuel combustion and volatile organic compound evaporative emissions. Residual impacts will be significant cumulative impacts because of the non-attainment status of the airshed.

5.2 GROWTH-INDUCING IMPACTS

Growth-inducing impacts, as defined by *CEQA Guidelines*: Section 15126 are those which could "foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the **surrounding** environment." The focus of this discussion is Project impacts that may lead to growth outside the boundaries of the Project site.

Community Services and Facilities

IM 3.4/Q Demand for Utility Extensions

Development of the Project site will require expansion of electrical and gas lines onto undeveloped lands currently in agricultural and open space land uses.

Sewer, Water and Storm Drainage

IM 3.5/C Extension of A Sewer Trunk Line with Capacity to Serve New Developments

The extension of sewer infrastructure onto the Project site may have a growth-inducing impact on adjacent undeveloped areas in Alameda County and Contra Costa County.

IM 3.5/T Inducement of Substantial Growth and Concentration of Population

The water distribution system infrastructure has been sized in anticipation of growth beyond the

Project site (particularly, the Dougherty Valley to the north) and will certainly facilitate development within the total Project site as a result.

5.3 UNAVOIDABLE ADVERSE IMPACTS

Pursuant to *CEQA*, a draft EIR must describe those significant environmental impacts for which no mitigation or only partial mitigation are feasible. While mitigation measures have been proposed for these impacts, the impact would not be reduced to an insignificant level without substantially altering the basic characteristics of the Project.

Traffic and Circulation

IM 3.3/B states that even with mitigation, LOS would exceed the significance threshold established by the City on I-580 between I-680 and Hacienda Drive. This remains an unavoidable adverse impact of the Project.

IM 3.3/E states that under the *Cumulative Buildout with Project* scenario, LOS would exceed the significance threshold established by the City. Even with mitigation, this impact remains an unavoidable adverse impact of the Project.

IM 3.3/I states that by the year 2010, development with the Project will cause LOS F operations at the intersection of Santa Rita Road with the I-580 eastbound ramps. Mitigation will reduce this impact but will create significant indirect impacts as drivers seek alternate routes to avoid the poor circulation conditions. This impact remains, therefore, an unavoidable adverse impact.

IM 3.3/M states the under the *Cumulative Buildout with Project* scenario, LOS would exceed the City's significance thresholds at two key intersections of Dublin Boulevard: Hacienda Drive and Tassajara Road. Implementation of *MM 3.3/13.0* would reduce but not eliminate this impact. It remains an unavoidable adverse impact of the Project.

The impact of the Project on level-of-service (LOS) at Tassajara Road intersections is identified as a significant cumulative impact: **IM 3.3/N**. To mitigate this LOS F, Tassajara Road would need to be widened to at least six lanes. A widening of this kind would fundamentally change the visual and physical character of the planned community. It is considered preferable to leave Tassajara Road at its current width and to accept congestion as an unavoidable adverse impact of the Project.

Community Services and Facilities

The extension of utility lines onto the Project site for gas, electric and telephone service has been identified as a significant growth-inducing impact of the Project. If the Project is to be developed, these extensions will be a necessity and are, therefore, unavoidable adverse impacts. Substantial mitigation can be achieved by *MM 3.7/26.0* which calls for the undergrounding of utilities lines. Implementation of this mitigation measure will reduce this impact to a level of insignificance.

Air Quality

Regional Ozone Emissions

Motor vehicles associated with the Project would contribute to regional ozone emissions. Given the region's existing non-compliance with air quality standards, and regulatory requirements to reduce ozone emissions, this would be a significant unavoidable adverse impact. Mitigation measures in the EIR would not reduce this impact to an insignificant level.

Noise

Increased traffic on area roadways will significantly increase noise levels, thus adversely affecting existing residences and population. Mitigation can be achieved to buffer residents from levels that exceed acceptable standards, by providing berms or walls adjacent to outdoor use spaces of existing residences. However, the magnitude of change in the noise environment, from quiet rural roads with little traffic to busy suburban thoroughfares, cannot be avoided. This is, therefore, an unavoidable adverse impact of the Project.

Visual

Development of the Project area will adversely impact the existing rural, agricultural character of the area, eliminating the sense of simplicity and openness that currently characterizes the planning area landscape. Although the highest ridgelines would be preserved as open space, the visual character of the rounded lower foothills in the foreground would be altered by construction of homes and roads. This is, therefore, an unavoidable adverse impact of the Project.

5.4 SHORT-TERM VERSUS LONG-TERM PRODUCTIVITY

The impacts discussed below are those which would narrow the range of long-term beneficial uses of the site. If the Project is approved, the City of Dublin would, by this action, foreclose other future beneficial and productive uses.

Cultural Resources

Despite archaeological surveys performed to date, it is possible that unidentified prehistoric sites may exist on the Project site.

5.5 SIGNIFICANT IRREVERSIBLE CHANGES

This discussion evaluates the Project in terms of its consumption of irretrievable natural resources. The discussion also focuses on Project land uses that will make it unlikely for future generations to reverse or remove these land use decisions.

Electricity, Natural Gas and Telephone Service

IM 3.4/S Consumption of Non-Renewable Natural Resources

The Project will increase demand for non-renewable fuel sources, including fossil fuels used in the generation of electricity, and natural gas.

Sewer, Water and Storm Drainage

IM 3.5/F Increase in Energy Usage Through Increased Wastewater Treatment

and

IM 3.5/H Increase in Energy Usage Through Increased Wastewater Disposal

Development of the Project will increase demand for non-renewable fuel sources, including fossil fuels for electricity.

IM 3.5/U Increase in Energy Usage Through Operation of the Water Distribution System

Analogously, the water distribution system required by the Project will increase demand for energy, primarily for pumping water to the system and for storage.

Geology, Soils and Seismicity

As stated in Section 5.1: *Cumulative Impacts* above, grading and excavation of the Project site will permanently change the existing physical condition of the Project site. Once the landscape is graded to create safe and stable building sites, it is highly unlikely that it will revert at some future time to its natural condition.

Biological Resources

In developed portions of the Project site, direct habitat loss (**IM 3.7/A**) will be total and permanent. This represents a significant irreversible change to those portions of the General Plan Amendment area. This loss of habitat would also cause the reduction or elimination of dependent wildlife, including some special status species.

5.6 IMPACTS FOUND NOT TO BE SIGNIFICANT

Discussed below are impacts which, although they appear significant, were determined to be insignificant.

Geology, Soils and Seismicity

IM 3.6/E Elimination of Future Use of Project Site for Aggregate Resources

The use of the Project site for urban development will preclude future extraction of aggregates.

Noise

IM 3.10/C Exposure of Existing and Proposed Development to Airport Noise

Impacts due to aircraft noise were found to be insignificant since the CNEL 60 contour does not extend upon the Project site.

Chapter 1

INTRODUCTION

1.0 INTRODUCTION

This Environmental Impact Report (EIR) assesses the potential environmental effects of the proposed Eastern Dublin General Plan Amendment and Specific Plan. As required by Section 15168 of the *Guidelines* to the *California Environmental Quality Act* (*CEQA*), this EIR evaluates the expected individual and cumulative impacts of the ultimate environmental changes resulting from development taking place in conformance with the Specific Plan and General Plan Amendment. It also identifies means of minimizing potential adverse impacts, and evaluates reasonable alternatives to the proposed project, including the required "no project" alternative.

1.1 LEGAL BASIS FOR THE EIR

In 1970, the California Legislature enacted the California Environmental Quality Act, or "*CEQA*". The statutes which comprise *CEQA* are set forth in the California Public Resources Code, Section 21000 *et seq.* To assist in implementing these statutes, the State of California has issued regulations known as the *State CEQA Guidelines* (commonly referred to as the *CEQA Guidelines* or, simply, "*Guidelines*"). The *CEQA Guidelines* are set forth in the California Code of Regulations, Section 15000 *et seq.* Under *CEQA*, all state and local agencies are required to consider the environmental impacts of any project they approve or propose to implement. The principal mechanism for such consideration is the EIR.

The EIR is primarily a public disclosure document with a number of specific objectives, including:

(1) **to inform** public agency decision-makers and the public of the environmental effects of proposed activities,

(2) to **assist** public agency decision-makers as they consider the environmental implications of their actions,

(3) **to identify** ways in which environmental damage can be avoided or significantly reduced,

(4) **to reduce or prevent** damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures, and

(5) **to disclose** to the public the reasons why a governmental agency approved a project if significant environmental effects are involved.

1.2 EIR REQUIREMENT

To determine whether a project may have a significant effect on the environment, *CEQA* requires that the public agency responsible for carrying out or approving the project (the "Lead Agency") conduct a preliminary review ("Initial Study") of potential significant environmental impacts. If the Initial Study shows that the project may indeed produce these effects, *CEQA* then requires the preparation of an EIR.

In September 1988, the City of Dublin, acting as Lead Agency, conducted an Initial Study on the Eastern Dublin General Plan Amendment and Specific Plan *(Note: For purposes of reference and environmental analysis, the General Plan Amendment and the Specific Plan broadly constitute the "Project" for which this EIR has been prepared. Refer to Section 2.3: Project Components, for further description of all Project components. Refer to Section 2.1: Project Location for a definition of terminology used to describe the Project site.)* Based on the Initial Study, the City of Dublin determined that the Project would have a significant effect on the environment and authorized preparation of this EIR. Concurrently, the City issued a Notice of Preparation ("NOP") to contact public agencies to solicit specific detail on the environmental information and concerns to be addressed in the EIR. The NOP was also sent to the State Clearinghouse in the Governor's Office of Planning and Research ("OPR") which issued an identification number (SCH# 88092014) for environmental documentation on the Project.

In October 1991, a subsequent Initial Study and Notice of Preparation were prepared in response to minor revisions to the Project description. Pursuant to *CEQA*, the revised NOP was again sent to the State Clearinghouse which issued a new identification number to the Project. This number (SCH# 91103064) should be referenced on all correspondence to agencies regarding the Project and is included, for easy reference, on the title page and cover of the EIR.

Appendix A: Agencies and Organizations Contacted by the State Clearinghouse (1988, 1991) provides a list of the agencies and organizations contacted by the two Notices of Preparation by the State Clearinghouse. Agencies marked with an asterisk are those which commented on at least one of the NOPs.

1.3 PROGRAM EIR

CEQA identifies different types of EIRs, each of which is designed to address specific situations and types of projects. This EIR is a **Program EIR.** A Program EIR (*Guidelines*: Section 15168(a)) is defined by *CEQA* as an EIR which is prepared on a series of actions that can be characterized as one large project and are related either:

- geographically,
- as logical parts in the chain of contemplated actions,
- in connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
- as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

Use of the Program EIR format enables the City of Dublin to jointly characterize the General Plan Amendment and Specific Plan as "the Project" being considered for approval and to assess the environmental impacts of both policy documents in a single EIR. Once the General Plan Amendment and Specific Plan are approved, specific development proposals for the Project site may require a **Project EIR** to assess project-specific environmental impacts. The process by which a determination is made to conduct project-specific environmental review is described in *Section 1.7: Future Environmental Analysis* below.

1.4 EIR SCOPE

The environmental and related issues addressed in the EIR were established by the Lead Agency from three sources: the initial studies prepared in 1988 and 1991; public agency responses to the notices of preparation of 1988 and 1991 (refer to *Appendix A* for a list of agencies contacted by the State Clearinghouse); and comments received during the public "scoping" sessions held in 1988.

This EIR addresses the following major environmental and related planning concerns:

(Note: All topical environmental issues are discussed in Chapter 3. The section of Chapter 3 in which this discussion is located is italicized below.)

- **Land Use.** Includes impacts on agricultural lands, open space, and compatibility of the Project with surrounding land uses and public agency plans and policies. (*Section 3.1: Land Use*)

- **Population, Housing and Employment.** Includes a discussion of planning issues related to population, employment, housing supply and affordability, within both a local and regional context. (*Section 3.2: Population, Housing, and Employment*) Specific environmental impacts resulting from the projected population increase are discussed in relevant sections of *Chapter 3.*

- **Traffic and Circulation.** Includes impacts on the regional and local road system, with an emphasis on infrastructure, capacity and levels of service; transportation and transit systems; and pedestrian and bicycle circulation. Traffic generated by activities related to construction of the Project will be addressed in this section. (*Section 3.3: Traffic and Circulation*)

- **Community Services and Facilities.** Includes impacts on the provision of police, fire, education (local schools), park/recreation, postal and library service. (*Section 3.4: Community Services and Facilities*)

- **Public Utilities.** Includes impacts on energy systems including gas, and electric; and solid waste generation and disposal (*Section 3.4*). Impacts to water supply, water quality and wastewater system capacity (including drainage and flooding) are discussed in *Section 3.5: Sewer, Water and Storm Drainage.*

- **Soils, Geology, Hydrology, Seismicity.** The discussion of potential impacts of the Project on local hydrological conditions including channel (drainage) forms, aquifer levels and quality, ground water quality and local waterways, is found in *Section 3.5.* The discussion of impacts to topography, soils, and slopes is found in *Section 3.6: Soils, Geology and Seismicity. Section 3.6* emphasizes safety concerns related to slope stability and integrity including subsidence, liquefaction, erodibility, permeability, and seismic hazards. Potential impacts to unique soil and geologic features and mineral resources are also addressed in this section.

- **Biological Resources.** Includes impacts on habitat, vegetation, and wildlife. Emphasizes potential degradation or elimination of important habitat, and impacts on listed, proposed, and candidate threatened and endangered species. Also addressed are potential impacts caused by domestic or non-native feral animals, and invasive non-native plants and wildlife. (*Section 3.7: Biological Resources*).

- **Visual Resources.** Includes impacts on visual character of the Project site and vicinity including typical and scenic views, distinctive features and scenic corridors. (*Section 3.8: Visual Resources*)

- **Cultural Resources.** Includes potential impacts on archaeological and historic resources (*Section 3.9: Cultural Resources*).

- **Noise.** Includes impacts of the Project during construction and at buildout on noise generation. (*Section 3.10: Noise*)

- **Air Quality.** Includes local and regional air quality impacts. (*Section 3.11: Air Quality*)

- **Fiscal Considerations.** Includes a discussion of the capital improvements' financing and the Project's impact on the City of Dublin's cost/revenue balance. *(Section 3.12: Fiscal Considerations)*

1.5 ORGANIZATION OF THE EIR

The EIR is organized into a **summary** section, six **chapters**, and an **appendix**. This chapter, *Chapter 1: Introduction,* describes the purpose, requirements, scope, organization and approval process of the EIR. It is preceded by a *Summary* of the EIR and its impacts. *Chapter 2: Project Description,* provides a description of the Project including site features, existing land uses, and the proposed land use plan for both the General Plan Amendment and Specific Plan areas.

Chapter 3: Environmental Setting; Impacts and Mitigation Measures, is the main body of the EIR. In this chapter, the Project is analyzed in terms of the existing environmental conditions of the site (the "Setting"), the possible significant adverse effects to the environment by the development proposal (the "Impacts"), and actions proposed to prevent or minimize these impacts ("Mitigation Measures"). To maintain clarity in its analysis of discrete environmental issues, *Chapter 3* is divided into twelve **sections**, each of which addresses a specific area of concern. Each section follows the Setting, Impacts and Mitigation Measures analysis format. As part of each section Setting discussion, the EIR discusses the relationship between the Project and applicable plans and policies of other agencies and organizations. Special attention is given to inconsistencies identified between the proposed Project and **adopted** plans and policies.

Chapter 4: Alternatives, discusses a range of alternatives to the Project, including a "*no project*" alternative, as required by *Guidelines*: Section 15126. *Chapter 5: CEQA-Mandated Considerations*, identifies various impact conclusions required by *CEQA* including cumulative impacts and unavoidable adverse impacts. In evaluating these impacts, all phases of the Project (planning, acquisition, development, and operation) are considered. In *Chapter 6: References,* a list of the EIR authors, and lists of the persons and agencies consulted in preparing the EIR are provided. This chapter includes a full bibliography of document sources. The final section of the EIR, *Appendix*, consists of appendices that provide support and technical documentation for the analysis in Part I (*Summary* and *chapters 1-6*) of the EIR. The *Appendix* is published separately as Part II of the EIR to reduce the bulk of the main analysis portion of the document.

1.6 REVIEW AND APPROVAL PROCESS

The review and approval process for the Project will involve: 1) review and approval of this EIR, and 2) review and approval of the General Plan Amendment and Specific Plan. The procedural and administrative steps to be taken for review and approval of these Project components are:

Eastern Dublin General Plan Amendment/Specific Plan EIR

- **Draft EIR (DEIR)**: This version (August 28, 1992) of the EIR is the *Eastern Dublin General Plan Amendment/Specific Plan EIR (Draft)*, or simply, Draft EIR.

- **Notice of Completion (NOC)**: Upon completion of the DEIR, the City of Dublin will file a Notice of Completion (NOC) with OPR (*CEQA*: Section 21161).

- **Public Notice/Public Review**: Concurrent with the NOC, the City will provide public notice of the availability of the DEIR for public review. The public review and comment period (to be determined by the City of Dublin) should be no less than 30 days nor longer than 90 days from the date of public notice except in unusual situations (*CEQA Guidelines*: Section 15087(c)). Public comment on the EIR will be accepted both in written form and orally at public hearings.

- **Response to Comments/Final EIR (FEIR)**: At the end of the public review period, all comments received on the DEIR from the public and agencies will be responded to in writing. The Draft EIR, the comments received during the public review period, and the City's written response to those comments will be combined to form the Final EIR.

- **Certification of the EIR**: Upon completion of the FEIR, the Dublin City Council will consider whether to certify that the Final EIR is "adequate and complete". Certification does not require that the document be exhaustive in its analysis or beyond disagreement among experts or lay persons (*CEQA Guidelines*: Section 15090). The rule of adequacy generally holds that the EIR can be certified if it shows: 1) a good faith effort at full disclosure of environmental information, and 2) provides sufficient analysis to allow decision-making regarding the Project that takes environmental consequences in account.

Eastern Dublin General Plan Amendment and *Eastern Dublin Specific Plan*

- **Public Notice/Public Review**: At the same time public notice is given for comments on the DEIR, the public and public agencies will be notified of the opportunity to comment on the General Plan Amendment and the Specific Plan . Public hearings will be held before the Dublin Planning Commission and Dublin City Council to consider these two documents during the public review period.

- **Findings**: Once the FEIR is certified, the Lead Agency can proceed towards approval of the General Plan Amendment and/or the Specific Plan. *CEQA* requires, however, the City of Dublin make "one or more written findings" for each significant impact identified in the FEIR before it "can approve or carry out a project". The findings will reflect how significant impacts will be mitigated or why mitigation measures or alternatives to the Project are infeasible (*CEQA Guidelines*: Section 15091).

- **Adoption**: After certification of the FEIR and in conjunction with its findings, the City can decide whether or how to adopt ("approve") the General Plan Amendment and Specific Plan.

- **Implementation**: Following approval of the General Plan Amendment and Specific Plan, a number of implementation tools must be drafted and approved by the City. These may include prezoning, the adoption of new ordinances covering the planning area, and specific land use approvals such as tentative maps, subdivision maps, and other land use permits. Implementation steps are considered a component of the Project (described in *Section 2.3: Project Components*) and are assessed for possible environmental impacts in *Section 3.1: Land Use; Jurisdictional Boundaries* and *Consistency with Relevant Land Use Policies and Plans.*

Required permits and approvals from other agencies with current jurisdictional authority over the Project site are described in *Section 2.7: Interagency Use of this EIR.*

1.7 FUTURE ENVIRONMENTAL ANALYSIS

The Program EIR format allows the City of Dublin to consider broad policy alternatives and mitigation measures for the Project at a stage in the planning process offering greater flexibility to address basic problems and cumulative impacts. This approach reduces, but does not necessarily eliminate, the need for future environmental analysis. Following approval of the Project, development proposed for the Project site will be reviewed by the City to determine whether it might have effects not examined in this EIR. If the proposal is found to be within the scope of this EIR, no new environmental document will be prepared. Proposed uses and projects, however, which substantially differ from the General Plan Amendment, the Specific Plan, and this EIR may exceed thresholds established by this EIR to assess environmental impacts. Such proposals would then require additional environmental review, such as a Supplemental EIR or Subsequent EIR.

The following criteria will be used to determine the necessity for and type of additional environmental analysis required for future development proposals on the Project site:

- If a proposed activity has effects that were not examined in the Program EIR, a new Initial Study would be prepared leading to either an EIR, an Addendum to the EIR, or a Negative Declaration.

- Where subsequent activities involve specific project approval at a more detailed level, the Lead Agency should use a written checklist or similar device to evaluate the site and the activity to determine whether the environmental effects of the operation were covered in the Program EIR.

- If the Lead Agency finds that, pursuant to *CEQA Guidelines*: Section 15162, no new environmental effects could occur or no new mitigation measures would be required, the agency can approve the activity as within the scope of the project covered by the Program EIR. In this case, no new environmental assessment or documentation would be required.

Chapter 2

PROJECT DESCRIPTION

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

Terms Used to Designate the Project Site

For purposes of consistency, the EIR uses the following terms to refer to discrete areas of the Project site:

- **"Planning area"** or **"Project site"** refer to the **entire** 6,920-acre General Plan Amendment area and are equivalent to and used interchangeably with the term **"General Plan Amendment area"**.

- **"Specific Plan area"** refers to the 3,328-acre western portion of the Project site.

- **"General Plan Amendment Increment area"** is used to describe the 3,592-acre eastern portion within the Project site but outside the Specific Plan area boundaries.

  (Note: The term "General Plan Amendment Increment area" is used because the EIR assesses differences in environmental impacts between the Specific Plan area and the larger General Plan Amendment area. Combined, the 3,328-acre Specific Plan area and the 3,592-acre General Plan Amendment Increment area comprise the total 6,920-acre Project site. This term will often be abbreviated as "GPA Increment area" in the text.)

- **"Eastern Dublin"** is used as a **general** reference to lands east of the current City of Dublin municipal limits. Because it is used to describe a general geographical location rather than a specific planning area, a boundary for "eastern Dublin" is not defined. The eastern Dublin area is **not** coterminous with either the boundaries of the Eastern Extended Planning Area (see below) nor with the boundaries of the General Plan Amendment area.

- **"Eastern Extended Planning Area"** is one of two Extended Planning Areas defined by the *Dublin General Plan* (see Figure 3.1-F: *Dublin General Plan, Primary and Extended Planning Areas.)* Western Extended Planning Area is located west of I-680 and is the subject of its own general plan amendment and specific plan study (*Western Dublin Specific Plan/General Plan Amendment: July 1992.*) The Eastern Dublin General Plan Amendment proposes amending the eastern boundary of the Eastern Extended Planning Area to coincide with the eastern boundary of the Project site.

  (Note: For further discussion of the relationship between the boundaries of the Eastern Extended Planning Area and the General Plan Amendment area, refer to Section 2.5: Project Characteristics; Policies; Eastern Dublin General Plan Amendment and Section 3.1: Land Use; Consistency with Relevant Land Use Plans and Policies.)

Regional Location

The regional location of the Project site is shown in Figure 2-A: *Regional Location.*

The Project site is located approximately 35 miles east of the City of San Francisco on the eastern edge of the City of Dublin. The City of Dublin lies within the Livermore-Amador Valley and is a part of a larger urbanizing area known as the Tri-Valley. The Tri-Valley is formed by the confluence of three valley basins (Livermore, Amador and San Ramon) and includes the communities of Dublin, San Ramon, Pleasanton and Livermore, and portions of Alameda and Contra Costa counties.

Regional surface access to the Project site is provided by two interstate highways. Interstate 580, which borders the Project site on the south, runs east-west linking the San Francisco Bay Area to the west with the Central Valley and Interstate 5 to the east. West of the Project site, Interstate 680 runs north-south, providing connections north to Walnut Creek and Sacramento and south to Fremont and San Jose. Direct access from Interstate 580 to the Project site is provided by three interchanges: Hacienda Drive, Tassajara/Hopyard Road and Fallon/El Charro Road.

Boundaries of the Project Site

The boundaries and subregional location of the General Plan Amendment (GPA) and Specific Plan (SP) areas are shown in Figure 2-B: *Subregional Location: The Tri-Valley.*

The boundaries of the GPA area are formed by I-580 to the south, the Alameda/Contra Costa county line to the north, the U.S. Army Parks Reserve Forces Training Area ("Camp Parks") to the west, and the ridgeline between Doolan Canyon Road and Collier Canyon Road to the east.

The boundaries of the Specific Plan area coincide with those of the GPA area on its western, northern and southern sides. On the east, the Specific Plan area boundary follows a stepped alignment beginning east of Croak Road near I-580 and then travels westward until it meets the county line at Tassajara Road.

2.2 PROJECT SITE FEATURES

Figure 2-C: *Project Site,* presents an aerial photograph of the Project site depicting major existing site features.

Topography

The Project site consists of two distinct topographic areas: a valley plain and rolling foothills. Along I-580, in the southern and southwestern portion of the site, the land is a relatively flat valley plain. The plain rises in a northeasterly direction to form gentle foothills and then, progressively steeper slopes. A series of ridgelines, trending in a general north-south direction and cut by seasonally active channels, provides topographic relief throughout the foothills area. Elevations in the foothills area range from 500 feet in the lower hills near I-580 to above 1,200 feet in the northeastern corner of the planning area. The foothills of the Project site are part of the Tassajara Hills which stretch from San Ramon to Livermore and culminate at Mount Diablo to the northeast of the Project site.

Vegetative and Hydrologic Character

The vegetation of the planning area consists primarily of open grasslands with few trees. Tassajara Creek, located along the west side of the planning area, and Cottonwood Creek near the east side are the Project site's two major perennial streams. Tassajara Creek supports substantial areas of willow-oak riparian habitat along its northern reach. Although a predominantly dry landscape, the planning

area also includes a number of springs, seeps, and isolated wetlands areas, some of which support small stands of trees and riparian vegetation. In addition, isolated stands of eucalyptus and other non-native trees mark the locations of scattered homesteads in the area where trees were planted for windbreaks and shade.

Existing Land Use

The predominant existing land use in the planning area is agriculture, consisting of cattle grazing and dry farming of grain and hay crops. Scattered single-family dwellings and agricultural outbuildings dot the rural roads which thread through the area. Some newer rural residential development is located along Tassajara Road and Doolan Road.

The largest area of urban development is situated in the southwestern portion of the site, west of Tassajara Road, and includes two abandoned facilities: the former Santa Rita Rehabilitation Center and a U.S. Naval Hospital. This area is owned by the County of Alameda Surplus Property Authority and is referred to in the EIR as the "County Property". Both facilities on the County Property will be demolished; a new Santa Rehabilitation Center has been constructed due north of its former site just outside the Specific Plan area boundary. Existing land use on the Project site is described in greater detail in *Section 3.1: Land Use* and shown in Figure 3.1-A.

Existing Road System

Interstate 580 provides direct regional access to the planning area, as described in *Section 2.1.* The majority of the local planning area roads are north-south corridors providing access from I-580. Tassajara Road, the principal north-south road, provides the sole means of through-access from the planning area north to Contra Costa County. The other north-south roads (Doolan, Fallon, and Croak roads) end within the planning area and do not connect to each other.

An east-west frontage road along I-580 extends from the western boundary of the planning area to Tassajara Road. No east-west roads currently exist to connect the planning area to the City of Dublin although an extension of Dublin Boulevard to Tassajara Road is scheduled. As of July 1992, the portion of the Dublin Boulevard Extension from Dougherty Road to the Southern Pacific railroad right-of-way was under construction. There are no east-west roads extending east from Croak Road toward Livermore. The only other east-west road of note is Gleason Drive which crosses the County Property between Tassajara Road and Arnold Road and provides access to the new Santa Rita Rehabilitation Center. East of the planning area, Collier Canyon Road connects Doolan Canyon Road to the Airway Boulevard interchange and North Canyons Parkway in Livermore.

Ownership

The ownership pattern of the planning area consists of 49 parcels and is shown in Figure 2-D: *Ownership Patterns*. Four of the parcels are more than 500 acres in size. Property lines tend to follow the section grid, modified in some cases by major streams or roadways. The smaller properties are predominantly clustered along Tassajara and Doolan Canyon roads.

Over half of the planning area is controlled by five land owners, including the Alameda County Surplus Property Authority. Large private land assemblies are located primarily along the western and eastern boundaries of the planning area. These properties include the 1,244-acre Dublin Ranch property owned by Chang Su-O-Lin, et. al.; Doolan Ranch East and West which encompass approximately 1,088 acres; Fallon Enterprises comprising about 314 acres; and the Pao-Lin property which is about 306 acres in size.

Public agencies control a substantial area (627 acres) in the southwestern portion of the planning area. The County Property encompasses 600± acres adjacent to I-580 and the East Bay Regional Park District owns or has easements for 27± acres at Tassajara Regional Park.

Most of the smaller parcels on the Project site are owned by individuals as single-family homes or ranchettes.

2.3 PROJECT COMPONENTS

The Project consists of the following components:

General Plan Amendment: Pursuant to State planning law (California Government Code: Sections 65350 *et seq*), a general plan may be amended four times each year. As part of the Project, the *Dublin General Plan*, adopted in 1985, will be amended to include text changes to general plan elements, land use designations, and policies, as well as a new general plan map for the Eastern Extended Planning Area (refer to Figure 3.1-F for boundaries of the primary and extended planning areas.) The General Plan Amendment Area Land Use Map is shown in Figure 2-E. To reflect this map, land use designations would be changed from Business Park/Industrial and Business Park/Industrial: Low Coverage for the County Property and from Agriculture/Open Space to a range of urban uses for unincorporated Alameda County lands. A detailed summary of the General Plan Amendment is given in *Section 2.6*.

Specific Plan: The authority to prepare and adopt specific plans is established under State planning law (California Government Code: Sections 65450 through 65457). A specific plan is a planning tool used to develop land use policy for a given area at a greater level of detail than the general plan. It is considered a "bridge" between general plan policy and specific land use proposals. Roughly the western half of the General Plan Amendment area has been designated as the Specific Plan area. The Specific Plan provides a framework to guide future land use and development decisions in this portion of eastern Dublin. The Specific Plan serves as an extension of the *Dublin General Plan* and can be used as both a policy and regulatory document. The Specific Plan would provide more detailed land use designations, planning policies, action programs, and regulations to supplement the *Dublin General Plan*. A detailed summary of Specific Plan policies is given in *Section 2.6*.

Project Implementation: A number of procedural steps would need to be undertaken for full implementation of the Project including adoption of the General Plan Amendment and Specific Plan (*refer to Section 1.7: Review and Approval Process*); Alameda County Local Agency Formation Commission (LAFCO) determinations on annexation to the City of Dublin and the Dublin San Ramon Services District (DSRSD), detachment from the Livermore Area Recreation and Park Department (LARPD), and sphere-of-influence boundary changes; prezoning, and review and approval of specific development projects. Agencies and approvals for implementation are described in *Section 2.7;* environmental impacts of implementation are assessed in *Section 3.1*.)

2.4 PROJECT CONCEPT

The Project proposes the development of a vital, mixed-use urban environment where people live, work, play, and interact in a manner that fosters a strong sense of community. Residential and employment-generating uses will be balanced to enable residents to live near work. Employment-generating land uses include retail, service, office, governmental, research and development ("R and D"), and light industrial. Residential designation range from Rural Residential to High Density multi-family. Higher density housing has been located close to commercial centers where the concentration

of population will contribute to that center's social and economic vitality.

The Project provides a full complement of regional office and retail land uses located near freeway interchanges, local-serving neighborhood shopping areas, and community-serving commercial centers. The community-serving commercial centers are envisioned as pedestrian- and transit-oriented mixed-use concentrations which include retail, service, office, and residential uses, and are carefully integrated with surrounding residential neighborhoods.

Open space is a major component of the Project's land use plan, giving form and character to the urban development pattern. The open space concept envisions a community ringed by undeveloped ridgelines. Urban and open space areas will be linked by an open space network structured along enhanced stream corridors. The circulation concept calls for an integrated, multi-modal system that reduces potential traffic impacts by providing area residents with choices for a preferred mode of transportation.

2.5 STATEMENT OF PROJECT OBJECTIVES

Section 15124(b) of the *CEQA Guidelines* requires that the project description contain a statement of the objectives sought by the proponent. In this case, the City of Dublin is the proponent for the General Plan Amendment and Specific Plan. The City assumed this role in 1988 in response to a number of separate development plans made for portions of the Eastern Extended Planning Area (refer to *Section 3.1: Land Use; Previous Development and Improvement Proposals for the Project Site* for a list of these proposals). To coordinate planning among these disparate proposals, the City opted (September 1988) for a comprehensive planning approach and authorized preparation of the planning studies which constitute the Project.

In determining approval of the General Plan Amendment and Specific Plan, the City of Dublin will need to consider the basic objectives of the Project, as expressed in the proposed General Plan Amendment:

- To ensure the responsible and environmentally-sensitive development of the planning area from both a local and regional perspective.
- To respond to community needs for housing, employment, and leisure opportunities.
- To preserve for key elements of the planning area's physical character by providing protections for, visually-sensitive ridgelands and biologically-sensitive habitat areas through development standards and/or incorporation into an open space system .
- To encourage higher development intensities in the more level areas of the planning area and discourage major alteration of distinctive hill forms.
- To encourage development patterns that support the use of transit on both a local and regional level, and facilitate a safe and efficient flow of traffic.
- To maintain a balance of employment and housing opportunities in the planning area in terms of both quantity and economic characteristics in order to reduce the import or export of labor that results in increased traffic congestion and air pollution.

2.6 PROJECT CHARACTERISTICS

Land Use Designations

The General Plan Amendment proposes amendments and additions to the existing land use categories of the *Dublin General Plan*. The land use categories of the General Plan Amendment and the Specific Plan are equivalent, as described below:

Residential: The General Plan Amendment includes minor text amendments for the following **existing** residential land use categories: Single Family (0.9-6.0 units/gross residential acres); Medium Density (6.1-14 units/gross residential acre); and Medium-High Density (14.1-24 units/gross residential acre). The following **new** residential land use categories have been developed as part of the General Plan Amendment: Rural Residential (1 unit/100 gross residential acres); High Density Residential (25.1± units/gross residential acre).

Commercial/Industrial: The General Plan Amendment adds to the **existing** commercial/industrial land use categories of the *Dublin General Plan* which are: Business Park/Industrial (BP/I); Business Park/Industrial:Outdoor Storage; Retail/Office; and Retail/Office & Automotive. The **new** categories are: Campus Office; Neighborhood Commercial; General Commercial; and Industrial Park.

Public/Semi-Public: The General Plan Amendment retains the Public/Semi-Public land use category which applies to public facilities such as governmental or institutional uses (libraries, public agency facilities, churches, community centers, etc.) and schools.

Parks and Open Space: The current *Dublin General Plan* has a Parks/Recreation land use category and an Open Space:Stream Corridor category. The *General Plan Amendment* retains the category of Parks/Recreation but expands it to include four new land use designations: Neighborhood Square, Neighborhood Park, Community Park and City Park. The Open Space:Stream Corridor category is simplified as Open Space and applies to areas that include slopes over 30%, stream and drainageway corridors, woodlands, visually-sensitive ridgelands, wildlife habitat areas and grazing lands.

Land Use Development Plans

General Plan Amendment

Figure 2-E illustrates generalized land use and circulation for the General Plan Amendment area. At buildout, the 6,920-acre GPA area is projected to provide approximately 17,970 new housing units and 10.6 million square feet of new commercial space. Development of the Project would increase the City of Dublin's population by an estimated 42,669 people, and increase employment by approximately 29,540 jobs. Market projections estimate that buildout of the planning area will take at least 30-40 years from the start of construction.

Table 2.0-1 summarizes land use characteristics for the General Plan Amendment area. As shown in the table, residential land uses will occupy almost three-quarters (72%) of the Project site. It is important to emphasize, however, that Rural Residential areas, which comprise more than half the residential acreage, are intended to remain primarily as open space. Roughly 11% (777 acres) of the Project site is designated for various commercial uses, including General Commercial, Neighborhood Commercial, Campus Office and Industrial Park. Another 4% (291 acres) is designated for Public/Semi-Public uses of which 192 acres are reserved for twelve school sites. The proposed schools include 9 elementary schools, 2 junior high schools, and one high school. Twenty-five parks, comprising 287 acres, are also designated within the GPA area, and another 571 acres are designated as Open Space.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
PROJECT DESCRIPTION
Table 2.0-1
GENERAL PLAN AMENDMENT AREA: LAND USE SUMMARY

Land Use Designation	Acres	Intensity	Units	Factor	Yield
RESIDENTIAL		**Du's/acre**	**Du's**	**Persons/du**	**Population**
High Density	69.9	35	2,447	2.0	4,894
Medium-High Density	135.6	20	2,712	2.0	5,424
Medium Density	720.3	10	7,203	2.0	14,406
Single Family	1,395.3	4	5,581	3.2	17,859
Rural Residential	2,672.3	.01	27	3.2	86
TOTAL:	**4,993.4**		**17,970**		**42,669**
COMMERCIAL		**Floor Area Ratio (Gross)**	**Square Feet (millions)**	**Sq. Ft/ Employee**	**Jobs**
General Commercial	293.3	.35/.25	3.479	510	6,822
Neighborhood Commercial	76.5	.35/.30	1.069	490	2,182
Campus Office	216.9	.75/.35	3.952	260	15,200
Industrial Park	190.5	.25	2.075	590	3,516
TOTAL:	**777.2**		**10.575**		**27,720**
PARKS					
City Park	56.3		1 park		
Community Park	126.7		2 parks		
Neighborhood Park	88.4		14 parks		
Neighborhood Square	15.8		8 parks		
TOTAL:	**287.2**		**25 parks**		
OPEN SPACE	**571.1**		--		
PUBLIC/SEMI-PUBLIC					
Public/Semi-Public	98.6	.25	1.074	590	1,820
Schools					
Elementary School	97.1		9 schools		
Junior High School	40.0		2 schools		
High School	55.3		1 school		
Subtotal:	**192.4**		**12 schools**		
TOTAL:	**291.0**				
GRAND TOTAL:	**6,919.9**				

Specific Plan

Figure 2-F illustrates proposed land uses for the Specific Plan area. The Specific Plan area is the 3,228-acre western portion of the General Plan Amendment area. Appropriately, the Specific Plan provides a more-detailed land use development concept for eastern Dublin than that provided in the current *General Plan* or proposed General Plan Amendment. At buildout, the Specific Plan area is projected to provide 12,448 new housing units (70% of the Project) and 10.9 million square feet (94% of the Project) of new commercial space (includes Public/Semi-Public uses). The Specific Plan will add 27,794 new residents and 28,288 new jobs to the City (refer to Tables 3.2-5 and 3.2-7.)

The distribution of land uses proposed under the Specific Plan is given in Table 2.0-2. Residential uses (1,702.6 acres) will occupy more than half the Specific Plan area with Medium Density and low density (Single Family and Rural Residential) housing predominating. Residential areas are envisioned as compact "villages" with neighborhood-serving commercial and retail uses (69.7 acres) located along pedestrian-oriented streets. The Specific Plan also emphasizes employment-generating uses in proximity to residential areas: 741.3 acres General Commercial, Campus Office, Industrial Park, and Public/Semi-Public uses are designated. All employment-generating commercial uses are located along major arterials with convenient transit access. The Specific Plan sets aside 13 percent of its site (653.9 acres) for Parks and Open Space uses, including 56.3 acres devoted to a new City Park adjacent to Tassajara Creek near the proposed Town Center.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
PROJECT DESCRIPTION
Table 2.0-2
EASTERN DUBLIN SPECIFIC PLAN: LAND USE SUMMARY

Land Use Designation	Acres	Intensity	Yield
COMMERCIAL/INDUSTRIAL			
General Commercial	65.4 acres	0.35 FAR	.997 MSF
	227.9 acres	0.25 FAR	2.482 MSF
Subtotal	**293.3 acres**	--	**3.479 MSF**
Neighborhood Commercial	31.7 acres	0.35 FAR	0.483 MSF
	38.0 acres	0.30 FAR	0.497 MSF
Subtotal	**69.7 acres**	--	**.980 MSF**
Campus Office	179.9 acres	0.35 FAR	2.743 MSF
	37.0 acres	0.75 FAR	1.209 MSF
Subtotal	**216.9 acres**	--	**3.952 MSF**
Industrial Park	132.5 acres	0.25 FAR	1.443 MSF
SUBTOTAL	**712.4 acres**	--	**9.854 MSF**
RESIDENTIAL			
High Density	69.9 acres	35 du/ac	2,447 du
Medium-High Density	135.6 acres	20 du/ac	2,712 du
Medium Density	489.1 acres	10 du/ac	4,891 du

Single Family	598.6 acres	4 du/ac	2,394 du
Rural Residential	409.4 acres	.01 du/ac	4 du
SUBTOTAL	**1,702.6 acres**	--	**12,448 du**
PUBLIC/SEMI-PUBLIC			
Public/Semi-Public	98.6 acres	0.24 FAR	1.074 MSF
SUBTOTAL	**98.6 acres**	--	**1.074 MSF**
SCHOOLS			
Elementary School	69.1 acres	--	6.5 schools**
Junior High School	35.9 acres	--	1.75 schools**
High School	55.3 acres	--	1 school
SUBTOTAL	**160.3 acres**	--	**9.25 schools**
PARKS AND OPEN SPACE			
City Park	56.3 acres	--	1 park
Community Park	126.7 acres	--	2 parks
Neighborhood Park	45.2 acres	--	7 parks
Neighborhood Square	13.3 acres	--	7 parks
Subtotal	**241.5 acres**	--	**17 parks**
Open Space	412.4 acres	--	--
SUBTOTAL	**653.9 acres**	--	**17 parks**
TOTAL LAND AREA	**3,327.8 acres**		

Partial school sites represent sites that lie partially outside the Specific Plan area, but within the Eastern Dublin General Plan Amendment area.

(Note: Re: Table 2.0-1 and Table 2.0-2: The development intensities used to estimate Project buildout are close to an average in each land use intensity range. For the EIR, maximum development intensities permitted for each land use category were not assumed because these intensities are based on gross acreage. Once infrastructure and specific development standards are accommodated, net acreage reduces the development intensity to a level that more closely approximates an average.)

Policies

General Plan Amendment

The General Plan Amendment includes text amendments as well as a new land use map for the 6,900-acre portion of the proposed amended Eastern Extended Planning area that lies east of Camp Parks

(Figure 2-E). *Amendment 1.4: Primary Planning Area and Extended Planning Area* (p.5) amends the boundary of the Eastern Extended Planning area by expanding it eastward to include the total General Plan Amendment area. (See Figure 3.1-F for the amended boundary.)

The following is a brief summary of the changes proposed by the General Plan Amendment. Complete copies of both the *1985 Dublin General Plan* and the *1992 Eastern Dublin General Plan Amendment* are available for review at the Dublin Planning Department.

Background: The text would be amended to add various references to the Eastern Extended Planning area and to describe the land use concept for this area. The existing General Plan land use classifications would be amended to reflect proposed land use designations in the Eastern Extended Planning Area.

Land Use Element: Proposed text amendments describe buildout characteristics of the Eastern Extended Planning Area including the number of housing units, residents, and jobs gained by the City. Policy amendments express the City's support for development of a mixed-use community in the Eastern Extended Planning Area and clarify the role of the *Specific Plan* as a tool to achieve this objective. Proposed amendments in the *Subsection 2.2: Commercial and Industrial Land Use* require that commercial and employment-generating uses be consistent with policies and guidelines set forth in applicable specific plans developed for the Eastern Extended Planning Area.

Parks and Open Space: Text amendments would encourage higher intensity development of flat and gently sloping areas as a means of minimizing grading of steeper slope areas. In addition, Agricultural Open Space policy would express the City's support of agriculture in the Eastern Extended Planning Area as long as landowners wish to continue pursuing these activities. *Amendment 3.2 (Eastern Dublin General Plan Amendment,* p. 19) states that the City "generally does not support the cancellation of Williamson Act contracts, unless some compelling public interest would be served." Amendments to policies relating to Open Space for Outdoor Recreation would specify the general need for more park space in Dublin's primary and extended planning areas, and recommend that this park space be maintained and improved in conformance with the *City of Dublin Park and Recreation Master Plan 1992.* Specific policies relating to the acquisition, improvement, and maintenance of parks and trails in the Eastern Extended Planning Area would be added.

Schools, Public Lands and Utilities: Policy amendments would require that adequate schools be provided for eastern Dublin school children, and encourage a revision in current district boundaries so that all Dublin school children attend Dublin Unified School District (DUSD) schools.

Circulation and Scenic Highways: Policy amendments would support extensive improvements to the City's roadways and circulation system with an emphasis on 1) establishing connections between Dublin and the Eastern Extended Planning Area and 2) non-automobile transportation alternatives. Higher density residential and mixed-use development would be encouraged near major transit lines and transfer points to promote public transit use. Scenic route policy amendments would support the designation of Fallon Road as a scenic route and recommend that the City exercise its design review powers for all proposed development visible from a designated scenic route.

Conservation: The description of the agricultural suitability of the Eastern Extended Planning Area would be amended to indicate its value as an area of local importance, and historic resource policies would be amended to recognize the potential for historic sites in the Eastern Extended Planning Area.

Specific Plan

The Specific Plan is organized into twelve chapters, which define the planning concept for the Specific Plan area and the goals, policies and action programs that support this concept. A brief summary of the Specific Plan is presented on the next pages. For the complete text, copies of the

Specific Plan can be obtained from the Dublin Planning Department.

Land Use: The Specific Plan calls for a balanced mixed-use community that includes a broad range of residential, employment, retail, service, and recreation uses. Residential uses will comprise approximately 40% of the 3,228-acre land area, non-residential development approximately 30%, and parks, open space, and rural uses the other 30%. The Specific Plan Land Use Map (Figure 2-F) shows the types and distribution of land uses planned for the Specific Plan area. Table 2.0-2 summarizes the land use program and development potential for the Specific Plan area. Projected population and employment generation are summarized in Table 3.2-5.

Residential Land Use: The Specific Plan policies encourage the provision of a wide range of housing options to meet the economic, physical, and social needs of a diverse community, the location of higher density housing near transit and major activity centers, and the inclusion of housing as a component of mixed-use projects. Providing affordable housing for both renters and owners is emphasized as an important community goal, with such housing being distributed throughout the Specific Plan planning area.

Commercial Land Use: The Specific Plan calls for the development of a hierarchy of discrete commercial areas. The Specific Plan establishes regional retail and office commercial areas which are automobile-oriented and community-oriented "commercial centers". The commercial centers are envisioned as vital and visually distinctive centers for community life that are well integrated with surrounding residential neighborhoods and have a strong pedestrian and transit orientation.

Employment: The Specific Plan seeks to create a stable and economically-sound employment base for the City which will provide a range of job types and wage/salary scales. To prevent imbalances between housing and employment, the Specific Plan policies link employment-generating land uses with the provision of housing. Specific Plan policies also support the development of employment centers that reduce traffic generation by taking advantage of transit and alternative transportation modes and by incorporating other uses that increase the capture of internal trips.

Recreation: The Specific Plan provides for a full range of developed parklands and open space areas to meet the recreation needs of the community. Active parks range from small neighborhood parks to large- scale community parks. Open space areas include trail corridors along stream corridors, including an extension of the East Bay Regional Park District's regional trail system along Tassajara Creek.

Traffic and Circulation: The Specific Plan provides for a circulation system that is convenient and efficient. The Specific Plan encourages the use of alternate modes of transportation as a means of improving community character and reducing environmental impacts. Specific Plan policies encourage a balanced orientation toward pedestrian, bicycle, transit, and automobile circulation. The road system is designed to maximize the free flow of traffic by creating a highly interconnected system that disperses traffic over numerous roadways rather than concentrating it on a few. The proposed system includes major north-south and east-west corridors to accommodate internal and through-traffic. Dublin Boulevard will be extended east to connect the Specific Plan area to central Dublin and to connect with North Canyons Parkway in Livermore. Tassajara Road and an extension of Fallon Road will provide north-south connections between I-580 and Contra Costa County.

The Specific Plan also calls for an east-west corridor across the width of the Specific Plan area that will be the "Main Street" for the Town Center. It will function as a "transit spine" linking the Town Center to the future East Dublin/Pleasanton BART station and as a street serving local traffic. Residential, retail and employment uses will be concentrated along the Transit Spine to encourage transit use. Land use patterns and intensities, and street alignments have been developed specifically

to encourage use of the future BART station. To further reduce trip generation, the Specific Plan proposes the development of Transportation Systems Management (TSM) programs for future employment areas, and recommends the development of park-and-ride lots adjacent to the freeway interchanges.

A network of sidewalks, trails, and bike lanes is planned to provide safe and convenient movement of pedestrians throughout the Specific Plan area with minimal conflict with vehicular traffic.

Resource Management:

Biological Resources: The Specific Plan area is characterized by a number of hydrologic features, including a creek, several intermittent streams, springs, seeps, and impoundments. The presence of these features in a generally dry environment has significant value to plant and wildlife species, and can play an important role in establishing the character of the future community. The Specific Plan area also includes three botanically-sensitive habitats: northern riparian forest, arroyo willow riparian woodland, and freshwater marsh. Each of these habitat areas is found in association with a hydrologic feature. Although no rare or endangered plant species have been identified in the Specific Plan area, a number of special status wildlife species (i.e. classified as *Federal Candidates for Listing* or *California Species of Special Concern)* are known to occur in the Specific Plan area or its immediate vicinity including: the red-legged frog, western pond turtle, golden eagle, northern harrier, burrowing owl, great blue heron, great egret, and American badger.

Specific Plan policies preserve and enhance the most critical of the habitat areas within the Specific Plan area. Streams and other hydrologic features are included in open space areas, and enhancement programs to revegetate and re-establish stream corridors will be undertaken to improve the habitat value of these currently degraded resources. In addition, a large area in the northeastern part of the Specific Plan area has been retained as Rural Residential and Open Space to ensure adequate forage area for the golden eagles that may inhabit the area.

Cultural Resources: The Specific Plan area contains a number of historic and archaeologic resources of potential significance. Specific Plan policies establish procedures to identify and protect cultural resources. In the case of historical resources such as the old school house, the Specific Plan encourages restoration and adaptive reuse of these resources.

Visual Resources: The foothills of eastern Dublin provide a dramatic visual backdrop for the Livermore-Amador Valley and the future community in eastern Dublin. Specific Plan policies call for the preservation of the natural open beauty of the hills and other important visual resources, such as creeks and major stands of vegetation. The Specific Plan describes two categories of visually-sensitive ridgelines: those on which no development should occur and those on which development can occur with certain restrictions. Policies address appropriate development techniques and protection measures in visually-sensitive hill areas. Visual resource policies also provide protection of views from designated scenic routes, and establish design review procedures for development applications in visually-sensitive areas.

Geology, Soils, and Grading: There are numerous landslides and areas of potential slope instability in the Specific Plan area, particularly in the hilly northeastern portion. While the Specific Plan generally avoids designating development in these areas, it also provides policies restricting development in steep or geologically unstable locations and requiring site-specific geotechnical evaluations as part of development review.

Noise: Traffic on I-580 is the major noise source in the Specific Plan area vicinity. Specific Plan policies require that development along the I-580 frontage provide adequate mitigation to conform to the State Land Use Compatibility Standards for noise and with the policies of

the *City of Dublin General Plan Noise Element.*

Community Design: The Specific Plan emphasizes that the design of residential neighborhoods, commercial areas, streets and parks will play an important role in creating the distinctive urban setting and high quality of life envisioned for the eastern Dublin community. The Specific Plan provides specific guidelines for developing an attractive, well-integrated, mixed-use community with a strong orientation to the pedestrian and to transit.

Community Services and Facilities: Implementation of the Specific Plan will require a substantial increase in community services and facilities including the following:

Schools: The Specific Plan provides sites for the development of 6.5 elementary schools, 1.75 junior high schools, and one senior high school to meet the future demand. *(Note: Due to the configuration of the boundary of the Specific Plan Area, the land use plan shows two partial school sites: .5 elementary and .75 junior high school.)* The Specific Plan area is currently served by both the Dublin Unified School District (DUSD) and the Livermore Valley Joint Unified School District (LVJUSD). The Dublin Unified School District is interested in annexation of the entire planning area. Resolution of this annexation issue will need to occur before the required schools can be built.

Police Protection: The City of Dublin Police Department would assume service responsibility for the Specific Plan area following annexation. Additional personnel and equipment will be needed to provided adequate service to eastern Dublin.

Fire Protection: With the City's annexation of the Specific Plan area, the Dougherty Regional Fire Authority (DRFA) would assume responsibility for fire protection services. In order to maintain current standards, the Specific Plan calls for two new fully staffed and equipped fire stations to be constructed in the Specific Plan area. In order to reduce the potential for wildlands fire hazards, the Specific Plan requires special maintenance and design provisions for development adjacent to open space areas.

Solid Waste: The Specific Plan is not expected to present any problems relating to collection or disposal of solid wastes. Due to general long-term concern regarding waste disposal, Specific Plan policies encourage recycling programs and reuse of composted materials.

Other Community Services and Facilities: No problems are foreseen in providing electricity, natural gas, or telephone service to the Specific Plan area. However, because of the size and projected population of the Specific Plan area, Specific Plan policies recommend that a new post office and a new library be developed.

Sewer, Water and Storm Drainage:

Water Supply and Facilities: Water service to the Specific Plan area will be provided by the Dublin San Ramon Services District (DSRSD) with water supplies from the Alameda County Flood Control and Water Conservation District (Zone 7). Development of the Specific Plan area will require an adjustment of current DSRSD boundaries and an expansion of existing facilities to ensure adequate water delivery. Water conservation will be emphasized in planning for new development.

Wastewater: Sewer service to the Specific Plan area would also be provided by the Dublin San Ramon Services District. The current DSRSD boundaries and sphere-of-influence need to be adjusted and facilities expanded. Development of the Specific Plan area will require the construction of new collection, treatment and disposal facilities including an expansion of wastewater export capacity by the Tri-Valley Wastewater Authority (TWA). Water

reclamation and reuse are encouraged in the Specific Plan.

Storm Drainage: The Specific Plan area lies within Zone 7 of the Alameda County Flood Control and Water Conservation District. Flood hazards in the Specific Plan area are confined to the Tassajara Creek channel and adjacent parcels. Runoff and flooding will be addressed through coordinated planning with regulatory agencies.

Financing: *Chapter 10: Financing* of the Specific Plan identifies options for financing the major infrastructure costs of new development. The initial financial analysis presented in this chapter indicates that proposed development would not be a financial drain on the City's resources.

Implementation: *Chapter 11: Implementation* of the Specific Plan identifies the sequence of procedural and administrative steps to be followed to implement the Specific Plan and identifies responsibilities for those tasks.

2.7 INTERAGENCY USE OF THIS EIR

According to *CEQA*, one of the purposes of the EIR is to inform local public agencies of Project proposals which may have an impact on:

(1) the services provided by the agency,

(2) environmental concerns for which the agency has statutory responsibility, and

(3) plans and projects proposed or being undertaken by the agency.

The agencies which are expected to use this EIR in their decision-making can be divided into three categories, as described below:

Commenting Agencies

Agencies expected to comment on the EIR are those which commented previously on the Notices of Preparation and are listed in *Appendix A*. Some of these agencies may also be responsible for providing services to the Project site or for the issuance of permits and/or approvals required for Project implementation.

Agencies with Statutory Responsibility for Service Provision

Approvals from public agencies with statutory responsibility to provide services to the Project site will be necessary before development can occur. Agencies with responsibility for boundary changes (ie. annexations and detachments) are included because such changes affect the provision of municipal services. The involvement of these agencies will occur during the early stages of implementing the Project as described in *Section 2.3*. These agencies are:

- **Alameda County Local Agency Formation Commission (LAFCO)**: Development of the portion of the Project site currently outside the City of Dublin municipal limits would require the approval of the Alameda County LAFCO for annexation into the City of Dublin and concurrent annexation into the **Dublin San Ramon Services District (DSRSD)**. Alameda County LAFCO would also need to approve a detachment of the General Plan Amendment area from the **Livermore Area Recreation and Park District (LARPD)** and a change in the boundaries of the City's sphere-of-influence.

- **Alameda County Board of Supervisors:** A petition would be made to the Alameda County Board of Supervisors to approve cancellation of Williamson Act contracts for agricultural lands within the General Plan Amendment area until annexed to the City of Dublin. Public hearings, findings and a resolution on the petition to cancel would be required. Property Tax Exchange Agreements may be signed between the City of Dublin and Alameda County for unincorporated lands annexed to the City of Dublin.

- **Dublin San Ramon Services District (DSRSD):** Adjustment of the service district boundary of the DSRSD to include the Project site.

- **Livermore Area Recreation and Park District (LARPD):** Detachment of the Project site from the jurisdiction of the LARPD.

Permitting Agencies

Certain agencies have statutory authority over natural resources and must issue a permit or grant approvals for certain types of actions related to Project implementation. Table 2.0-3 (next page) provides a comprehensive listing of all agency permits and approvals **potentially** required to implement the Project. Because many agencies have elaborated their own plans for a specific environmental concern, such as air quality or water supply, Table 2.0-3 also references the section of *Chapter 3* in which a discussion of that agency's plan or statutory authority can be found.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
PROJECT DESCRIPTION
TABLE 2.0-3
POTENTIALLY APPLICABLE PERMITS AND PLANS BY AGENCY

AGENCY	PLAN/POLICY	POTENTIAL PERMIT REQ'D (Y/N)	EIR CHAPTER
U.S. Dept of Army, Directorate of Engineering and Housing	1. Installation Compatible Use Zone (ICUZ) Study for Parks Reserve Forces Training Area (PRFTA), (Draft:1988)	No No	3.1 Land Use
U.S. Dept of Army, Corps of Engineers	1. U.S. Clean Water Act, Section 404	Yes (a)	3.5 Pub Utils. 3.7 Bio.Rsrces
U.S. Dept of the Interior, Fish and Wildlife	1. Endangered Species Act, Sections 7(a) and 7(c) 2. National Environmental Policy Act (42 USC 4332 (2)c)	Yes (b)	3.7 Bio Rsrces
CA Air Resources Board	1. CA Clean Air Act 1988	No	3.11 Air Quality
Bay Area Air Quality Management District	1. Bay Area Clean Air Plan '91	No	3.11 Air Quality
Metropolitan Transportation Commission	1. Bay Area Clean Air Plan '91	No	3.11 Air Quality
CA Dept of Conservation, Office of Land Conservation	1. Land Conservation Act (Williamson Act: 1965, amended 1981)	No	3.1 Land Use
CA Dept of Conservation, Div. of Mines and Geology	1. Division of Mines and Geology, Note 46	No	3.6 Geology
CA Dept of Fish and Game-Region 4	1. Streambed Alteration Agreement (F&G Code Section 1601-03)	Yes (c)	3.7 Bio.Rsrces
CA Water Resources Control Board	1. Water Quality Control Plan, SF Bay Basin 2, (1982)	Yes (d)	3.5 Pub Utils.
Alameda Co. Solid Waste Mgmt Authority	1. Alameda County Solid Waste Management Plan (1987)	No	3.4 Pub Svces
Alameda Co. Board of Supervisors	1. Williamson Act Contracts	Yes (e)	3.1 Land Use
Alameda Co. Local Agency Formation Commission (LAFCO)	1. Annexation to City 2. Annexation to DSRSD 3. Change in SOI boundary 4. Detachment from LARPD	Yes (f)	3.1 Land Use
Alameda Co., Planning Department	1. General Plan 2. East County Area Plan, (under revision 1992)	No	3.1 Land Use
Dublin San Ramon Services District	1. Wastewater Collection System Master Plan (June 1988)	No	3.5 Pub Utils
East Bay Regional Park District	1. Master Plan 1988 2. Regional Trails MP 1988	No	3.4 Pub Svces
U.S. Environmental Protection Agency	1. National Environmental Policy Act (NEPA)	Yes (g)	3.5 Pub Utils
U.S. Dept of the Interior, Advisory Council of Historic Preservation	1. National Historic Preservation Act, Section 106, (1966)	Yes (h)	3.9 Cult.Rsrces
CA State Office of Historic Preservation	1. National Historic Preservation Act, Section 106, (1966)	Yes (h)	3.9 Cult.Rsrces

(a) Section 404 grants the Army Corps of Engineers authority over the discharge of dredged or fill material into wetlands and other waters. A permit is required.

(b) Sections 7(a), 7(c), and 10 require that applicants secure a permit to authorize an incidental taking of an endangered species. Incidental takings include the destruction of habitat critical to the survival of an endangered species. Applicants are required to submit a Habitat Conservation Plan to U.S. Department of the Interior, Fish and Wildlife, Endangered Species Office.

(c) Any work (ie. construction, excavation, grading, etc.) within the banks of a creek requires a Streambed Alteration Agreement from the Department of Fish and Game. Creeks are defined by the California Code of Regulations, Title 14 (Natural Resources), Section 1.72 as: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."

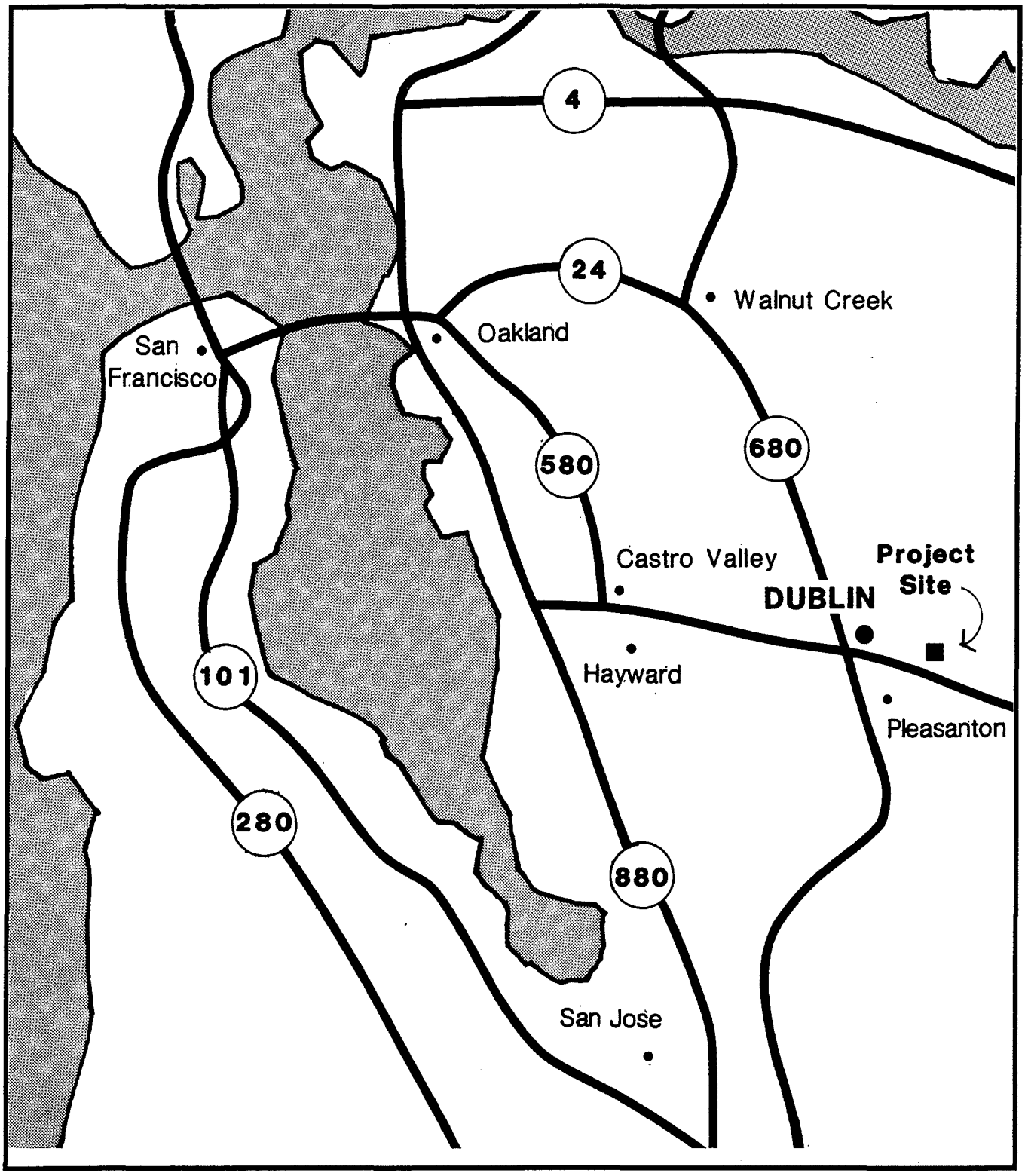
(d) Certification of Compliance with the Water Quality Control Plan for the San Francisco Bay Region 2 required.

(e) Approval and findings required from the County of Alameda Board of Supervisors for the cancellation of Williamson Act contracts for unincorporated lands.

(f) Approval and findings consistent with the Cortese-Knox Act required by the County of Alameda LAFCO.

(g) In cases where the Army Corps of Engineers grants a permit under Section 404 of the Clean Water Act, the EPA requires that a Master Environmental Assessment be performed pursuant to the requirements of the National Environmental Policy Act.

(h) Any action by a federal agency that would affect a property listed or eligible for the National Register of Historic Places triggers the requirement for an independent survey to determine eligibility for listing. The head of the federal agency contemplating an action that would affect a listed or eligible property must notify the Advisory Council of the proposed action and solicit its comments.

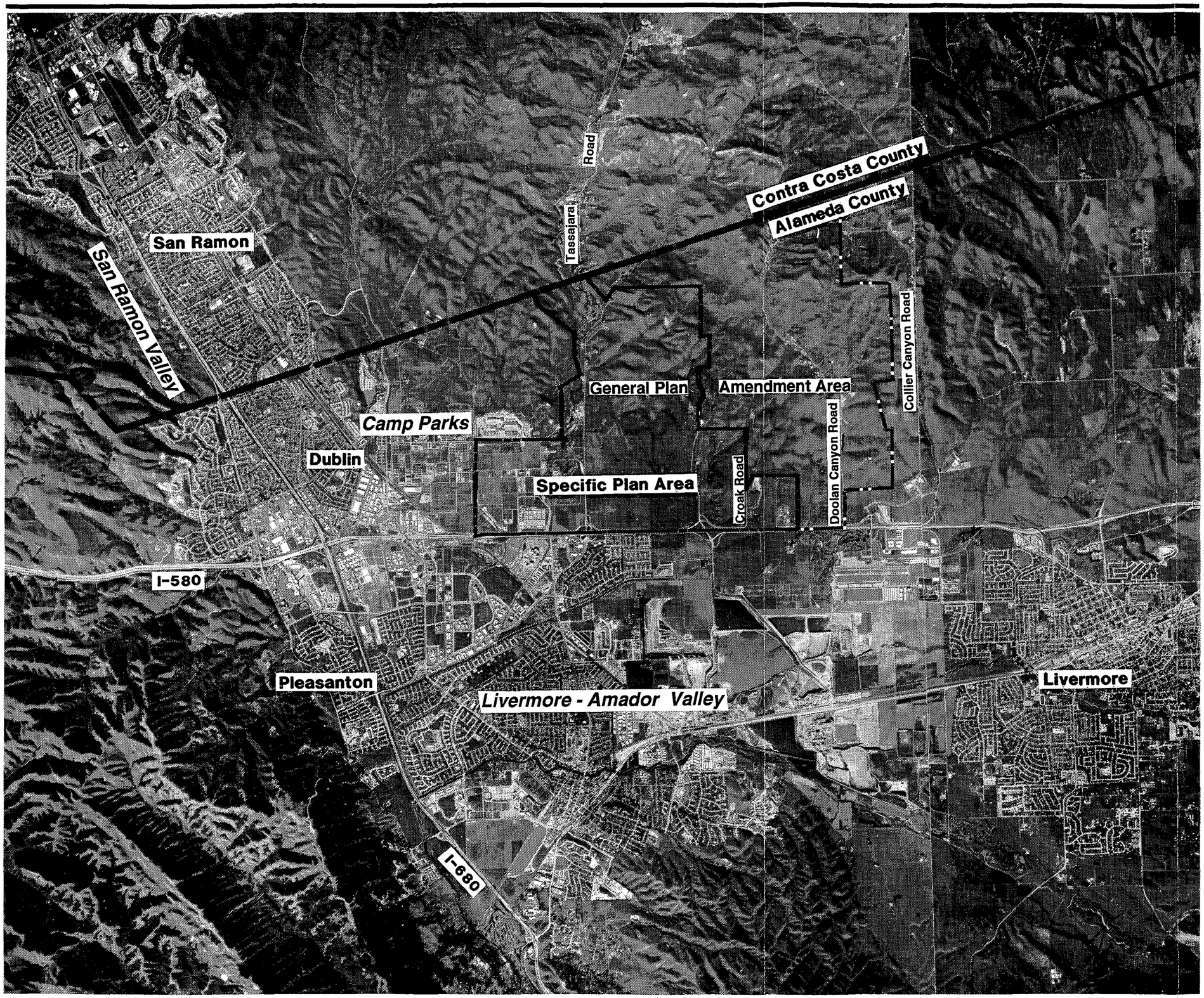


EASTERN DUBLIN GPA • SP • EIR

Regional Location

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Figure 2 A



Subregional Location: The Tri - Valley

Legend

- County Boundary
- Specific Plan Area
- General Plan Amendment Area

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd Figure 2 - B



Project Site

Legend

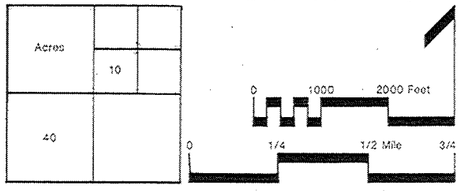
General Plan Amendment Area

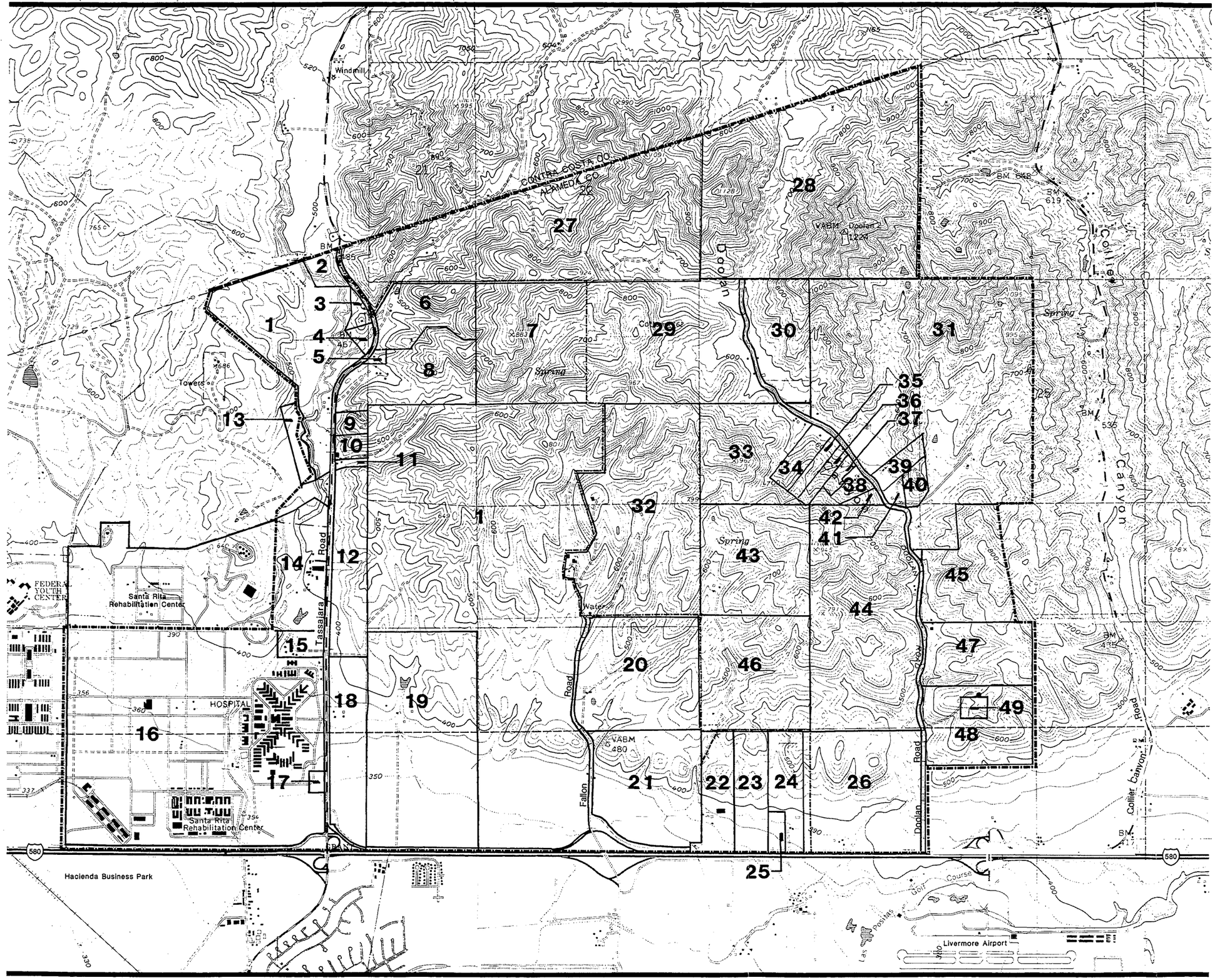
Specific Plan Area

Photograph taken 10-17-91

EASTERN DUBLIN
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Wallace Roberts & Todd **Figure 2 - C**





Ownership Patterns

Legend

---- General Plan Amendment Area

---- Specific Plan Area

	OWNER	ACREAGE
1	Chang Su-O-Lin	1244.0
2	Moura	12.5
3	Vargas	5.0
4	Herrera	7.93
5	Haight	2.10
6	Mission Peak Homes	67.83
7	Redgwick	160.0
8	Silvera	91.0
9	Plato	10.0
10	Zimmer	10.0
11	Raley	3.75
12	Gygi	1.0
13	Tassajara Regional Park	27.2
14	Koller	71.56
15	Casterson	19.19
16	Alameda County Surplus Property Authority	600.0
17	United States of America	4.17
18	Dublin Land Company	80.14
19	Pao-Lin	306.04
20	Jordan	189.12
21	TMI	135.62
22	Anderson	48.90
23	Righetti	48.78
24	Branaugh	39.8
25	Campbell	8.81
26	Crosby	14.0
27	Moller	363.0
28	Bailey	513.60
29	Doolan Ranch (West)	215.09
30	Jones	92.37
31	Doolan Ranch (East)	568.24
32	Fallon Enterprises	314.42
33	Jones and Muehlhausen	137.74
34	Silva	20.06
35	Mottin	9.97
36	Ogelvie	10.0
37	Nelson	5.0
38	Foscalina	9.85
39	Akins	20.0
40	Funk	10.0
41	Funk	10.0
42	Morgan	4.91
43	Mandeville	169.90
44	Doolan Ranch (East)	304.32
45	Flanigan	95.59
46	Croak	162.0
47	Bloom	87.52
48	Vij	113.33
49	City of Livermore	7.12

April 1992

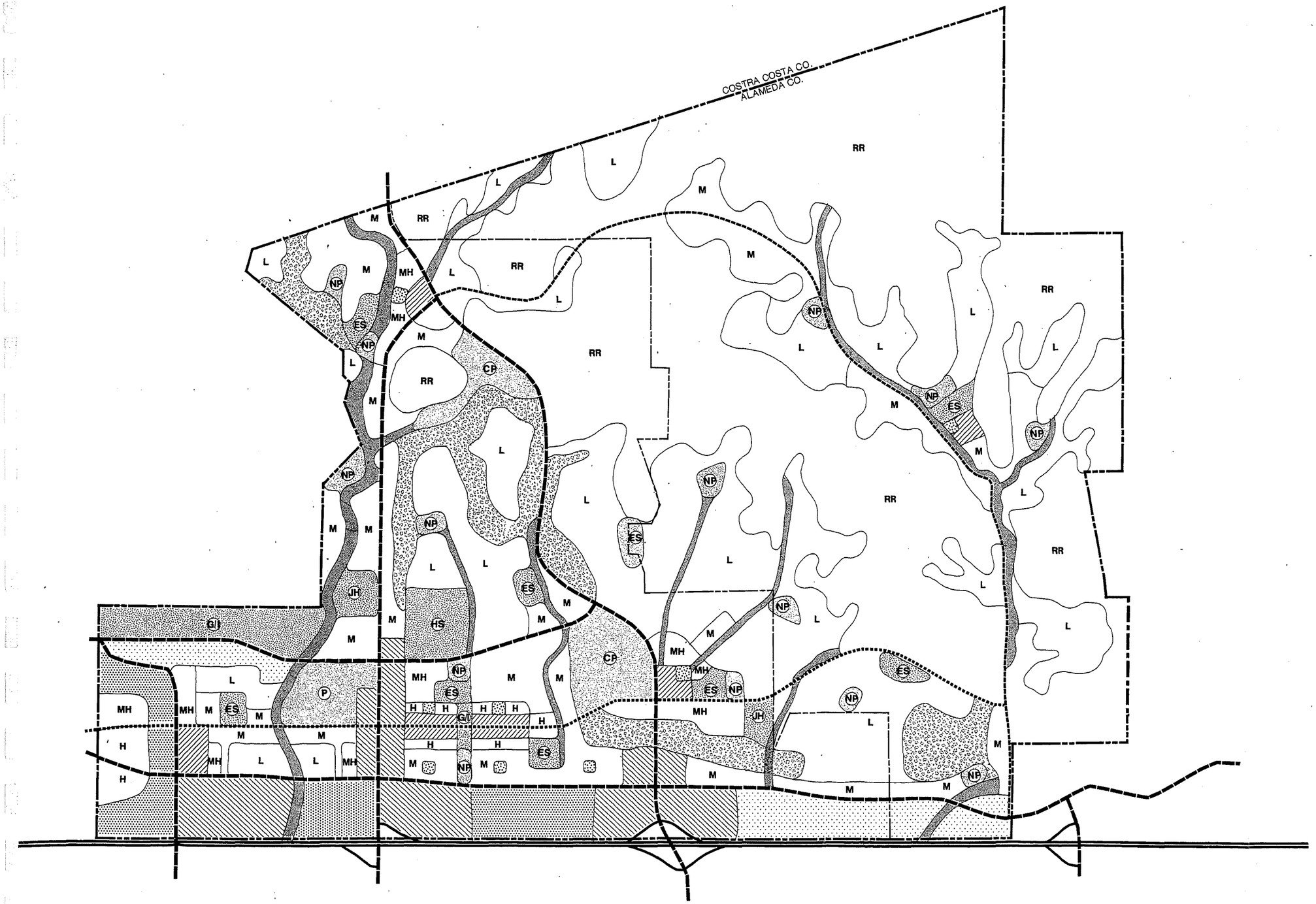
EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 2 - D**

Acres 10 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4



General Plan Amendment Area Land Use

Legend

COMMERCIAL
- Campus Office
- Neighborhood Commercial
- General Commercial
- Industrial Park

RESIDENTIAL

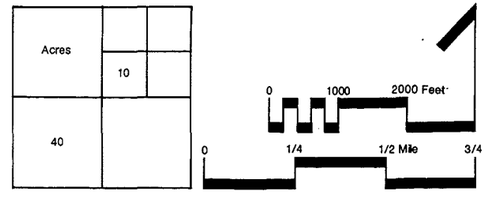
H	High Density	25- du/ac
MH	Medium-High Density	14-25 du/ac
M	Medium Density	6-14 du/ac
L	**Single Family**	0-6 du/ac
RR	Rural Residential	1 du/100 ac

PUBLIC/SEMI-PUBLIC/OPEN
- Public/Semi-Public Facility
  - (ES) Elementary School
  - (JH) Junior High School
  - (HS) High School
  - (G/I) Public/Semi-Public
- Parks & Recreation
  - (P) City Park
  - (CP) Community Park
  - (NP) Neighborhood Park
- Neighborhood Square
- Open Space
- **Riparian Corridor (not a land use category)**

CIRCULATION
- Arterial Street
- Collector Street
- Transit Spine
- General Plan Amendment Study Area
- Specific Plan Study Area

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 2 - E**





Specific Plan Land Use

Legend

Roads

RESIDENTIAL

Rural Residential	.01 du/ac
Single Family	0.9-6.0 du/ac
Medium Density	6.1-14.0 du/ac
Med-Hi Density	14.1-25.0 du/ac
High Density	25.1 + du/ac

COMMERCIAL/INDUSTRIAL

- General Commercial
- Neighborhood Commercial
- Campus Office
- Industrial Park

PUBLIC/SEMI-PUBLIC

- Public/Semi-Public
- EL Elementary School
- JR Junior High School
- HS High School

PARKS AND OPEN SPACE

- Neighborhood Square
- Neighborhood Park
- Community Park
- City Park
- Open Space

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 2 - F**

Acres 10

0 600 1200 Feet

0 1/4 1/2 Mile

Chapter 3

ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

INTRODUCTION

This chapter constitutes the main body of the EIR. Its purpose is threefold:

1) to describe the environmental conditions of the Project site and vicinity as they exist prior to commencement of the Project;

2) to evaluate the possible environmental effects of the Project on these conditions;

3) and to propose actions that the City can take to reduce or eliminate potential environmental effects.

Chapter 3 is divided into twelve **sections.** To ensure a consistent assessment of environmental impacts, each section follows a similar format as described below:

Each section is broadly divided into two subsections: *Setting*, and *Impacts and Mitigation Measures*. The *Setting* subsection provides a "baseline" description of existing environmental conditions. Pursuant to the *CEQA Guidelines* (Section 15125), environmental conditions are described from **both** a local **and** regional perspective.

Following the *Setting*, the potential environmental effects of the Project on environmental conditions are analyzed and presented. This is the *Impacts* discussion. In conformance with *CEQA*, impacts must be evaluated according to the **degree** of "adverse change" they might cause to existing environmental conditions. *CEQA* has adopted the term "**significance**" to describe adverse effect. In this EIR, three degrees ("levels") of significance are used to classify impacts: "significant", "potentially significant" and "insignificant". Each *Impacts* discussion begins with a description of the criteria ("Significance Criteria") used to determine the degree of significance.

Under *CEQA*, simply identifying potential impacts does not fulfill the requirements of environmental assessment. Among its objectives (refer to *Section 1.1: Legal Basis for the EIR*), *CEQA* requires that the EIR propose **actions**, including changes or alternatives to the project, that can reduce or eliminate environmental damage. These actions are called *Mitigation Measures*. Mitigation measures can encompass a broad range from specific infrastructure improvements to programmatic and policy-based proposals. In this EIR, mitigation measures are presented following specific impacts. Each mitigation measure is given under a heading identifying its origin: The three sources are: the *General Plan Amendment*, the *Specific Plan*, or this EIR. Following the description of a mitigation measure, the EIR assesses the degree to which the respective environmental impact is reduced or eliminated by implementation of that mitigation measure. Again, the level of significance will be described as either "significant", "potentially significant", or "insignificant".

Finally, a word regarding the format used to designate impacts and mitigation measures in this document. Impacts are given as: **IM 3.#/#.** The "IM" indicates "impact"; the prefix "3.#" links the impact to the section of *Chapter 3* in which the impact is found (ie. **IM 3.3** means the impact is related to *Section 3.3: Traffic and Circulation*); and the letter "X" following the "backslash" indicates the alphabetical order of the impact. Mitigation measures are designated following the same format *(MM 3.#/#)* with one small difference: alphabetical rather than numerical order is used to create a list. In this case, *"MM"* indicates "mitigation measure"; the "3.#" prefix links the mitigation measure to its section of *Chapter 3*; and a number (instead of a letter) following the "backslash" indicates the numerical order in which the mitigation measure is given. Finally, all mitigation measures are printed in italics for quick identification in the text.

Section 3.1

LAND USE

3.1 LAND USE

This section describes existing land uses on the Project site and in the Project site vicinity. It evaluates the following potential land use and planning impacts:

- Project alterations to existing and planned land use patterns.
- Land use compatibility with on-site and adjacent land uses.
- Project impacts on agricultural lands including Williamson Act lands. Agricultural impacts are discussed as a separate subsection of *Section 3.1*.

Also discussed in this section are planning concerns involving jurisdictions such as spheres-of-influence, planning areas, and special districts. To conclude this section's discussion of land use impacts, the Project is evaluated for consistency with relevant local plans and policies.

SETTING

PROJECT SITE LAND USE

Overview

The existing land uses on the Project site are: agriculture (grazing and dry crops), horse ranches, rural residential, and public/semi-public uses.

Existing land uses on the Project site and in its immediate vicinity are shown in Figure 3.1-A: *Existing Land Use: Project Site and Vicinity.*

Horse Ranches

The planning area contains two horse farms which are actively involved in the breeding, training, and selling of horses. The 72-acre Yarra Yarra Ranch, is located on Tassajara Road east of the Alameda County property. Campbell Arabians horse farm is a smaller nine-acre establishment located adjacent to I-580 east of Croak Road, and accessed from a frontage road. Both ranches have a training and riding ring for lessons, stables, a single-family house and numerous outbuildings.

Residential

Approximately 69 rural residential units are located along Tassajara and Doolan Roads in the planning area. Rural residential units are generally on two- to 10-acre lots and typically consist of single family homes and hobby farms.

Alameda County Property (Public/Semi-Public)

The Alameda County Surplus Property Authority owns a 958-acre parcel of land partially within and partially adjacent to the southwest portion of the Project site. The entire Alameda County-owned parcel lies within the City of Dublin municipal limits. Approximately two-thirds of this parcel (600 acres) lies within the General Plan Amendment area boundary and is referred to as the "County property" in this EIR. This property was formerly the location of the Santa Rita Rehabilitation Center. Land uses on the County property are currently governed by a 1986 agreement between the

City of Dublin and Alameda County which provides that the planned land uses will be Business Park/Industrial and Business Park/Industrial: Low Coverage. Under the proposed Project, the County Property is planned for Commercial, Residential, Industrial Park and Public/Semi-Public uses. Implementation of the General Plan Amendment and Specific Plan would require an amendment to the City/County agreement.

In April 1992, existing land uses on the 600-acre County property included an abandoned U.S. Naval Hospital, a County warehouse storage facility, a County animal shelter, and the partially-demolished Santa Rita Rehabilitation Center. The County plans to finish demolition of the former Santa Rita Rehabilitation Center by Summer 1992; other remaining land uses will either be cleared or transferred to the northern 358-acre portion of the parcel.

Utility Easements (Public/Semi-Public)

A utility easement about 30-feet wide extends north-south through the eastern portion of the Dublin Ranch property, roughly parallel to and about 800 feet east of Tassajara Road. A row of power poles extends along the east shoulder of Tassajara Road. Another line of power poles, leading to an off-site water reservoir and pumping station, extends through or near the more easterly property lines of the planning area.

AGRICULTURE

Agricultural Uses

Agriculture, composed predominantly of grazing, is the major land use on the Project site with the exception of development in the southwestern and eastern portions. Hay crops and barley are periodically cultivated on the flatter lands adjacent to I-580. Rural residences constitute a land use related to agriculture occurring on the Project site. Rural residences are served by local wells and household septic systems. Improvements to lands in agricultural use generally consist of asphalt and unpaved roads, fences, barns, corrals, wells, water tanks, ponds, single-family homes and various out-buildings.

Farmlands of Local Importance

Suitability for agriculture is largely a function of soil capability. According to the Agricultural Suitability Map for the planning area prepared by the Soil Conservation Service, no soils on the Project site support prime farmlands or farmlands of Statewide importance. As shown in Figure 3.1-B, much of the planning area does support farmlands "of local importance". Farmlands "of local importance" are defined as those which contribute to local production of food, feed, fiber, forage and oilseed crops. The agricultural lands in the Project area are of local importance for grazing. The locally important cultivated lands are located in the southern part of the Project site north of I-580 and east of the Alameda County property.

Figure 3.1-B also shows a land use category called "Other". "Other" is defined by the Soil Conservation Service as those areas where the soil does not support important farmland due to the presence of steep slopes, landslides or other factors.

Generally, areas of locally important farmland on the Project site occur in the flatter or gently sloped portions while lands designated as "Other" are located in the northern, steeper portions. Soils in the planning area are discussed further in *Section 3.6: Soils, Geology and Seismicity.*

Williamson Act Contract Lands

Williamson Act Lands are a subset of agricultural lands. In 1965, the California State Legislature passed the State Land Conservation Act, also known as the Williamson Act, which enables jurisdictions to establish agricultural preserve programs. Under the Williamson Act, the landowner agrees to limit the use of the land to agriculture and compatible uses for a minimum period of ten years. In turn, the county in which the land is found agrees to tax the land at a lower rate based on its agricultural use rather than at its real estate market value. As a partial compensation for lost tax revenues, the State Legislature pays a subvention to cities and counties.

Williamson Act contracts are entirely voluntary and self-renewing yearly. To withdraw from a contract, the owner must notify the county with a Notice of Non-Renewal. Withdrawal involves a ten-year period of tax adjustments based on full market value before land can be removed from the preserve program. Under certain conditions, the city or county in which the contracted land is located can cancel the contract. If cancellation occurs before contract expiration, a penalty must be paid.

Project site and adjacent lands under Williamson Act contract and those for which non-renewal status have been filed are mapped on Figure 3.1-C. Table 3.1-1 (next page) shows Williamson Act parcels by owner and contract status within the Specific Plan area and General Plan Increment area. Table 3.1-2 summarizes the change in Williamson Act contracts for the Project site through the year 2000. The information given in Figure 3.1-C and Tables 3.1-1 and 3.1-2 and discussed in this section is based on records kept by the Alameda County and Contra Costa County Assessors' offices and reflects contract status as of April 1992.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-1
WILLIAMSON ACT CONTRACTS: OWNERSHIP AND CONTRACT STATUS

Assessor's Number	Owner	Renew (Acres)	Non-Renew (Acres)	Year	Expiration
SPECIFIC PLAN					
946-541-5-1	Chang		183.4	1983	1-1-93
946-500-2-2	Koller		65.9	1988	1-1-98
946-500-3	Casterson		19.2	1988	1-1-98
946-1040-1	Chang		67.1	1983	1-1-93
946-1040-2	Chang		22.6	1983	1-1-93
946-1040-3	Chang		166.7	1983	1-1-93
946-680-3	Chang		154.0	1987	1-1-97
946-680-4	Chang		14.9	1987	1-1-97
946-680-8	Silvera		91.0	1989	1-1-99
946-680-1	Mission Pk		67.8	1990	1-1-00
946-580-2	Redgwick		160.0	1985	1-1-95
99B-3036-7	Chang		11.5	1988	1-1-98
99B-3036-8	Chang		147.8	1988	1-1-98
99B-3036-9	Jordan		15.8	1989	1-1-99
99B-3036-10	Jordan		173.3	1989	1-1-99
Subtotal			**1361.0**		
GPA INCREMENT AREA					
99B-3046-2-2	Fallon	314.4		1992	
99B-3291-1	Bailey	513.6		1992	
99B-3281-3	Mandeville		160.9	1990	1-1-00
99B-3281-2	Croak	124.2		1992	
99B-3281-1-1	Croak	37.8		1992	
99B-3281-4	Doolan Rch		304.3	1984	1-1-94
99B-3301-2	Doolan Rch		492.9	1984	1-1-94
99B-3281-5	Doolan Rch		8.5	1984	1-1-94
99B-3301-1-5	Flanigan	95.6		1992	

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-1
WILLIAMSON ACT CONTRACTS: OWNERSHIP AND CONTRACT STATUS
(Page 2)

Assessor's Number	Owner	Renew (Acres)	Non-Renew (Acres)	Year	Expiration
99B-3416-1-1	Bloom	87.3		1992	
99B-3416-1-4	Vij		113.3	1986	1-1-96
946-580-1	Moller	363.0		1992	
Subtotal GPA Increment Area		**1,536.0**	**1,080.0**		
TOTAL GPA AREA		**1,536.0**	**2,441.0**		

Date: April 1992
Source: Assessor's Office: Alameda and Contra Costa counties; WRT

As shown in Figure 3.1-C and summarized in Table 3.1-2, in April 1992, 57 percent of the Project site had Williamson Act contracts in force, including much of the northern and central portions. Proportionally, a greater portion of these contracted lands were located on GPA Increment area lands. Parcels under contract here represent 37 percent of the total 6920 acres of the Project site. Significantly, as of April 1992, all contracted lands in the Specific Plan planning area had been non-renewed. By the year 2000, all Williamson Act contracts in the Specific Plan area will have expired. Within the GPA Increment area, five contracted parcels totalling 1080 acres were non-renewed, equaling 41 percent of all contracts. Overall, 61 percent of all contracted parcels on the Project site were in the process of terminating their Williamson Act contracts in April 1992.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-2
WILLIAMSON ACT CONTRACTS: SUMMARY OF CONTRACT STATUS (1992; 2000)

	1992 (Acres)					2000 (Acres)	
Area	**Acres**	**In Contract**	**% of Site**	**Non-Renew**	**% of Contracts**	**In Contract**	**% of Site**
SP	3,327.8	1,361	41%	1,361	100%	0	0%
GPA INCREMENT	3,592.1	2,616	73%	1,080	41%	1,536	43%
TOTAL GPA	6,919.9	3,977	57%	2,441	61%	1,536	22%

Date: April 1992
Source: Assessor's Office: Alameda and Contra Costa counties; WRT

PREVIOUS DEVELOPMENT AND IMPROVEMENT PROPOSALS FOR THE PROJECT SITE

Prior to preparation of the *Specific Plan* and *General Plan Amendment*, a number of proposals and plans for projects within the GPA area were submitted to the City of Dublin for consideration. As described in *Section 2.5: Statement of Project Objectives*, this potential development in Dublin's Eastern Extended Planning Area prompted the City to undertake the comprehensive planning studies for the *General Plan Amendment* area. These proposals are not being pursued at this time. The

previous development proposals included:

- *Dublin Ranch* - a 930-acre residential project organized into three "villages". Proposed total housing units: 5,190 d.u.
- *Dublin Ranch North* - The Redgewick property, a 160-acre residential project. Proposed total housing units: 810 d.u.
- *Fallon Ranch* - a 153.6-acre business park for high-technology and light industrial uses.
- *Dublin Boulevard Extension* - extension of Dublin Boulevard from Dougherty Road to North Canyons Parkway to create an east-west arterial. The portion of this extension between Dougherty Boulevard and the Southern Pacific right-of-way is under construction as of July 1992.

IMPACTS AND MITIGATION

SIGNIFICANCE CRITERIA

This section - *Section 3.1: Land Use* - discusses land use **impacts** of the Project and land use **planning concerns**. According to the *CEQA Guidelines: Appendix G*, a project may have a significant impact on existing land uses if it would:

- disrupt or divide the physical arrangement of an established community;
- conflict with established recreational, educational, religious, or scientific uses in an area;
- convert prime agricultural land to non-agricultural land or impair the productivity of prime agricultural land; or
- conflict with adopted environmental plans and goals of the community where it is located and, as a result, cause "substantial change in the physical conditions which exist in the area affected by the proposed project" (*Guidelines*: Section 15002(g)).

CEQA Guidelines: Appendix I (the "environmental checklist" used to conduct the Initial Study) calls for an evaluation of potential environmental impacts if a project would result in the "substantial alteration" of the present or planned land use of an area. "Substantial land use alteration", however, is not in itself considered a significant environmental effect by *CEQA*. This EIR discusses land use alteration, therefore, as a **planning concern** in this EIR.

IMPACTS AND MITIGATION MEASURES: PROJECT SITE

IM 3.1/A Substantial Alteration to Existing Land Use

As described in *Section 2.2: Project Site Features* and in the *Setting* subsection above, the Project site is predominantly a rural area devoted to agriculture and rural residential uses. The Project site's only existing area of urban development is the Alameda County property located within the City of Dublin west of Tassajara Road. As an urban community with a fully-developed infrastructure, the Project

will result in a substantial alteration of the present agricultural and rural land uses and rural character occurring over much of the Project site. All of the proposed land uses except Rural Residential and Open Space are considered urban uses. Rural Residential would develop at one dwelling unit per 100 acres and Open Space would essentially remain in its existing undeveloped condition. Both land uses would allow continued grazing. If implemented according to the land use designations shown in Tables 2.0-1 and 2.0-2, the Project would result in the conversion to urban uses of 53% of the General Plan Amendment area and 75% of the Specific Plan area.

The alteration of existing land uses from primarily rural to residential, commercial, industrial and other urban uses is identified as an important planning concern of the Project. Pursuant to *CEQA*, however, this alteration is not, in itself, an environmental impact and is therefore insignificant. The specific environmental impacts associated with this land use alteration manifest themselves in such areas as traffic, biological resources and air quality, for example and are discussed in their respective sections of this Draft EIR.

Mitigation Measures of the EIR

No mitigation is required for an insignificant impact.

There are, however, some planning strategies available which would address and reconcile these planning concerns. The eastern portions of the Specific Plan area and the GPA Increment area have been partially designated as Low Density and Rural Residential which preserve the outer edge of the Project site in a minimally developed and a relatively rural state. Implementation of these land use designations would preserve hillside areas, creek corridors, and other areas of significant resource value.

Implementation *General Plan* policies which preserve oak woodlands, riparian vegetation, natural creeks, and slopes over 30% as Open Space would also partially compensate for the conversion to urban land use. These open space areas along with areas designated for parks and recreation will constitute the backbone of the open space system for the GPA area.

IM 3.1/B On-Site Project Land Use Conflicts

The *Dublin General Plan* states that abrupt transitions between single-family development and higher density development should be avoided. Both the GPA and the Specific Plan land use plans have been developed to achieve land use compatibility and to avoid potential land use conflicts. Policies in both documents concerning the buffering and location of land uses on the Project site support the compatibility of adjacent land uses. On-site land use conflicts presented by the land use plans of the Project do not present themselves and are considered, therefore, an insignificant impact. (Refer to **IM 3.10/F** for a related discussion of potential noise conflicts arising from the adjacency of land uses on the Project site.)

No mitigation is required.

IMPACTS AND MITIGATION MEASURES: AGRICULTURE

IM 3.1/C Discontinuation of Agricultural Uses

Approximately one half of the agricultural activity would be lost with full implementation of the Project, but it may also disappear due to other urban pressures and higher property tax rates. Although it can be reasonably argued that one of the primary reasons that agriculture is occurring on a majority of the Project site at this time is the presence of the Williamson Act contracts and the attendant favorable tax rate, the fact that most of the property owners on the Project site and all of

the owners in the Specific Plan area have filed non-renewal notices for their Williamson Act contracts seems to indicate that the loss of agricultural activity in these areas may be a foregone conclusion with or without the Project. When one also considers the relatively limited value of the non-prime soil, and consistency with applicable General Plan policies, the discontinuation of agricultural uses that would result is classified an insignificant impact.

No mitigation is required.

IM 3.1/D Loss of Farmlands of Local Importance

The Project proposes residential and commercial land uses over most of its southern and southwestern portions. Development here will result in the complete loss of existing agricultural lands "of Local Importance".

As defined by CEQA, the loss or conversion of agricultural lands is "significant" if the affected agricultural lands are classified as "prime". Because the agricultural lands on the Project site are not "prime", their loss is considered to be an insignificant impact of the Project.

Mitigation Measures of the EIR

No mitigation is required for an insignificant impact.

The Project, however, does include policies that address the loss of agricultural lands. The General Plan Amendment designates 3,243 acres, or 47% of the total Project area, as Rural Residential and Open Space. The land use plan for the GPA Increment area sets aside 67% of its total area as Rural Residential and Open Space while the Specific Plan devotes 25% of its total acreage to these land uses. Rural Residential lands throughout the Project site are intended to be primarily open space areas with one dwelling unit per 100 acres. Agricultural lands in these areas are expected to remain minimally developed and can continue to serve as grazing areas.

IM 3.1/E Indirect Impacts resulting from Non-Renewal of Williamson Act Contracts

The non-renewal of Williamson Act contracts is not an environmental impact defined under *CEQA*. Non-renewal is, however, a planning concern of this EIR particularly if the Project is considered a factor which accelerates the non-renewal process. The indirect impact resulting from non-renewal may be the discontinuation of agricultural activities on the Project site. Following the arguments given above for IM 3.1/A: Discontinuation of Agricultural Uses, this indirect impact is considered insignificant.

Mitigation Measures of the EIR

No mitigation is required for an insignificant indirect impact.

The loss of agricultural lands is, however, concern of City of Dublin policies. To offset the precipitous decline of agricultural activity in Dublin's extended planning areas, the existing *General Plan* includes references and policies related to conversion or loss of agricultural land. *General Plan Policy 3.2.A* restricts consideration of a development proposal on Williamson Act lands until two years before contract expiration. The General Plan Amendment deletes the reference to a two-year waiting period and speaks to compelling public reasons and the desire of the landowner to cease agricultural activities consistent with applicable *General Plan* and Specific Plan policies. Other *General Plan* policies address premature urbanization and the effect on adjacent agricultural properties. The overall theme of the *General Plan* is that the City generally supports preservation of agricultural land, but urbanization is acceptable if a

land owner wishes to pursue development consistent with the Specific Plan, General Plan, and other City policies. In the long term, GPA policy foresees urbanized uses (all proposed land uses except Rural Residential and Open Space) over approximately 53% of the Project area, but encourages continued agricultural use for as long as possible.

SETTING

LAND USE IN THE PROJECT SITE VICINITY

Tri-Valley Non-Urban Lands

The urban "core" of the Tri-Valley is formed by the cities of Dublin, San Ramon, Pleasanton and Livermore. All of these cities are growing and expanding urban land uses onto adjacent rural and agricultural lands. (See Figure 2-B.)

Despite tremendous growth pressure, the Tri-Valley still retains portions of the rolling hills, wooded ridges, vineyards, creeks and fields which give the area its natural character and contribute to the local economy and quality of life. Existing non-urban lands in the Tri-Valley are agricultural (croplands, viticulture, grazing, livestock operations), rural residential (ranchettes and hobby farms), mining/extraction (gravel pits) or open space (parks, watershed, recreational or preserves). How much of this land will be urbanized and how much will continue in agriculture and open space is a planning concern of area residents and local policy-makers. *Section 5.1; Cumulative Impacts* lists development projects currently proposed for the Tri-Valley core.

Adjacent Lands

The land uses adjacent to the Project site generally consist of agricultural and vacant lands to the north and east, and developed lands to the south and west. These uses are illustrated in Figure 3.1-A, and are described below. Relevant planning efforts on adjacent lands are also described.

To the West

Camp Parks (Public/Semi-Public). The U.S. Army's Parks Reserve Forces Training Center (Camp Parks) is located directly west of the planning area within the City of Dublin. Camp Parks covers 2,884 acres and is the largest single land use in the vicinity of the planning area. The portion of Camp Parks adjacent to I-580 is the most highly developed, with barracks, training areas, classrooms, and administration buildings. The base is also used by a number of Bay Area civilian police forces for training. Further north, the Camp Parks property is vacant or used for leased grazing. The area is also used on an as-needed basis for maneuvers which involve troop encampments, small arms firing, helicopters and other heavy equipment. An 11.6-acre communications satellite tracking station operated by Lockheed is situated in the eastern portion of Camp Parks, and a light artillery range is located in the northern portion of Camp Parks. A *Master Plan* and EIS were completed for Camp Parks in 1990 to guide future land use and facilities development. The *Master Plan* has not been adopted and is currently on hold until the Army evaluates the uses of other Army installations scheduled for closing and the potential to relocate uses to Camp Parks. The *Master Plan* process is scheduled to restart in fiscal year 1992/93. No completion date for the *Master Plan* has been set.

To the South

Livermore Municipal Airport/Livermore Airway Business Park. The Livermore Municipal Airport is located to the south of the planning area across I-580 and south of the Las Positas Golf Course and the Livermore Airway Business Park, a recently constructed light industrial business park. The Federal Aviation Administration classifies the airport as a "general transport" airport. The *Livermore Airport Master Plan* characterizes the airport as "physically and operationally a basic transport airport" that can accommodate turbojets under 60,00 pounds and general aviation aircraft of lesser weight. As of 1985, there were 400 based aircraft, 37 of which were twin-engine and only four of which were turbine-powered.

The *Master Plan* for the Livermore Municipal Airport was completed in December 1975 (City of Livermore, 1975). The *Master Plan*, which is revised periodically, contains the demand forecasts and growth projections for the airport and its facilities. The *Master Plan* projects a four percent annual increase in airplane operations. A component of the *Master Plan* is the *Airport Layout Plan* which illustrates airport facilities and land use. In 1988, the airport expanded its runway by relocating a portion of the Las Positas Golf Course onto land in Alameda County to the west of the Livermore city line. The City of Livermore is in the process of annexing this property.

The Alameda County Airport Land Use Commission (ALUC) adopted the *Alameda County Airport Land Use Policy Plan* in July 1986. The *Airport Land Use Policy Plan* defines a "General Referral Area" and a "Height Referral Area" for the Livermore Municipal Airport that extend into the Eastern Dublin General Plan Amendment area. (See Figure 3.1-D: *Airport Referral Area.)*

The General Referral Area is defined as the area near an airport which affected by current or future airport operations. As shown in Figure 3.1-D, the Livermore Municipal Airport General Referral Area extends 4,000 feet north of I-580 between Tassajara Road and Livermore Avenue. Within the General Referral Area, *ALUC Policy Plan* hazard prevention, safety, and noise zone recommendations are applicable. Proposed land uses and activities subject to review under State ALUC law must be referred to the County ALUC for a Determination of Plan Consistency. The ALUC then makes a determination of consistency and refers it back to the City where the proposed land use is located.

The Height Referral Area delineates an area whose airspace must be kept clear of air navigation hazards. Any proposed project which might protrude into the identified airspace must be referred by the project sponsor to the Federal Aeronautics Administration (FAA) for an Aeronautical Study. The Livermore Airport Height Referral Area encompasses an area 20,000 feet from the runway in all directions and 200 feet above ground level in the Height Referral Area.

To protect future operations at Livermore Municipal Airport from restrictions imposed by new development in surrounding jurisdictions (including within the Eastern Dublin General Plan Amendment area) the Livermore City Council adopted a resolution in 1991 supporting the creation of an Airport Protection Zone (APZ). The proposed APZ prohibits the creation of new residential land use designations within 5,000 feet of the airport. This APZ would extend onto the Project site and partially overlays the General Referral Area designated in the Alameda County Airport Policy Plan as shown in Figure 3.1-D. The Livermore City Council has passed a second resolution proposing that the Alameda County Airport Land Use Commission (ALUC) include the Livermore Municipal Airport APZ in the *Alameda County Airport Land Use Policy Plan.* As of August 1992, the Livermore APZ had not been adopted by the County ALUC and therefore, the proposed APZ restrictions are <u>not</u> applicable at this time.

Resource Extraction/Agriculture. Resource extraction and agricultural uses are located on unincorporated Alameda County lands to the south of I-580 between the city boundaries of Livermore and Pleasanton. Sand and gravel deposits in this area are owned by Kaiser Industries

and constitute the largest concentration of these resources in the Bay Area. Alameda County has adopted a Reclamation Plan for the mined areas which calls for the creation of an open space and reclamation resource known as the "Chain of Lakes." The Chain of Lakes will consist of a series of open gravel pits filled with groundwater after mineral deposits have been extracted to create water recreation areas. Shadow Cliffs Regional Recreation Area located south of the quarry activities on Stanley Boulevard (see Figure 3.4-B), is the first of these recreation areas.

Residential. Medium and high density residential neighborhoods are located south of the Project Site within the City of Pleasanton. Office/Commercial uses are clustered around the Tassajara Road interchange.

Hacienda Business Park. Hacienda Business Park is the largest commercial development project in the vicinity of the planning area. Located entirely within the City of Pleasanton, it covers approximately 860 acres zoned for commercial use. Phase I of the two-phase project was initiated in 1982 and included 3.1 million square feet of office space. Planning for Phase II is currently ongoing. At the time of buildout in the year 2000, Hacienda Business Park was planned to include almost 10.18 million square feet of commercial space to accommodate approximately 36,000 employees.

As of Spring 1992, Hacienda Business Park had a total of approximately 4.9 million square feet of commercial space. It is expected that net absorption of space for Hacienda Business Park will continue to be roughly 500,000 square feet per year with an associated addition of 200 employees per year. The amount of construction will depend on the ability of the infrastructure in the Livermore-Amador Valley to accommodate development. The City of Pleasanton approved a general plan amendment in 1991 permitting the redesignation of 79 acres of the business park to residential uses. A potential of 1,358 housing units could be built under this new residential designation.

To the East

Triad Business Park (Industrial Park). The 398-acre Triad Systems Corporation parcel is located adjacent to the southeastern portion of the Project Site within the incorporated limits of the City of Livermore. It is accessed from Collier Canyon Road. The parcel is divided into a 268-acre business park (office, light industrial, commercial and hotel uses), 19 acres reserved for road easements, and 111 acres in permanent open space. The first segment of the North Canyons Parkway has been completed on the property. Undeveloped areas of the business park are zoned for light industrial uses and are currently used for livestock grazing.

Las Positas College (Public/Semi-Public). Las Positas College, one of two community colleges in the Chabot/ Las Positas Community College District, owns approximately 150 acres adjacent to the eastern boundary of the Triad Business Park. Access to the campus is via the main entrance on Collier Canyon Road. Approximately 35 of the 150 acres are currently developed with college facilities, which include an administration building, library, science, math and English buildings, a technical vocational center, parking, and an activities field. The College has about 64,200 square feet of facilities and an enrollment of approximately 5,000 students.

Las Positas College completed a *Master Plan* to guide expansion of the campus through the year 2005. The *Plan* projects that the campus will have approximately 367,500 square feet of facilities and an enrollment of about 15,200 students by the year 2005. New facilities will include a physical education center, a science center, a warehouse/maintenance complex, a performing arts center, and a student union. The *Plan* states that the campus will need a minimum of two main entrances to accommodate projected growth. The *Plan* also states that the College will need to be adequately served by public transportation in order to accommodate future students, faculty, and staff.

Agricultural/ Rural Residential. East of the Project site, most of the lands are used for grazing. Much of this land is in Williamson Act contract (see Figure 3.1-C), with the exception of those fronting on I-580 and smaller lots along lower Collier Canyon Road. A majority of the owners in the Collier Canyon Road vicinity have filed for non-renewal. These lands are included in the North Livermore General Plan Amendment area whose boundary also partially overlaps the Project site (see Figure 3.1-E). The *North Livermore General Plan Amendment* proposes three alternative land use designations in this area: County Agricultural (one dwelling unit/100 acres; Transfer of Development Credits/Agricultural (density varies according to slope of land); and Hillside Protection (transfer of development credits applicable for slopes greater than 20% and for lands outside urban service areas). Refer to the discussion in *Jurisdictional Boundaries: Potential Sphere-of-Influence Planning Concerns* for further discussion on this planning area overlap.

To the North

Alameda County Property (Public/Semi-Public). This area, approximately 358 acres, lies just north of, and adjacent to the 600-acre Alameda County property within the Project site. A new Santa Rita Rehabilitation Center was built here to replace the former facility (within the planning area) and can accommodate 2,500 inmates and 530 staff. There are also other public facilities on-site such as the Alameda County Sheriff's Firing Range and Training Center, a California Highway Patrol office and miscellaneous warehouse and storage buildings.

Agriculture/Rural Residential. North of the Project site, Contra Costa County lands include the Dougherty and Tassajara valleys and the Tassajara Hills. Most of this area is in agricultural use, primarily as rangeland for livestock grazing. A limited amount of rural residential uses occur along Tassajara Road to the north of the planning area. Tassajara Road and its interchange with I-580 provide the major access for these residences.

Contra Costa County lands adjacent to the northern Project site boundary remain largely under Williamson Act contracts with the exception of the Windemere Property and the Tassajara Valley properties to the northwest. The Windemere parcel terminated its contract in February 1992; the Tassajara Properties parcel contract will expire in February 1995 (see Figure 3.1-C). Refer to *Section 5.1:Cumulative Impacts* for a description of the Dougherty Valley (Windemere and Shapell properties) and Tassajara Valley projects proposed for these lands.

TRI-VALLEY LAND USE PLANNING AND DEVELOPMENT PROJECTS

Numerous land use and development projects in the Project site vicinity have either been proposed or are undergoing review. These proposals can be divided into two categories: public (city, county or public agency) land use planning efforts, and private development projects. Taken together, these proposals represent a possible future scenario for **cumulative** growth in the Tri-Valley. The locations of these projects in relation to the Project site are shown in Figure 5-A: *Subregional Land Use and Development.* The Project's contributions to cumulative impacts in the Tri-Valley are discussed in *Section 5.1: Cumulative Impacts.*

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The significance criteria used to determine impacts to land uses in the Project site vicinity are equivalent to those stated above in *Project Site: Land Use.*

IMPACTS AND MITIGATION MEASURES: TRI-VALLEY NON-URBAN LANDS

IM 3.1/F Conversion of Non-Urban Lands

Lands to the north and to the east of the Project site are used for grazing and some are currently in active Williamson Act contracts. The adjoining lands in North Livermore and in Contra Costa County are relatively isolated due to the lack of through-roads and their considerable distance from both I-580 and I-680. The Project proposes Rural Residential and Open Space uses in the perimeter areas adjacent to these lands. Both of these land uses allow continued grazing and would function as open, rural areas similar to the adjacent land. Because most of the Project's Rural Residential and Open Space lands are located on the Project site perimeter, they should provide a buffer between the Project and adjoining agricultural lands. Therefore, the impact of the proposed Project on adjoining agricultural land is considered insignificant.

No Mitigation is required.

IMPACTS AND MITIGATION MEASURES: ADJACENT LANDS

IM 3.1/G Potential Conflicts with Land Uses to the West

Proposed Specific Plan land uses adjacent to Camp Parks are Open Space with two pockets of Single Family residential land use. There is the possibility that the Army will substantially increase the level of activity on the base and in the Tassajara Park area. There is also the possibility that the southern part of Camp Parks may become surplus land in which case it may be sold and not developed by the Army.

Existing and future Army training activities in Camp Parks including the use of high velocity weapons, helicopters, troops and other equipment in the area adjacent to the Specific Plan area have the potential to result in substantial land use conflicts related to noise and safety, especially for residents of the two adjacent areas designated as Single Family.

The *Installation Compatibility Land Use Zone Study* submitted by the Army as part of their response to this Project's Notice of Preparation (October 1988) stated a concern that development of the Specific Plan prior to the completion of the *Camp Parks Master Plan* may substantially curtail future Army activities. Because the extent of future Army activities is not known, the Project's effects on future Army activities cannot be determined at this time. These potential conflicts are an important planning concern of this EIR and may constitute a potentially significant impact.

Mitigation Measures of the EIR

MM 3.1/1.0 *The City of Dublin should coordinate its planning activities with the Army so that compatible land uses can be formulated in the Project site vicinity. Ongoing coordination has the potential to solve future conflicts and reconcile land use incompatibilities. The City should also consult with the Army for any specific development proposals that arise as a result of the Project.*

Implementation of MM 3.1/1.0 will reduce land use conflicts to a level of insignificance.

No further mitigation is required. Noise-related impacts are addressed by *MM 3.1/3.0*

IM 3.1/H Potential Conflicts with Land Uses to the South

The Specific Plan and General Plan Amendment designate a series of urban land uses along the southern Project site boundary adjacent to Interstate 580, including Campus Office, General Commercial, and Industrial Park. Primary land uses south of the Project site are urbanized areas of the City of Pleasanton including residential, retail and business park uses as well as some agricultural land, a golf course and the Livermore Municipal Airport. The eight-lane wide Interstate 580 forms a barrier between the Project and these southern land uses. The very presence and width of the freeway are the most dominant effects on adjoining land uses both to the north and to the south of the freeway. Proposed Project land uses, are compatible with the function of the freeway and existing uses to the south. Proposed Project land uses that fall within the adopted ALUC General Referral Area and Height Referral Area are consistent with the requirements and policies of these designated areas. Thus, there are no significant land use conflicts in this area and the potential for land use impacts is insignificant.

No mitigation is required.

IM 3.1/I Potential Conflicts with Land Uses to the East

Directly east of the Project site is the Triad Industrial Park in the City of Livermore and rural residential and open space lands. Project land uses proposed adjacent to the Triad property include Industrial Park (adjacent to I-580) with Medium Density and Rural Residential designations set at a distance from the freeway. These proposed uses are similar in intensity and distribution to existing adjacent uses. Therefore, land use impacts are considered insignificant.

No mitigation is required.

IM 3.1/J Potential Conflicts with Land Uses to the North

Directly north of the Alameda County property is the new Alameda County Santa Rita Rehabilitation Center. Adjacent Project land uses include Public/Semi-Public and Medium Density Residential. East of the Rehabilitation Center, the proposed Medium Density Residential area is buffered by an open space setback of approximately 100 feet and a small ridge. Open Space designations to the north and south of this Medium Density Residential area form a 200- to 400- foot buffer between the western Specific Plan boundary and the eastern County property boundary. The provision of open space buffers along the boundary between the two properties reduces potential land use conflicts. Some future residents in the Specific Plan area immediately east of the Santa Rita Rehabilitation Center may perceive the proximity of the Rehabilitation Center as a potential land use conflict. This potential conflict may be more of a marketing concern rather than an actual land use conflict. Land use impacts are, therefore, insignificant.

Mitigation Measures of the EIR

> While no mitigations are required, the City may consider additional protections as planning progresses in this area of the Project site. Development proponents in this area and the City should consult with the Rehabilitation Center authorities to implement adequate provisions to ensure that residents in this area are protected from potential conflicts. These uses may include the use of setbacks, landscaping and fences in the development area and increased security on the County's part.

JURISDICTIONAL BOUNDARIES

The Project site lies within the boundaries of two distinct jurisdictions: incorporated city limits: and county limits. Part of the Project site lies within Dublin's sphere-of-influence (SOI). Additionally, the Project site is itself considered a planning area with its own boundary. The Project is also within, or proposes inclusion within, a number of special service district areas. For the Project to be fully implemented, changes to some jurisdictional and service district boundaries will be required.

Changes to jurisdictional, planning area or service district boundaries are administrative and political in nature and do not directly result in environmental impacts. The discussion of jurisdictional issues is intended to provide the public and decision-makers with the information required to decide whether the jurisdictional changes required to implement the Project should ultimately be approved.

SPHERE-OF-INFLUENCE

Relationship of the Project Site to Sphere-of Influence Boundaries

Sphere-of-influence (SOI) boundaries describe the probable ultimate physical boundaries and service areas of the city (or other governmental agency) and are used to determine future annexations and service district size. SOI boundaries do not confer jurisdictional control over land use. Figure 3.1-E depicts the current sphere-of-influence boundaries for Dublin, Livermore, Pleasanton and San Ramon as they relate to the General Plan Amendment area. The Specific Plan area is currently within Dublin's SOI with the exception of 14 acres located in the southeast corner which is part of the Crosby property. The majority of the GPA Increment area is currently not assigned to any City's SOI. This area is shown as the Doolan Canyon Study Area. A portion of the GPA Increment area located directly north of the Specific Plan area, however, is within Dublin's SOI. Both Dublin and Livermore have made requests to enlarge their spheres-of-influence within the General Plan Amendment area.

Alameda County Local Agency Formation Commission/City and County Boundaries

Alameda County's Local Agency Formation Commission (LAFCO) is responsible for reviewing and acting upon requests for annexation into a municipal (city) or special district boundary, and any change in the sphere-of-Influence. LAFCO's powers are authorized in the Cortese-Knox Local Government Reorganization Act of 1985. In making decisions, LAFCO is charged to consider changes in governmental organizations that provide efficient and orderly urban patterns, the delivery of necessary urban services and the appropriate preservation of open space. Part of LAFCO's mission is to discourage urban sprawl and preserve prime agricultural land according to local conditions and circumstances.

Potential Sphere-of-Influence Planning Concerns

The Project entails an expansion of the City of Dublin sphere-of-influence to eventually encompass the entire Project area. If annexation of the Specific Plan area were pursued separately from annexation of the entire Project site, there would need to be a 14-acre expansion of the SOI to include the southeast corner of the Specific Plan area (see Figure 3.1-E.) Development of the Project site will require Alameda County LAFCO approval for annexation into the City of Dublin.

There has been interest expressed by both Dublin and Livermore regarding annexation of the Doolan Canyon and Croak Road areas which currently lie outside the spheres-of-influence of both cities. The City of Livermore City Council is expected to make a decision on the *North Livermore GPA* in 1992 and subsequently petition Alameda County LAFCO for SOI changes and annexation of Doolan Canyon.

The North Livermore General Plan Amendment EIR shows three land use scenarios, all of which overlap the eastern portion of the Project site. The three scenarios designate the eastern portion of the Project site as 1/100 or one dwelling unit per 100 acres. The Livermore scenarios also show Business and Commercial Park north of Interstate 580 and adjacent to the eastern extension of Dublin Boulevard. There are also some small designations of Open Space interspersed among the 1/100 designation. Annexation of part of the eastern portion of the Dublin General Plan Amendment Area would be in conflict with the City of Livermore's annexation plans for that same area. Conversely, annexation action by the City of Livermore would be in substantial conflict with the City of Dublin's proposed General Plan Amendment for much of the same land. This is a significant planning concern.

Any conflicts regarding annexations or changes in SOIs will ultimately be resolved by the Alameda County LAFCO. On September 20, 1990, Alameda County LAFCO passed a resolution excluding the upper portion of Doolan Canyon from Dublin's SOI. The resolution also provides that the lower portion of Doolan Road is not in any city's SOI and that the Croak Road subarea remain in Dublin's SOI. Alameda County LAFCO has indicated in a letter dated June 3, 1992 and sent to the mayors of both cities that it would consider further SOI issues in this area in May 1993, even if only one city is ready to proceed at that time. Alameda County LAFCO staff assume that both cities will have completed their general plan amendment studies by early January 1993.

PLANNING AREAS

As described in *Section 2.1: Project Location*, the Project site is also referred to as "the planning area"; consequently, the boundaries of the Project site are also a planning area boundary. Planning area boundaries that occur outside the incorporated city limits do not confer regulatory authority. Their function is to show the probable physical development of unincorporated land which is related to the development of a city's incorporated area. Cities can indicate general plan land use designations in a planning area but cannot exercise land use authority until annexation is approved by LAFCO. Planning area lands are generally located adjacent to the city limits and, as in the case of the GPA Increment area, may extend beyond the city's sphere-of-influence boundary.

A portion of the Project site lies outside the City of Dublin in an unincorporated area of Alameda County. This portion of the Project site is subject to the provisions of the *Livermore-Amador Valley Planning Unit General Plan*, a component of the *Alameda County General Plan* and the *Alameda County Zoning Ordinance*. As discussed above in *Spheres-of-Influence*, the planning areas of the cities of Dublin and Livermore overlap and present planning area conflicts. This conflict is expected to be resolved by LAFCO in 1993 when it makes its ruling on whether the Doolan Canyon area should be annexed to either Dublin's or Livermore's sphere-of-influence or remain outside either SOI.

OTHER SPECIAL DISTRICTS

A number of special service districts are current or future providers of services to the Project site. Refer to *Chapter 3.4; Fire Protection*, for a discussion of the Dougherty Regional Fire Authority; *Chapter 3.4; Schools*, for a discussion of the Dublin Unified School District and the Livermore Valley Joint Unified School District; *Chapter 3.4; Parks and Recreation*, for a discussion of the East Bay Regional Park District and the Livermore Area Recreation and Park District; and *Chapter 3.5: Sewer, Water and Storm Drainage*, for a discussion of the Dublin San Ramon Services District.

Annexation of the Project site into the Dublin San Ramon Services District to provide water and sewer service and annexation/detachment from other special district boundary adjustments would require approval by Alameda County LAFCO.

CONSISTENCY WITH RELEVANT LAND USE PLANS AND POLICIES

The following section describes the major plans and policies of relevance to the Project. These include currently applicable city and county plans which have direct jurisdiction over portions of the Project site, as well as the plans and policies of adjacent areas. The identification of inconsistency with applicable plans does not necessarily constitute an environmental impact. Where inconsistencies are identified in this EIR, they are found to be planning concerns.

CITY OF DUBLIN

City of Dublin General Plan

The *Dublin General Plan* was adopted in February of 1985. It established two planning areas for the City: the Primary Planning Area encompassing the incorporated city in 1985, and an Extended Planning Area which included lands on both the western and eastern sides of the City. Figure 3.1-F shows Dublin's Extended Planning Area land use plan. This map from the *Dublin General Plan* reflects current *General Plan* guiding and implementing policies for land use development in the Eastern Extended Planning Area. The eastern boundary of the Extended Planning Area is not contiguous with Dublin's sphere-of-influence boundary. The General Plan Amendment proposes amending the eastern boundary of the Eastern Extended Planning Area so that it coincides with the eastern boundary of the Project site.

Land Use Designations

The land use plan for the Extended Planning Area, as depicted in Figure 3.1-F, shows the Alameda County property designated for Business Park/Industrial uses in the northern portion. Business Park/Industrial: Low Coverage uses are shown for the southern portion of the County property and for the lands adjacent to I-580 east of Tassajara Road. The remainder of the land located within the Eastern Extended Planning Area is designated for Residential/Open Space uses pending *General Plan* refinement studies.

Land Use Policies

According to the *General Plan*, the primary guiding and implementation policies for the Eastern Extended Planning Area are to:

- *Consider residential development proposals (including support facilities) on moderate slopes, with multi-family densities typically considered on flatter land and next to business park areas. The location, extent and density of residential development will be determined when municipal services can be provided and through General Plan refinement studies. (Note: the Dublin General Plan Amendment and Specific Plan both represent refinement studies.)*

Approval of residential development in the Extended Planning Area will require determination that:

- Utilities and public safety services will be provided at urban standards without financial burden to Dublin residents and businesses.
- Proposed site grading and means of access will not disfigure the ridgelands.
- Timing of development will not result in premature termination of viable agricultural operations on adjoining lands.

- The fiscal impact of new residential development in the extended planning area supports itself and does not draw upon nor dilute the fiscal base of the remainder of the city.

Project Consistency with the *City of Dublin General Plan*

A full consistency evaluation of *General Plan* policies and the Project is given in Table 3.1-4. The comments below provide some guidelines to interpreting and using Table 3.1-4.

Table 3.1-4 identifies existing applicable *General Plan* policies and summarizes the Project's potential consistency with each respective component. It also shows how potential inconsistencies are reconciled through new policies or implementation strategies. These reconciliations are usually contained in the General Plan Amendment or the Specific Plan. Other reconciliations recommended by the EIR are also indicated. It should be noted that a final finding of consistency would be made by the City decision makers during the Specific Plan and General Plan Amendment public hearings and may be subject to change. For this reason, the Table 3.1-4 uses the terms "potentially consistent" or "potentially inconsistent" when evaluating the Project relative to the General Plan. Reviewers should note that Table 3.1-4 refers to both the Specific Plan and the General Plan Amendment (indicated in the table as SP and GPA respectively). The Specific Plan, by its very nature, proposes development and policies at a greater level of detail and specificity than the General Plan Amendment. For this reason, Table 3.1-4 is sometimes silent relative to consistency of the General Plan Amendment because there is no proposed development that can be evaluated for certain policies at this time.

City of Dublin Zoning Ordinance/Subdivision Ordinance

The *City of Dublin Zoning Ordinance* is based on the *Alameda County Zoning Ordinance* (with a number of modifications). The *Subdivision Ordinance* is contained within the Dublin Municipal Code. Zoning district designations for the City of Dublin and adjacent areas are shown in Figure 3.1-G. Other zoning applicable to the Project is the Annexation Agreement for the County property in which the County agreed to develop the 600 acre property in accordance with the City's PD zoning, which is shown in Figure 3.1-G. As noted under Setting, implementation of the GPA or Specific Plan would require an amendment to the Annexation Agreement.

The *City of Dublin Subdivision Ordinance* regulates subdivision of property within the City boundaries. Any areas of the Project site annexed by the City of Dublin would become subject to the requirements of the *Subdivision Ordinance.*

Project Consistency with the *City of Dublin Zoning Ordinance/Subdivision Ordinance*

The Specific Plan suggests a revised City zoning district scheme consistent with the proposed underlying Specific Plan land use designations and the amended *General Plan.* This "prezoning" would become the effective zoning of the property when annexation of the Specific Plan area occurs. Prezoning for the GPA Increment area is not being considered at this time. Table 3.1-3 shows the Specific Plan recommendation for zoning district designations which correspond with the indicated respective Specific Plan land use designation:

Table 3.1-3 Recommended Prezoning for Land Use Designation's

Specific Plan Land Use	City Zoning District
Rural Residential	A
Residential Single Family	PD with R-1 base
Residential Medium Density	R-PD with R-S base
Residential Medium-High Density	R-PD with R-S base
Residential High Density	R-PD with R-4 base
General Commercial	H-1 for I-580 PD with C-1 and/or C-2 base
Neighborhood Commercial	PD with C-N base
Campus Office	C-O
Public/Semi-Public	Create new district
Open Space	Create new district
Industrial Park	PD with M-1 base

OTHER APPLICABLE COUNTY, CITY AND AGENCY PLANS

Alameda County

Alameda County General Plan

Most of the Project site is located outside the incorporated boundaries of the cities of Dublin and Livermore within unincorporated Alameda County (Figure 3.1-H). The operative plans are: the *Alameda County General Plan 1977*, (including all pertinent elements and planning unit plans); the *Alameda County Zoning Ordinance*, and the *Alameda County Airport Land Use Compatibility Policy Plan.*

The Project is located within the northwestern corner of the Livermore-Amador Valley Planning Unit (LAVPU), one of four planning units under the current *Alameda County General Plan.* The County is currently (August 1992) in the process of updating and revising its *General Plan*, including the *General Plan* for the LAVPU (adopted November 1977), which has been renamed the East County Area.

An East County Area Plan; Planning Commission Policy Options Report was released for review in December 1991; a draft of the *East County Area Plan* is tentatively set for Fall 1992. Principal policy concerns of the *East County Area Plan* are: subregional growth management; economic development in the East County traffic congestion reduction; and the preservation of environmental quality. Detailed discussion of these issues is expected between the County and incorporated cities before an *East County Area Plan* is adopted.

Until adoption of a new *East County Area Plan,* the land use designations of the existing *LAVPU General Plan* apply to the unincorporated areas of the Project Site. All of the General Plan Amendment Area in the unincorporated area is currently designated as Agriculture/Open Space on the General Plan Map (adopted November 3, 1977). The General Plan land use designations adjacent to the Project site are shown in Figure 3.1-H. The *Open Space Element* of the *Alameda County General Plan* establishes the importance of preserving open space resources (Alameda County, 1973). The *Open Space Element* is currently being updated as part of the *Alameda County General Plan Update.*

Land use policies in the *Open Space Element* stress maintaining the natural integrity of hill areas. According to the *Open Space Element*: "The preservation of ridgelines, canyons, significant stands of trees, and watercourses is of paramount importance to the protection of hill areas." The Project site and vicinity are described in the *Open Space Element* as a large, continuous area of open space that should be preserved. The *Open Space Element* suggests that Doolan Canyon become a major park and recreation preserve area. The Doolan Canyon area is shown as a preserve area on the County Open Space Plan Map.

Alameda County Zoning Ordinance

Zoning designations in the planning area and on surrounding lands are shown in Figure 3.1-G. Zoning designations for the Alameda County property within the unincorporated portion of the GPA area were agreed upon by the City and County prior to annexation. The County land adjacent to I-580 (200± acres) was pre-zoned Planned Development Business Park/Industrial: Low Coverage, and the 400± acres further north, was pre-zoned Planned Development Business Park/Industrial. Alameda County zoning would be supplanted by City of Dublin zoning upon annexation.

Contra Costa County

Contra Costa County General Plan

Contra Costa County adopted an update of its *General Plan* in January 1991. The *General Plan* includes revised portions of the *San Ramon Valley Area General Plan*, including land use policies applicable to the unincorporated areas north of the Project Site. The General Plan establishes a new Urban Limit Line (ULL) east of Tassajara Road in Contra Costa County and designates most of land north of the General Plan Amendment Area as Agricultural. No land use conflicts or consistency issues are identified between the land use proposal of the Project and the *Contra Costa County General Plan.*

Dougherty Valley Specific Plan

Contra Costa County proposes 11,000 residential units on 6,000 acres in Dougherty Valley. This planning effort parallels the City of San Ramon Specific Plan for the same area (refer to *City of San Ramon* below.)

City of Livermore

City of Livermore Community General Plan

The *Livermore Community General Plan 1976-2000* was adopted in February of 1976 and was last updated in 1988 (City of Livermore, 1988). Land use designations for City of Livermore incorporated areas adjacent to the Project site are shown in Figure 3.1-H.

As part of its *General Plan*, the City of Livermore has designated a North Livermore planning area. Three planning subareas have been mapped: Areas A, B, and C. A general plan amendment for Area A, known as the Springtown area, was adopted by the City of Livermore in March 1988.

North Livermore General Plan Amendment/EIR/(Jan 30, 1992)

A General Plan Amendment and EIR *(North Livermore General Plan Amendment)* have been recently prepared. The North Livermore GPA area extends into the Project site. The *North Livermore General Plan Amendment* studied four population buildout alternatives. In April 1992, the Livermore Planning Commission recommended adoption of the lowest growth alternative (10,000 projected population) to the Livermore City Council which will hold public hearings on the proposal. Under

the 10,000 Population Plan, a maximum of 3,713 housing units and 5.17 million square of commercial/office space would be permitted. The *North Livermore General Plan Amendment* is completed and is expected to be acted upon by the Livermore City Council some time in late 1992.

As shown in Figure 3.1-E, a substantial portion of the GPA area and the North Livermore General Plan Amendment area overlap. Neither Dublin nor Livermore can annex this overlap area until Alameda County LAFCO has made a decision concerning the sphere-of-influence boundaries for both cities. (Refer to *Potential Sphere-of-Influence Planning Concerns* above.)

Livermore Northwest Area General Plan Amendment/EIR

A General Plan Amendment and EIR were completed in June 1987 for Livermore's Northwest Area, located immediately to the east and south of the planning area. The Northwest Area covers 300 acres in the east corner of Collier Canyon Road and I-580 within Livermore's incorporated limits. The land is currently designated for industrial development. The Northwest Area project would change the site's current General Plan land use designation from Low-Intensity Industrial to Urban Medium Residential (4.5 dwelling units per acre), Community Commercial and Office Commercial. The Northwest Area application is currently under review by the City of Livermore, but no decisions are expected to be made until the studies for North Livermore Areas B and C are completed.

City of San Ramon

City of San Ramon General Plan

The City of San Ramon, located in Contra Costa County due north of Dublin, was incorporated in 1983. The *San Ramon General Plan,* applicable to incorporated land west of Tassajara Road, was adopted in November of 1986 (City of San Ramon, 1986). Issues addressed in the *San Ramon General Plan* which are relevant to the Project include future development in the Dougherty Valley and Bishop Ranch. Specific development projects and land use planning efforts for these areas are discussed in *Chapter 5.1: Cumulative Impacts.*

Dougherty Valley Growth Management and Specific Plan

This plan proposes 11,000 residential units and 313,000 square feet of non-residential space on the Windemere and Shapell properties. Topographic conditions limit access to Dougherty Valley from the west and require that Dougherty Road be a main access route. Future north-south routes connecting with the Hacienda Road/I-580 interchange may be proposed. Due to the proximity of the Windemere and Shapell properties to the Project site (see Figure 5-A), development of these areas should be monitored and coordinated carefully with planning for the Project.

City of Pleasanton

City of Pleasanton General Plan

The City of Pleasanton adopted a new *General Plan* in 1986. Policy issues addressed in the Pleasanton Plan of relevance to the Project include overall traffic conditions on Tri-Valley highways and interchanges, access to Hacienda Business Park, and the creation of a jobs/housing balance in the Tri-Valley area.

Pleasanton's Level of Service (LOS) standard is a policy addressing the financing and timing of traffic improvements, many of which affect Dublin and the Project site. This standard requires developers of major business parks to limit traffic volumes to LOS D at critical intersections or to develop mitigation to return traffic volumes to these standards. The North Pleasanton Improvement District

(NPID) was formed as an assessment district which allows developers to comply with the City's standard.

The *City of Pleasanton General Plan* indicates an upgrade for the Fallon/El Charro Road interchange. Currently, the interchange is used primarily by sand and gravel trucks, but it is an important access for the GPA area as well as for the proposed future development in the Stoneridge Drive area in Pleasanton. The El Charro Road Study outlines improvements to the interchange to accommodate overall traffic increases and addresses the traffic conflicts caused by the heavy truck use of the interchange. This interchange improvement is addressed further in *Section 3.3: Traffic and Circulation.*

Bay Area Rapid Transit District (BART)

BART Extension Plans

As part of its regional expansion program, the Bay Area Rapid Transit District (BART) is constructing an extension from Bay Fair Station in San Leandro into the Tri-Valley. The EIR and preliminary engineering on the extension project (known as the Dublin/Pleasanton Extension, or DPX) were completed in February 1990. In 1991, station and parking sites were selected and construction began on the rail right-of-way in the I-580 median. New BART stations will be located in Castro Valley, West Dublin/Pleasanton (adjacent to Stoneridge Mall) and East Dublin/Pleasanton (adjacent to Hacienda Business Park).

As of April 1992, the public participation phase of the station design process had been completed and station designs and engineering were being finalized to reflect public input. Construction of the West Dublin/Pleasanton station was expected to begin in May 1993 and East Dublin/Pleasanton construction would commence a few months later in Fall 1993. The final funding and construction schedules are not yet finalized and the indicated dates may be postponed. The funding schedule for station construction provides for completion of the Castro Valley and East Dublin/Pleasanton stations prior to West Dublin/Pleasanton. West Dublin/Pleasanton will operate full service from a temporary "shell" structure until funds for station completion are secured. This project is discussed further in *Section 3.3: Traffic and Circulation.*

United States Army

Camp Parks Master Plan

The Army is finalizing a comprehensive 20-year *Master Plan* for Camp Parks. A draft of the *Master Plan* has not yet been released for public review. Changes envisioned by the *Master Plan* will probably include the intensification of current uses, and the designation of some acreage fronting on I-580 as surplus land. Compatibility of future land uses proposed in the *Master Plan* with Project land uses are discussed in **IM 3.1/G: Potential Conflicts with Land Uses to the West.**

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
RESIDENTIAL		
GP 2.1.1.A encourage housing of varied types, sizes, and price to meet current and future needs of all residents.	Potentially consistent. The SP and the GPA provide a full range of housing types and prices.	None needed
GP 2.1.2.A Avoid economic segregation by City sector.	Potentially consistent. The SP and the GPA provide housing densities from very low to very high (25+du/ac) which would provide for all economic sectors.	None needed
IP 2.1.2.C Require a mixture of dwelling types in large projects.	Potentially consistent. The SP and GPA provide a wide array of both dwelling unit types and densities.	None needed
GP 2.1.3.A Avoid abrupt transitions between single-family development and higher density development on adjoining sites.	Potentially consistent. There is no higher density development on adjoining Single Family sites.	None needed.
IP 2.1.3.B Require all site plans to respect the privacy and scale of residential development nearby.	Potentially consistent. There is no residential development nearby. SP layout is designed to consider privacy.	None needed.
IP 2.1.3.C Require a planned development zoning process for all development proposals over 6.0 units per gross residential acre.	Potentially consistent. SP Implementation 12.2.7 requires Planned Development zoning for all residential districts except Rural Residential.	None needed for SP. The GPA Increment would require PD zoning when further development is proposed
GP 2.1.4.A Consider residential development proposals (including support facilities such as neighborhood shopping centers, schools and parks) on moderate slopes, with multi-family densities typically considered on flatter land and next to business park areas.	Potentially consistent. The SP was designed to place land uses more intense than single-family on the flatter slopes.	The GPA supplants this policy with new language that promotes a balanced mixed-use community that is "well integrated with both natural and urban systems". The SP contains policies that protect sloping land to the extent feasible.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
IP 2.1.4.B The location, extent and density of residential development will be determined when municipal services can be provided and through GP refinement studies.	Potentially consistent. The SP represents a GP "refinement study" which includes programs for the provision of municipal services.	The GPA supplants this IP language with reference to the SP and the need for additional specific plans in the remainder of the Eastern Extended Planning Area. Further refinement studies would be needed for the GPA Increment area.
IP 2.1.4.C Approval of residential development in the extended planning area will require determinations that: 1)Utilities and public safety services will be provided at urban standards without financial burden to Dublin residents and businesses; 2)Proposed site grading and means of access will not disfigure the ridgelands; 3)Timing of development will not result in premature termination of viable agricultural operation on adjoining lands; 4)The fiscal impact of new residential development in the extended planning area supports itself and does not draw upon and dilute the fiscal base of the remainder of the City.	Potentially consistent. The SP contains language and performance standards to ensure that utilities and safety standards are provided, that specific mitigation measures to protect the ridgelands are implemented, and that development pay for the full cost of providing needed infrastructure. Phasing and buffering around the perimeter of the SP area should not affect agricultural uses on adjoining properties.	The GPA amends IP 2.1.4.C to provide for project consistency with all applicable GP and SP policies. Also, GP 3.2.A has been amended to state that the City does not generally support the cancellation of Williamson Act contracts and that agricultural activities should continue until such time that a proposal consistent with the General Plan and the SP is made.
COMMERCIAL/INDUSTRIAL		
GP 2.2.4.A Consider providing space for new businesses and for expansion of existing Dublin firms.	Potentially consistent. The SP and the GPA combined commercial, industrial and public/semi-public uses provide for approximately 11.6 million square feet of development and about 29,540 new jobs. This should be sufficient opportunities for a wide variety of businesses.	GP 2.2.4.A has been supplanted with new language to encourage a full range of commercial and employment generating use to meet the needs of the City and the Tri-Valley Area.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
IP 2.2.4.D Prior to planning and/or building permit approval of more than 9,000 of the potential jobs in the Extended Planning Area, one of more Specific Plans shall be developed to designate sufficient land for housing in reasonable relationship to existing jobs and jobs being proposed; and to demonstrate how needed municipal services will be provided.	Potentially consistent. The SP implements this policy, however it is not tied into the 9,000 job threshold. The SP would result in a net deficit of 8,106 fewer employed residents than jobs. By comparison, the entire GPA area would result in net deficit of 544 which would be a ratio o 1.02:1.0.	The GPA deletes this policy. Policies 4-26 and 4-27 in the SP call for maintaining a balance of residential growth and employment generating uses and for ensuring a balance within the Planning Area as it develops.
OPEN SPACE FOR PRESERVATION OF NATURAL RESOURCES AND PUBLIC HEALTH AND SAFETY		
GP 3.1.A Preserve oak woodlands, riparian vegetation and natural creeks as open space for their natural resource value.	Potentially inconsistent for the SP. While SP policies 6-9, 6-10, 6-11 and 6-12 call for protection of natural areas "wherever possible", preservation of these natural areas as open space is not always achieved and some development is allowed.	SP policies 6-15 and 6-16 protect and preserve identified high value habitat areas. Other natural areas not considered high value may receive additional protection through the imposition of mitigation measures and development prohibitions in designated natural areas. Similar policies needed for the GPA Increment area.
GP3.2.A Maintain slopes predominantly over 30% (disregarding minor surface humps or hollows) as permanent open space for public health and safety.	Potentially inconsistent for the SP. The SP would allow limited development in some areas of greater than 30% slope, even though the overall emphasis of the open space policies is to maintain large and continuous open space areas. Cannot be evaluated for GPA Increment area without a development proposal.	SP program 6A calls for detailed review of proposed development on open space areas. The SP provides for additional restrictions and design modification if necessary to be consistent with the General Plan. SP policies 6-32 to 6-38 provide guidance for grading and development on hillsides.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
AGRICULTURAL OPEN SPACE		
GP 3.2.A Maintain lands currently in Williamson Act agricultural preserve as rangeland, provided that specific proposals for conversion to urban uses consistent with the General Plan may be considered not sooner than two years prior to contact expiration.	Potentially inconsistent. Under this policy, the City could not consider development until 1997 or 1998 in some areas of the SP. Some tracts in the GPA Increment area are in active contracts and non-renewal notices have not been filed.	The GPA amends GP 3.2.A to delete the reference to a two-year waiting period prior to development consideration. The revised language refers to compelling public reasons and the desire of the landowner to cease agricultural activities and pursue development consistent with applicable GP and SP policies.
IP 3.2.B Approval of development of agricultural land not under contract shall require findings that the land is suitable for the intended use and will have adequate urban services and that conversion to urban use will not have significant adverse effects on adjoining lands remaining under contract.	Potentially consistent. Adjoining lands under active contract are to the north and east. These lands are adjacent to GPA Rural Residential and Open Space designated areas and should not be adversely affected.	Further implementation of the GPA Increment area needs to ensure that perimeter development provides adequate buffers between adjacent agricultural lands.
OPEN SPACE FOR OUTDOOR RECREATION (See Section 3.4,Parks and Recreation		
GP 3.3.A Expand park area to serve new development.	Potentially consistent. The SP includes a variety of types and sizes of parks throughout the SP area.	The GP policy has been refined to state, "Expand park area throughout the primary and extended planning areas to serve new development.
GP 3.3.E Restrict structures on hillsides that appear to project above major ridgelines.	Potentially consistent. SP policies 6-29 and 6-31 restrict ridgeland development consistent with the GP policy.	None needed.
IP 7.7.B Require that land designated as open space through development approvals be permanently restricted to open space use by recorded map or deed.	Potentially inconsistent. While SP policies 6-6, 6-7 and 6-8 call for the preservation of open space, no specific implementation plans relative to map or deed restrictions are proposed. Not applicable to GPA Increment area at this time.	Amend SP Action Program 6 to include provisions for permanent open space restrictions through map or deed restrictions. Insure that GPA Increment refinement policies incorporate similar programs
IP 7.7.C Require revegetation of cut and fill slopes.	Potentially consistent. SP policy 6-22 calls for revegetation of all disturbed areas.	None needed.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
IP 7.7.D Require use of native trees, shrubs and grasses with low maintenance costs in revegetation of cut and fill slopes.	Potentially consistent. SP policy 6-22 calls for use of native trees, shrubs herbs and grasses for revegetation of disturbed areas.	None needed.
IP 7.7.F Prohibit development within designated open space areas except that designed to enhance public safety and the environmental setting.	Potentially consistent. The SP does not provide for development in designated Open Space areas.	None needed.
IP 3.3.M Promote inclusion of hiking, bicycling and/or equestrian trails within designated open space areas.	Potentially consistent. SP policy 6-3 and 6-5 provide for convenient and adequate access to and between designated open space areas.	None needed.
PUBLIC SCHOOLS (See Section 3.4, Schools)		
IP4.1.B Initiate preparation of site plans or specific plans jointly with School District prior to sale.	Potentially inconsistent. SP Program 8B calls for working with the school district for the development and funding of schools, but does not link such work to a specific time.	Both IP 4.1.B and SP policy 8B should be amended to clarify the timing of development/school district coordination. The term "prior to sale" needs to be clarified.
MUNICIPAL SERVICES (See Sec. 3.4, Solid Waste and Sec. 3.5, Sewer, Water and Storm Drainage		
GP 4.3.A Expand sewage treatment and disposal capacity to avoid constraining development consistent with the General Plan.	Potentially inconsistent. Neither the 4.2MGD SP demand nor the 5.6MGD GPA demand can be accommodated by the 0.64MGD capacity available at the DSRSD treatment plant. Neither the SP nor the GPA is clear on the timing of the treatment plant expansion relative to actual service demand.	SP policy 9-4 and/or 9-6 need to be amended to link development to the capacity of actual or planned wastewater facility expansion. Implement Mitigation Measures 3.5/11 and 12. Similar mitigation to be applied to the GPA as well.
GP 4.3.B Cooperate with Alameda County as necessary for adoption and implementation of County Solid Waste Management Plan.	Potentially consistent. SP Action Program 8K calls for the development of a solid waste management plan for Eastern Dublin.	None needed.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
GP 4.4.A Base General Plan proposals on the assumption that water supplies will be sufficient and that local wells could be used to supplement imported water if necessary.	Potentially inconsistent. The SP assumes that DSRSD will provide adequate water for the project, however, it has not been shown that DSRSD will obtain all water needed from Zone 7 to meet project demand. The GPA makes no such supply assumptions.	The City should consider the availability of water on a broader basis than the assumption that it will be sufficient to serve the project. Adopt Mitigation Measures 3.5/26-31 to insure adequate supply and reliability.
CIRCULATION AND SCENIC HIGHWAYS (See Sec. 3.3, Traffic and Circulation and Sec. 3.8, Visual Resources		
GP 5.1.A Improve freeway access.	Potentially consistent. SP policy 5-9 calls for additional lanes on I-580 as well as improved interchanges and access.	None needed. The GPA also includes amended Implementing policy to improve access to I-580.
GP 5.1.D Reserve right-of-way and construct improvement necessary to allow arterial and collector streets to accommodate projected traffic with the least friction.	The SP provides for a major road improvement program to carry community and sub-regional traffic through the SP area.	None needed.
IP 5.1.I Prevent misuse of neighborhood streets by through traffic.	Potentially consistent. SP policy 5-8 call for design means to discourage through and high speed traffic on neighborhood streets.	None needed.
GP 5.2.B Support improved local transit as essential to a quality urban environment, particularly for residents who do not drive.	Potentially consistent. SP policies 5-10 through 5-14 provide a number of opportunities for public transit throughout the SP area.	None needed.
GP 5.4.A Provide safe bike routes along major arterial streets.	SP policy 5-17 and implementation of the bicycle route system shown on SP Figure 5.3 provide a fairly substantial bicycle route network.	None needed.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
GP 5.6.A Incorporate previously designated scenic routes in the General and work to enhance a positive image of Dublin as seen by through travelers.	Potentially consistent. SP policies 6-31 and Gateway Design Guidelines in Section 7.4 provide for enhancing the visual resources along scenic corridors and other "gateway" entrances to the project. Designated scenic highways in County General Plan in the Planning Area are Tassajara Road, Doolan Road and I-580. The current City GP does not designate scenic highways.	None needed. The GPA incorporates the County designated scenic highways as adopted City-designated scenic routes.
IP 5.6.B Exercise design review of all projects within 500 feet of a scenic route and visible from it.	Potentially consistent. SP Program 6R requires projects with potential impacts on scenic corridors to submit detailed visual analyses with development applications.	None needed. The GPA amends GP 5.6.B to require design review for projects visible from a designated scenic route.
HOUSING (See Sec. 3.2, Population, Employment and Housing)		
GP 6.3.A Encourage housing of varied types, sizes, and prices to meet current and future housing needs of all Dublin residents.	Potentially consistent. The SP and the GPA provide a wide variety of housing densities, sizes and types. Housing diversity is a primary goal of the SP.	None needed.
GP 6.3.C Ensure that housing in Dublin will have adequate public services and will be accessible to public facilities and employment and commercial centers.	Potentially consistent. SP Section 4.4, Residential Land Use, provides an number of policies relative to access to facilities and employment centers. Sections 8, Community Services and Facilities, and Section 9, Sewer, Water and Storm Drainage, provide a number of policies and action plans to ensure adequate public services and facilities.	As noted above, the SP is not clear on the linkage between the availability of actual wastewater treatment capacity and domestic water supply and the development of the SP area. Such clarification should be made. Similar policies to be applied to GPA Increment area.
RIPARIAN VEGETATION (See Sec. 3.7, Biological Resources)		
GP 7.1.B Promote access to stream corridors for passive recreational use and to allow stream maintenance and improvements as necessary, while respecting the privacy of owners of property abutting stream corridors.	Potentially consistent. SP policy 5-15 provides for trails along stream corridors. Action Program 5C provides for a 300 foot setback between the Tassajara Creek Trail, the main stream corridor trail, and nearby development.	The SP and GPA should consider a setback or performance standard for other stream corridor trails.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
IP 7.1.D Require open stream corridors of adequate width to protect all riparian vegetation, improve access and prevent flooding caused by blockage of streams.	Potentially consistent. SP Policy 5-15 provides for access to creeks. Policy 9-8 calls for preservation of natural creek bottoms and side slopes. Action Programs 9R and 9S outline storm drainage and flood control programs.	None needed.
IP 7.1.E Require revegetation of creek banks with species characteristic of local riparian vegetation, where construction requires creekbank alteration.	Potentially consistent. SP Policies 6-11, 6-12 and 9-8 call for revegetation of creekbanks with native species for both erosion control and for habitat enhancement.	None needed.
GP 7.2.A Maintain natural hydrologic systems.	Potentially consistent. SP Policy 6-12 calls for maintaining natural stream channels rather than replacement with underground drainage systems. In combination with other policies and action programs, natural hydrologic systems should be maintained as much as possible.	None needed.
HILLSIDES AND GRADING		
GP 7.2.B Regulate grading and development on steep slopes.	Potentially consistent. SP Policies 6-32 to 6-38 call for a number of grading standards and measures of review.	None needed.
IP 7.2.F Restrict development on slopes over 30 %.	Potentially consistent. The SP does allow limited development on slopes over 30%, however, the emphasis is to generally discourage development on steep slopes while providing a number of restrictions and development standards for steep areas.	None needed.
OAK WOODLANDS (See 3.7, Biological Resources)		
GP 7.3.A Protect oak woodlands.	Potentially consistent. There are no oak woodlands per se, in the planning area. There are, however, a number of individual and some stands of coast live oaks are found around the site and in the northern riparian forest.	None needed.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
IP 7.3.B Require preservation of oak woodlands where woodlands occupy slopes that otherwise could be graded and developed, permit allowable density to be transferred to another part of the site. Removal of an individual oak tree may be considered through the project review process.	Potentially consistent. As noted above, there are no oak woodlands on the project site. The SP discourages the removal of trees, but allow such removal for necessary construction improvements.	The SP should include an action program that outlines the removal and replacement of oak trees.
AGRICULTURAL LANDS (See Sec. 3.1, Agricultural Lands)		
GP 7.5.A Prevent premature urbanization of agricultural lands.	Potentially consistent. Other GP policies (GP3.2.A) are tied more the conversion of Williamson Act lands. IP 2.1.4.C allows development in the extended planning area, which are agricultural lands, when various conditions are met.	The GPA amends GP 3.2.A to state that agricultural activities should continue until such time that a proposal consistent with the General Plan and the SP is made.
IP 7.5.B Approval of urban development shall require findings that the land is suitable for the proposed use and will have adequate urban services; and that conversion to urban use will not have significant adverse effects on adjoining lands remaining under Williamson Act contract.	Potentially consistent. SP Chapters 8 and 9 provide for the adequacy of urban services. Adjoining lands remaining under Williamson Act contracts are located to the north and east of the planning area where designations are Rural Residential and Open Space. Development in these areas should not adversely affect adjoining agricultural lands.	None needed.
ARCHAEOLOGIC AND HISTORIC RESOURCES (See Sec. 3.9, Cultural Resources)		
GP 7.6.B follow state regulations--Public Resources Code Sections 21083.2(c) and (d)--regarding discovery of archaeological sites, and Historical Resources, as defined in Section 5020.1 of the Public Resources Code.	Potentially consistent. SP Policies 6-24 through 6-27 require a process of discovery, analysis and mitigation for historic and archaeological resources.	None needed.
SEISMIC SAFETY (See Sec. 3.6, Soils, Geology and Seismicity)		

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

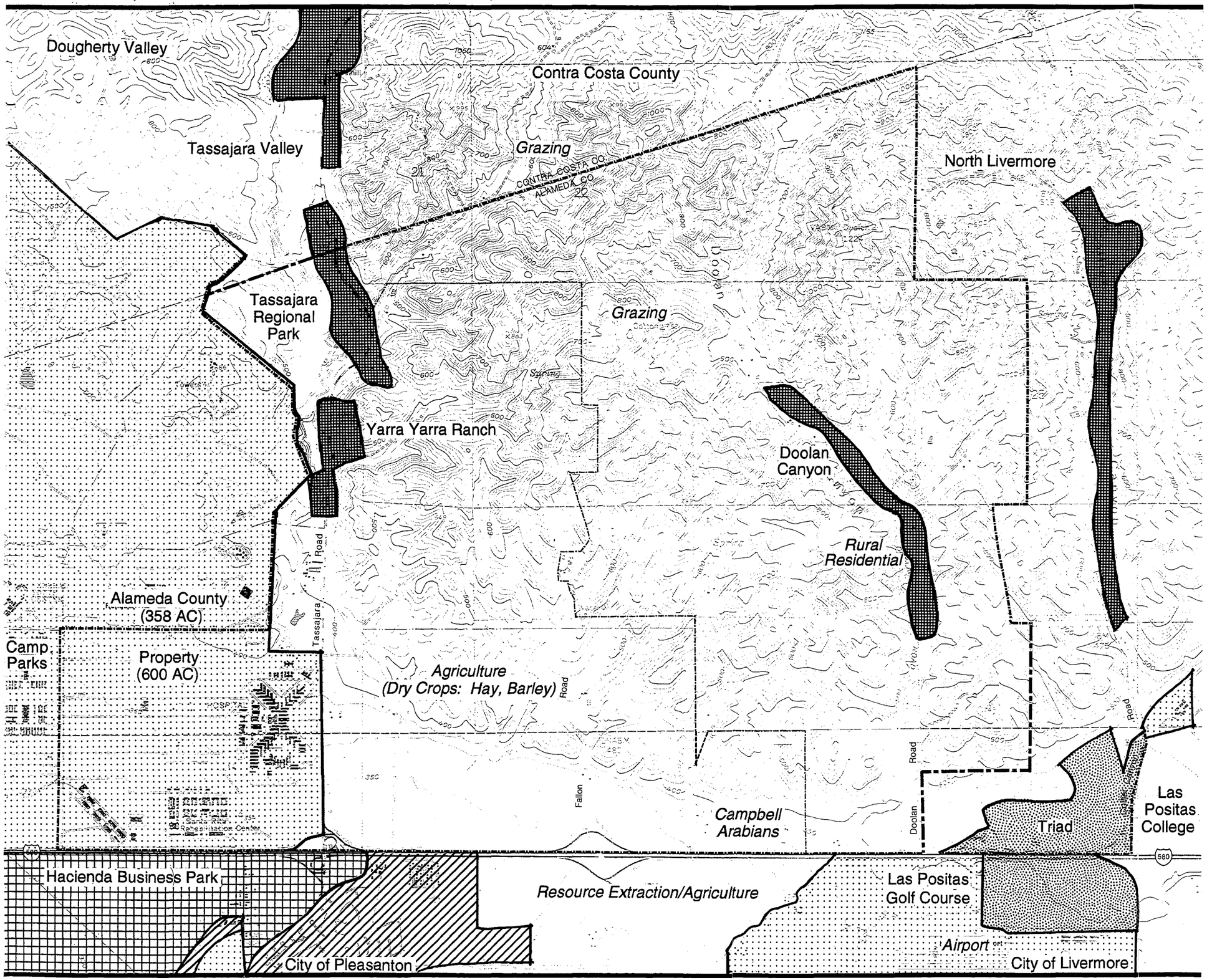
Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
GP 8.1.A Geologic Hazards shall be mitigated or development shall be located away from geologic hazards in order to preserve life, protect property, and reasonable limit the financial risks to the city of Dublin and other public agencies that would result from damage to poorly located public facilities.	Potentially consistent. SP Section 6.4.1 provides for a process of review and general restrictions on steep slopes, fill, landslides and expansive soils. While the text mentions a range of conditions that would require site-specific investigations, there is no specific reference to the risks associated with ground shaking.	A policy or action program should be added to require more site specific investigations and mitigations relative to critical facilities such as schools.
IP 8.1.1.B Structures intended for human occupancy will be at least 50 feet away from any active fault trace; freestanding garages and storage structures may be as close as 25 feet. These distances may be reduced based on adequate exploration to accurately locate the fault trace.	Potentially consistent. The geotechnical investigation found no active fault traces in the planning area. However, the inferred traces of the Mocho and Parks faults may exist on site, but are as of yet, unproven.	None needed.
SAFETY (See Sec. 3.4, Fire Services and Sec. 3.7, Biological Resources)		
IP 8.2.2.C A fire protection buffer zone shall be provided around the perimeter of residential development situated adjacent to undeveloped open space land.	Potentially consistent. SP Policy 8-6 requires a buffer zone as well as other fire safety programs.	None needed.
GP 8.2.3.A Regulate development in hill areas to minimize runoff by preserving woodlands and riparian vegetation. Retain creek channels with ample right-of-way for maintenance and for maximum anticipated flow.	Potentially inconsistent. While the SP regulates development in the hill areas, it does allow for removal of woodlands and riparian vegetation under certain conditions and with replacement. Sufficient right-of-ways for creeks are maintained.	To be consistent with this policy, it appears that either the GP would have to be amended to allow woodlands and riparian vegetation to be removed under certain conditions or the SP would be amended to preserve all woodland and riparian areas.
IP 8.2.3.B Require dedication of broad stream corridors as a condition of subdivision approval.	Potentially consistent. Action Program 6G requires dedication along both sides of a stream as a condition of subdivision approval.	None needed.
IP 8.2.3.C Protect riparian vegetation and prohibit removal of woodlands. Removal of an individual oak tree may be considered through the project review process.	Potentially inconsistent. The SP does not prohibit the removal of woodlands as noted previously.	See discussion for GP 8.2.3.A above.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
LAND USE
Table 3.1-4
PROJECT CONSISTENCY WITH CITY OF DUBLIN GENERAL PLAN (1985)

Pertinent General Plan Policies	Project Consistency Evaluation	Policy Reconciliation
IP 8.2.3.D Require drainage studies of entire small watersheds and assurance that appropriate mitigation measures will be completed as needed prior to approval of development in the Extended Planning Area.	Potentially consistent. Action Program 9R requires a drainage plan for each development application prior to development approval.	None needed.
NOISE (See Sec. 3.10, Noise)		
GP 9.0.A Where feasible, mitigate traffic noise to levels indicated by Table 4: Land Use Compatibility for Community Noise Environments.	Potentially consistent. SP Policy 6-45 requires adequate mitigation to conform with the State Land Use Compatibility Standards and the policies and standards in the City's Noise Element.	None needed.
GP 9.0.G Review all multi-family development proposals within the projected 60 CNEL contour for compliance with noise standards--as required by State law.	Potentially consistent. The above discussion would be applicable for multi-family development projects as well.	None needed.

FOOTNOTES:

GP: City of Dublin General Plan Guiding Policy
IP: City of Dublin General Plan Implementing Policy
SP: Eastern Dublin Specific Plan
GPA: Eastern Dublin General Plan Amendment



Existing Land Use: Project Site & Vicinity

Legend

- General Plan Amendment Area
- Specific Plan Area
- Agricultural Uses/Open Space
- Public/Semi Public Facilities
- Office/Commercial
- Light Industrial
- Residential
- Rural Residential

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.1 – A**

Acres 10 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4

Agricultural Suitability

Legend

- General Plan Amendment Area
- Specific Plan Area
- Locally Important Farmland
- Approximate Urbanized Area
- Other

Source: U.S. Soil Conservation Service, June 1982.

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.1 – B**

Acres: 10, 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4

Williamson Act Agreements

Legend

Agreements in Force

Agreements Non-Renewed

	OWNER	ACREAGE
1	Chang Su-O-Lin	1244.0
2	Moura	12.5
3	Vargas	5.0
4	Herrera	7.93
5	Haight	2.10
6	Mission Peak Homes	67.83
7	Redgwick	160.0
8	Silvera	91.0
9	Plato	10.0
10	Zimmer	10.0
11	Raley	3.75
12	Gygi	1.0
13	Tassajara Regional Park	27.2
14	Koller	71.56
15	Casterson	19.19
16	Alameda County Surplus Property Authority	600.0
17	United States of America	4.17
18	Dublin Land Company	80.14
19	Pao-Lin	306.04
20	Jordan	189.12
21	TMI	135.62
22	Anderson	48.90
23	Righetti	48.78
24	Branaugh	39.8
25	Campbell	8.81
26	Crosby	14.0
27	Moller	363.0
28	Bailey	513.60
29	Doolan Ranch (West)	215.09
30	Jones	92.37
31	Doolan Ranch (East)	568.24
32	Fallon Enterprises	314.42
33	Jones and Muehlhausen	137.74
34	Silva	20.06
35	Mottin	9.97
36	Ogelvie	10.0
37	Nelson	5.0
38	Foscalina	9.85
39	Akins	20.0
40	Funk	20.0
41	Funk	10.0
42	Morgan	4.91
43	Mandeville	169.90
44	Doolan Ranch (East)	304.32
45	Flanigan	95.59
46	Croak	162.0
47	Bloom	87.52
48	Vij	113.33
49	City of Livermore	7.12

~~14.0~~ 186.35

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.1 - C**

Acres: 10, 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4

Airport Referral Area

Legend

- General Plan Amendment Area
- Specific Plan Area
- Height Referral Area
- General Referral Area
- Proposed Airport Protection Zone

Source: Alameda County Airport Policy Plan

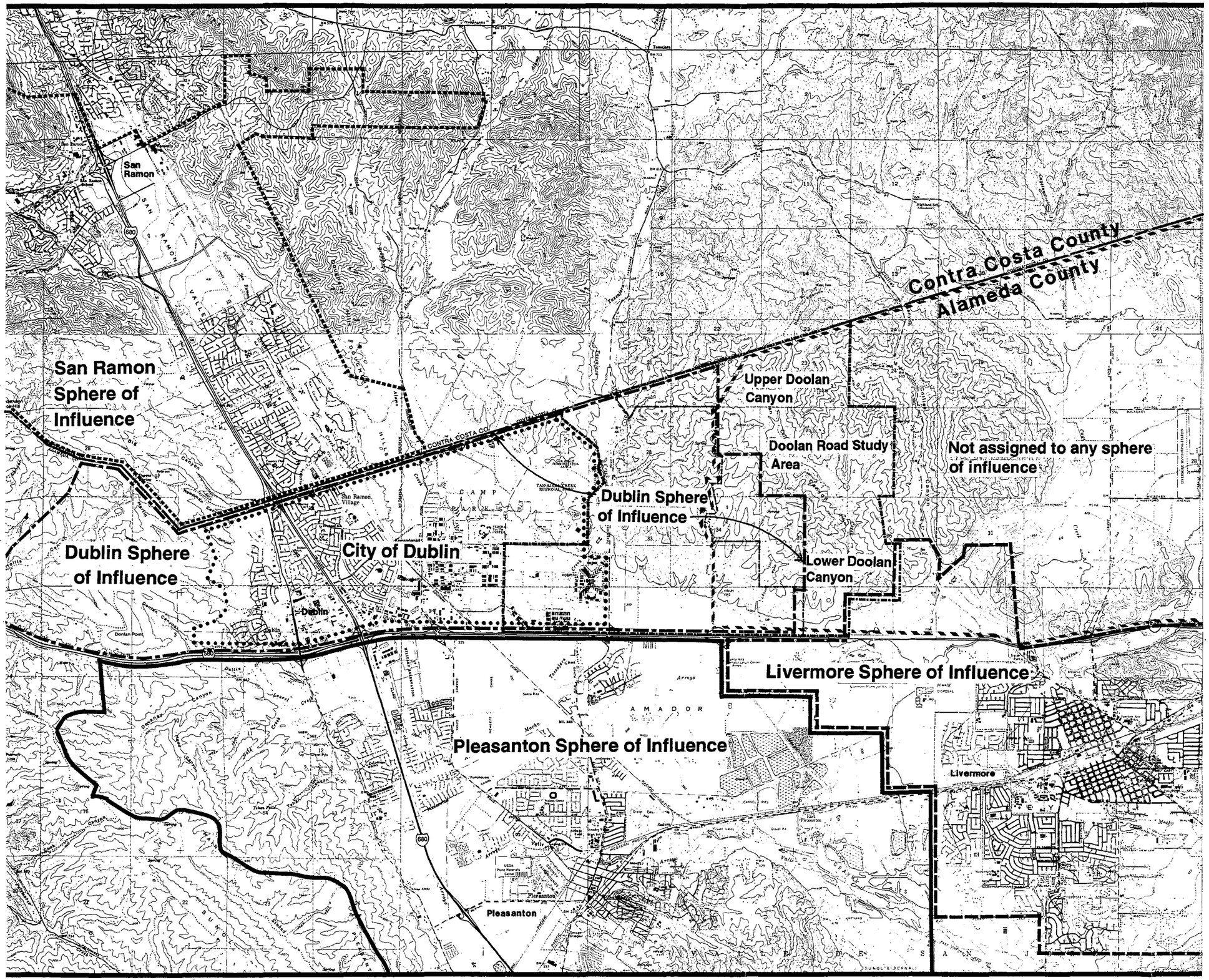
EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.1 - D**

Acres: 10, 40, 160

0 2000 4000 Feet

0 1/4 1/2 1 Mile 2



Jurisdictional Boundaries

Legend

- General Plan Amendment Area
- Specific Plan Area
- North Livermore GPA Area
- Dublin Sphere of Influence
- Livermore Sphere of Influence
- Pleasanton Sphere of Influence
- San Ramon Sphere of Influence
- County Line
- City of Dublin Limits

Source: Alameda County, Contra Costa County

EASTERN DUBLIN GPA • SP • EIR

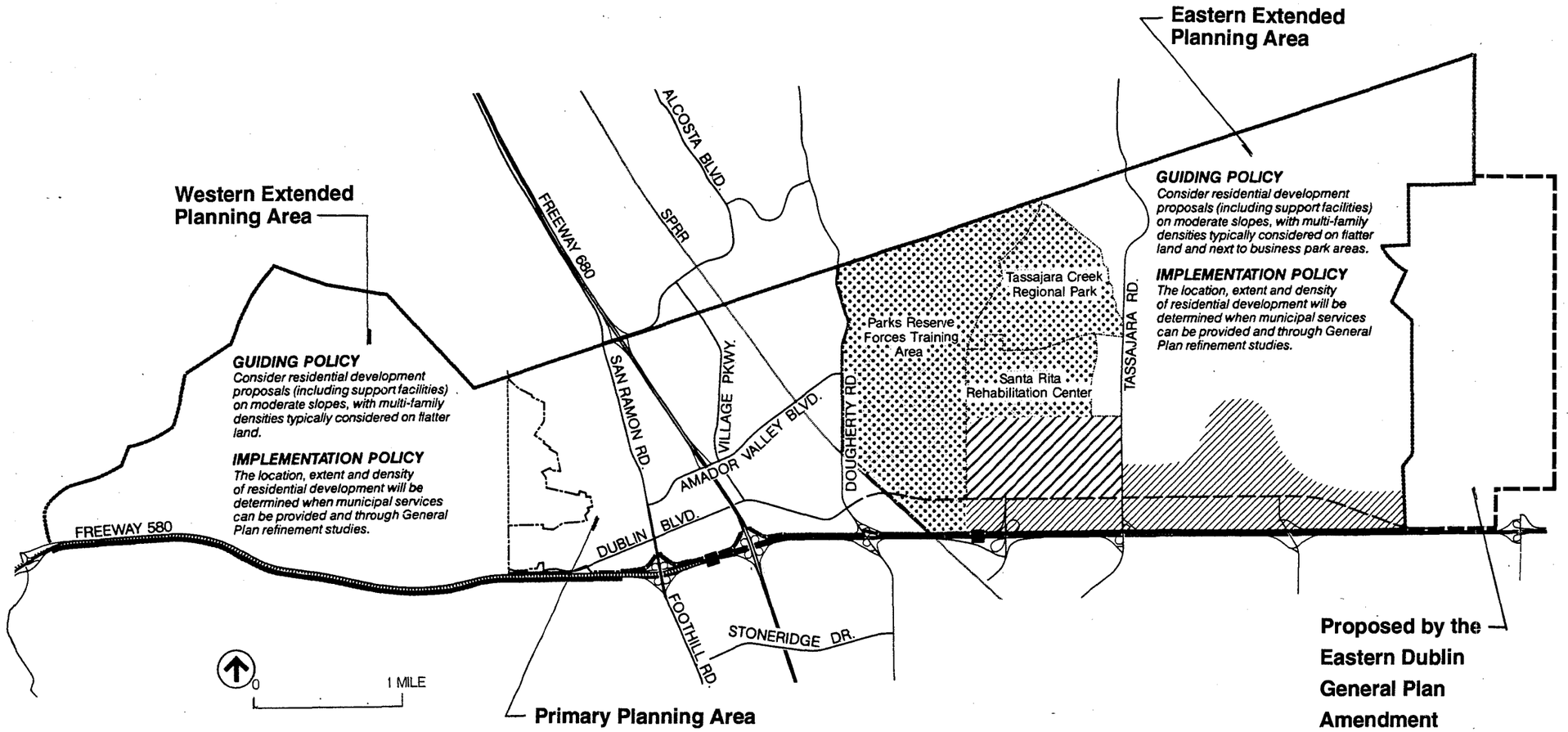
Wallace Roberts & Todd **Figure 3.1 - E**

Acres: 10, 40, 160

0 2000 4000 Feet

0 1/4 1/2 1 Mile 2

Dublin General Plan - Primary and Extended Planning Areas

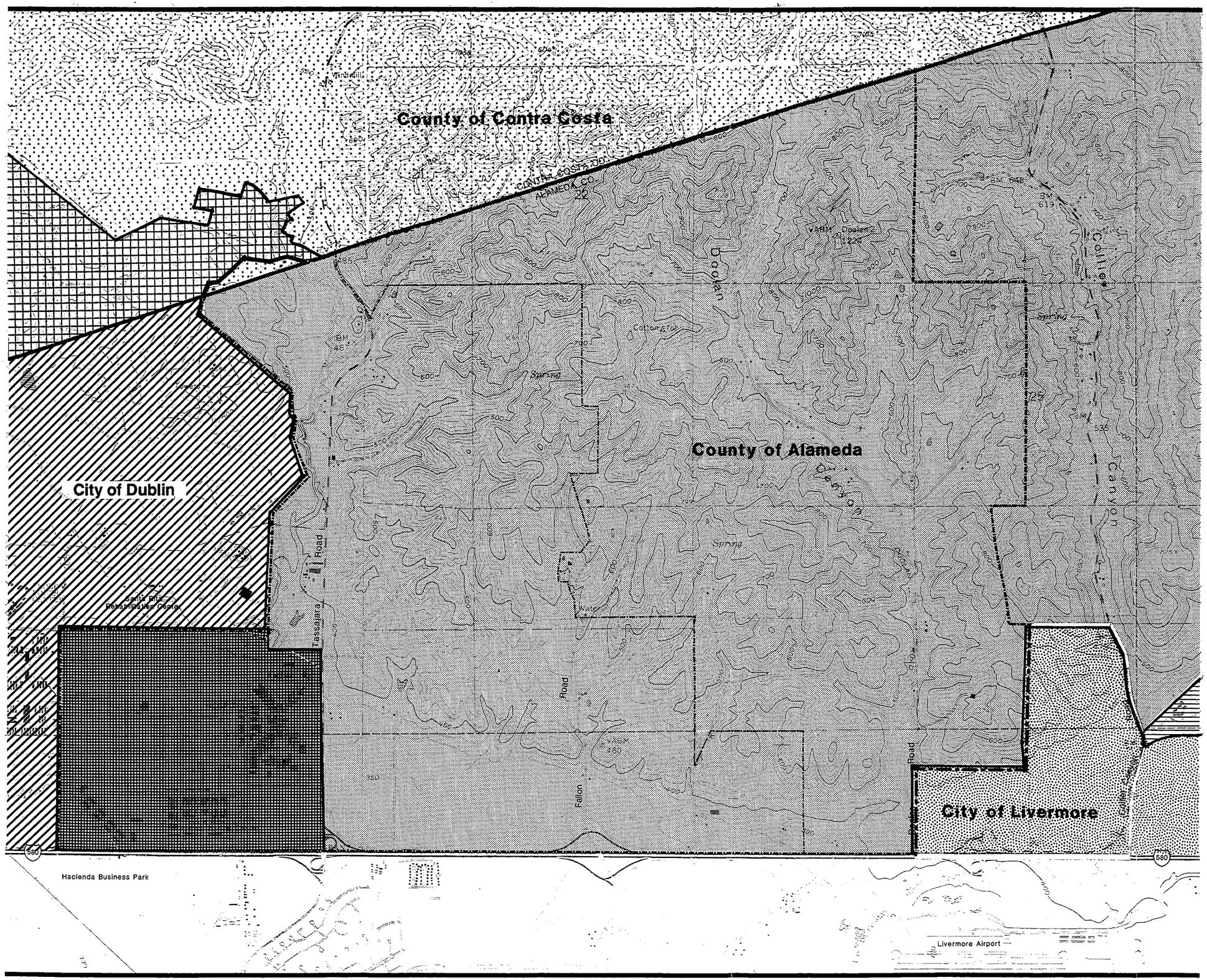


- Residential/Open Space
- Business Park/Industrial: Low Coverage
- Business Park/Industrial
- Public Lands

Source: Blayney-Dyett, Urban and Regional Planners, City of Dublin, 1985

EASTERN DUBLIN
GPA • SP • EIR

Wallace Roberts & Todd Figure 3.1 - F



Existing Zoning

Legend

- General Plan Amendment Area
- Specific Plan Area
- Jurisdictional Boundaries

Alameda County

- Agriculture

Contra Costa County

- Public/Semi-Public
- Agricultural

City of Dublin

- Planned Development
- Agriculture

City of Livermore

- Planned Development
- Education

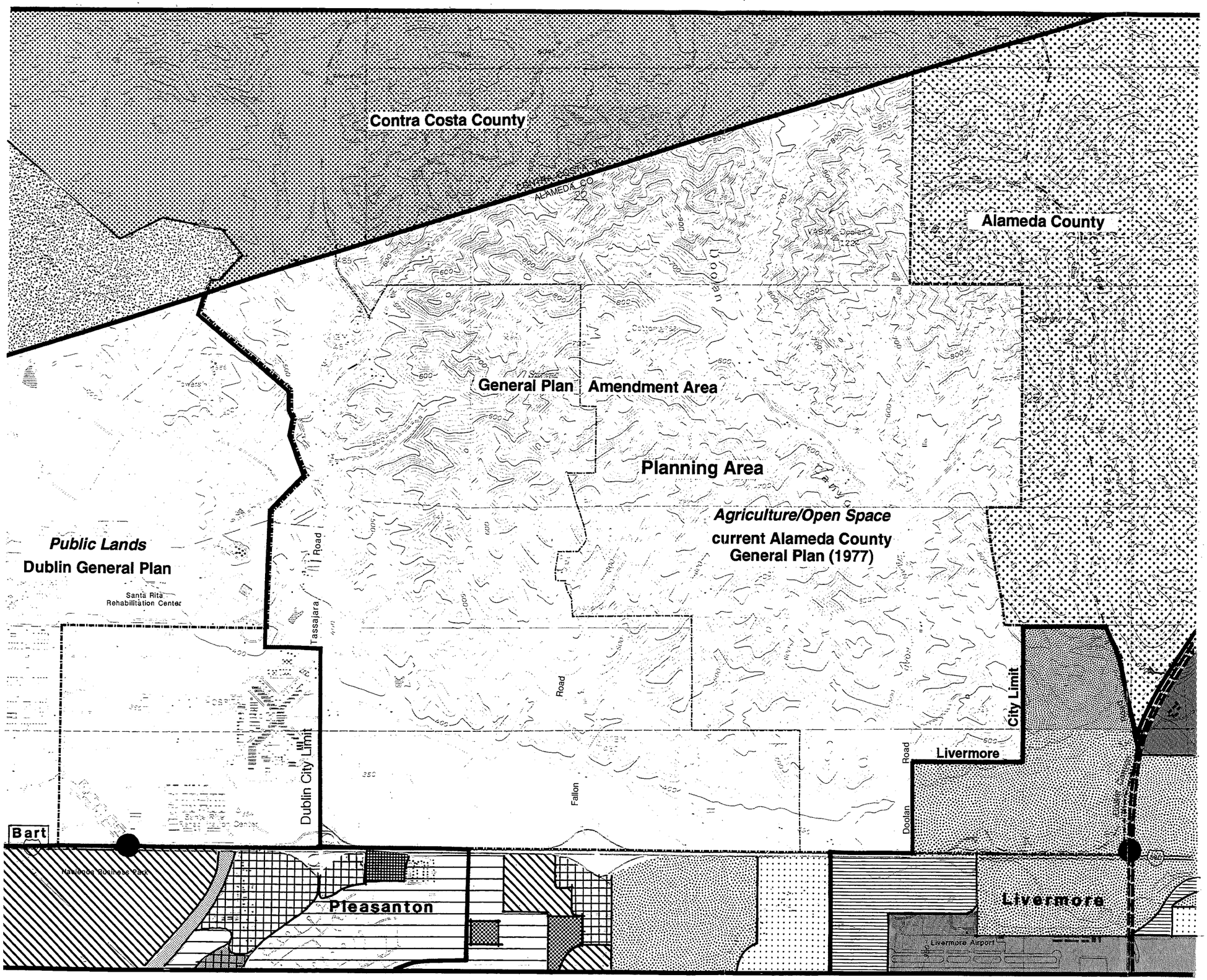
EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.1 – G**

Acres 10 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4



Surrounding Plan Designations

Legend

- General Plan Amendment Area
- Specific Plan Area

Contra Costa County
- General Open Space
- Agricultural Preserve
- Public/Semi-Public

Alameda County
- Agriculture

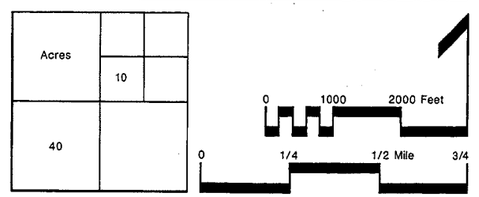
Livermore
- Low Intensity Industrial
- Community Facility
- Limited Agriculture
- Open Space/Receation

Pleasanton
- Business Park
- Retail
- Medium Density Residential
- High Density Residential
- Recreation
- Public Health and Safety
- Community Facility
- Proposed Interchange
- Proposed Road

Note: City land use designations were used wherever possible.

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.1-H**



Section 3.2

POPULATION, HOUSING & EMPLOYMENT

3.2 POPULATION, HOUSING AND EMPLOYMENT

This section describes the demographic, employment and housing context of the proposed Project. It contains a general description of expected Bay Area growth as well as more detailed population, jobs and housing development projections for the Tri-Valley subregion and for the City of Dublin. It describes the population, employment and housing projections for both the Specific Plan and the General Plan Amendment. This section does not analyze these projections in terms of potential environmental impacts because the physical environmental effects associated with population, employment and housing are addressed in the appropriate environmental analysis subject areas in *sections 3.3* through *3.12* of this EIR.

REGIONAL OVERVIEW

"Projections 90" is The Association of Bay Area Governments' (ABAG) most recent population, household, income and employment forecast for the nine-county San Francisco Bay Area Region. In order to place the GPA/SP in its overall regional context, several findings of ABAG's projections for the years 1990 to 2005 are summarized in this section.

Population

The Association of Bay Area Governments (ABAG) expects the nine-county San Francisco Bay Region to add approximately 800,000 new residents by the year 2005, reaching a total population of 6,832,850. This represents an increase of about 13 percent over the 15-year forecast period from 1990-2005 and a significant decrease from the 42 percent growth increase the region experienced between 1960 and 1980. In-migration will represent approximately 30 percent of gross population growth which is a combination of births and migration. A summary of existing and projected population growth is shown in Table 3.2-1.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
POPULATION, HOUSING AND EMPLOYMENT
Table 3.2-1
REGIONAL AND TRI-VALLEY POPULATION PROJECTIONS

Area	1990 (a)	1995 (b)	2000 (b)	2005 (b)	% Change
BAY AREA	6,023,777	6,292,650	6,610,500	6,832,850	13%
TRI-VALLEY					
Dublin	23,229	29,500	37,100	46,200	98%
Livermore	56,741	64,400	71,700	83,300	46%
Pleasanton	50,533	66,400	72,500	80,500	59%
San Ramon	35,303	46,300	53,200	55,600	57%
SUBTOTAL	165,806	206,600	234,500	265,600	60%
Danville	31,306	39,200	41,700	43,900	40%
Alamo-Bhwk	18,476	21,100	21,700	22,300	21%
SUBTOTAL	49,782	60,300	63,400	66,200	33%
TOTAL	215,608	266,900	297,900	331,800	54%

(a) Source: 1990 Census
(b) Source: ABAG, Projections 90, December 1989

ABAG expects approximately 422,000 new households in the region by year 2005, a 15.6 percent increase for the 15-year forecast period. By contrast, the 1970's saw a 27 percent increase in households in ten years. The rate of growth in this period was unusually high in historical terms, due primarily a high birth rate associated with the "baby boom" generation born between 1947 and 1957.

The ratio of population to household growth has differed significantly in the region over the past several decades. Between 1960 and 1970 household growth in the nine counties was approximately equal to population growth; i.e. an additional household was added for each new person. In the 1970's, household growth was almost twice that of population growth - on average, two households were added for each new resident. However, lower fertility rates in the 20-year period between 1957 and 1977 in combination with rising housing costs are now reducing the formation of new households in comparison to population growth. At the same time, household size is expected to decline from 2.54 persons in 1990 to 2.46 in 2005.

Housing

ABAG estimates that the increase of 422,000 new households expected in the region by 2005 will create a demand for at least 29,000 new dwellings each year. (In the ABAG projections, households are approximately the same as occupied housing units.) Tri-Valley and regional area household projections are given in Table 3.2-2.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
POPULATION, HOUSING & EMPLOYMENT
Table 3.2-2
TRI-VALLEY AND REGIONAL AREA HOUSEHOLDS

Area	1990 (a)	1995 (b)	2000 (b)	2005 (b)	% Change
Dublin	7,100	8,470	10,940	13,990	97%
Livermore	21,100	22,800	25,650	30,350	44%
Pleasanton	20,180	22,770	25,210	28,620	42%
San Ramon	12,160	16,120	19,240	20,250	67%
Alamo-Bhwk	6,430	7,210	7,670	7,980	24%
Danville	12,520	13,670	15,070	15,930	27%
TOTAL	79,500	91,040	103,780	117,120	47%
BAY AREA	2,284,080	2,445,750	2,595,440	2,706,200	15.6%

(a) Source: 1990 U.S.Census
(b) Source: ABAG, Projections '90, December 1989

Employment

The region is expected to add approximately 1.2 million jobs by year 2005, an increase of over 59,000 new jobs annually. Most of this growth will occur in services, retail trade, business services, high technology manufacturing, F.I.R.E. (finance, insurance and real estate) and construction. More than 27 percent of Bay Area jobs are in the business services, F.I.R.E. and high technology industries. In 1990 nearly 850,000 individuals were employed in these sectors.

ABAG predicts that high technology will represent an increasing number of all Bay Area manufacturing jobs. Overall, the nine-county Bay Area is projected to add 880,880 jobs between 1990 and 2005. (ABAG; *Projections '90).* Existing and projected employed residents in the nine-county Bay Area region are shown in Table 3.2-3.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
POPULATION, HOUSING AND EMPLOYMENT
Table 3.2-3
EXISTING AND PROJECTED EMPLOYED RESIDENTS

Area	1990 (a)	1995 (a)	2000 (a)	2005 (a)	% Change
BAY AREA	3,162,800	3,420,400	3,631,200	3,751,600	19 %
TRI-VALLEY					
Dublin	12,000	14,000	17,500	21,700	81%
Livermore	31,200	35,300	40,500	47,000	51%
Pleasanton	32,100	36,400	40,800	45,800	43%
San Ramon	19,900	26,800	31,000	32,200	62%
SUBTOTAL	95,200	112,500	129,800	146,700	54%
Danville	19,700	21,700	24,100	25,200	28%
Alamo-Bhwk	9,900	11,200	11,500	11,900	20%
SUBTOTAL	29,600	32,900	35,600	37,100	25%
TOTAL	124,800	145,400	165,400	183,800	47%

(a) Source: ABAG, Projections '90, December 1989.

Jobs/Housing Balance

According to ABAG, inadequate housing production is the most persistent, serious obstacle to a healthy regional economy. Many communities are seeking job growth without commensurately encouraging increased housing production. A minimum of 160,000 new dwelling units are needed to accommodate the projected need for additional resident workers between 1990 and 1995. Because housing vacancy rates are already low, and the labor force participation rates of the existing population are high, a production level less than 160,000 dwelling units is likely to exacerbate the wage-cost spiral in the Bay Area, affecting job demand and the competitive position of Bay Area industries in national and world markets. Moreover, insufficient housing production also comes at a time when the financing of new public infrastructure (roads, schools, water and wastewater systems) is more uncertain than in the past.

ABAG also anticipates that labor force growth will be a major problem by the mid 1990's due to housing production deficits. The aging of the population and expensive growth are also affecting growth of the regional labor force. Labor supply does not keep pace with potential job production because most communities have substantially built out residentially-zoned land.

DUBLIN AND THE TRI-VALLEY SUBREGION

This section describes the existing and projected population, employment and housing characteristics of the Tri-Valley subregion. This area comprises the cities of Dublin, Livermore and Pleasanton in the Livermore-Amador Valley and the cities of San Ramon and Danville in the San Ramon Valley. In addition, the unincorporated area of Alamo-Blackhawk in Contra Costa County is included as part of the subregional context for the Project.

Population

Using the 1990 census, there is an estimated existing (1990) population in the Tri-Valley area of 215,600 persons. ABAG estimates that population in the Tri-Valley will reach 331,800 by the year 2005 (See Table 3.2-1). The additional 116,000 persons expected to be added to the subregional population during the forecast period between 1990 and 2005 represent a 53 percent increase for that period. The City of Dublin's population is projected to increase by 22,900 or 98 percent during the same period.

The number of households in the Tri-Valley is estimated to increase by 37,620 between 1990 and 2005 to reach a total of 117,120 households. (See Table 3.2-2). This represents an increase of 47 percent during the forecast period.

Employment

In the last ten years, commercial and industrial development has increased dramatically in the Tri-Valley area, largely due to the relocation of businesses from San Francisco possibly seeking relief from land scarcity, high lease rates, high housing costs and strict planning controls. ABAG projects a continuation of this trend. According to ABAG, from 1990 to 2005, almost 80,500 new jobs will be created in the Tri-Valley area, an increase of 4,735 new jobs per year. Over 34 percent of these jobs are expected to be in the services industry, with another 34 percent in wholesale and manufacturing. Almost 45 percent of the total employment growth is projected to occur between 1990 and 1995; 27 percent between 1995 and 2000; and the remaining 28 percent between 2000 and 2005.

Major employment centers in the Tri-Valley area are described below. These developments are: Hacienda Business Park in Pleasanton; Bishop Ranch in San Ramon; and the Crow Canyon area in San Ramon.

Hacienda Business Park in the City of Pleasanton will contain almost 10.18 million square feet of commercial space at buildout in the year 2000, assuming approval of Phase II. Hacienda is approximately 42 percent completed, with a total of 4.9 million square feet of existing industrial and office space. There are presently nearly 10,000 employees within Hacienda and an additional 36,600 employees are anticipated by the end of November 1998.

Bishop Ranch in the City of San Ramon contains approximately 5.1 million square feet of industrial and office space and employs approximately 14,000 people. At buildout in 1996, Bishop Ranch is anticipated to have 9.4 million square feet of commercial/office space and approximately 26,000 employees.

A significant amount of office, retail and industrial square footage is also projected on or near the **Crow Canyon** corridor area in San Ramon, perhaps equivalent to the amount of non-residential floor area in Bishop Ranch.

Table 3.2-3 shows existing and projected employed residents for both the Bay Area and the Tri-Valley based on ABAG Projections '90 data. The Tri-Valley is expected to produce an additional 59,000 employed residents between 1990 and 2005. It is expected that 9,700 of these new employed residents will live in Dublin.

Applicable Policies

The existing *City of Dublin General Plan* contains the following policies related to employment-generating uses (*Section 2.2.4: Business Parks*; p. 13) in the Project area:

- *Consider providing space for new businesses and for expansion of existing Dublin firms.*

- *Designate a 600-acre business park on Santa Rita Rehabilitation Center property within the 200 acre portion fronting I-580 to be business park/industrial low coverage.*

- *Consider sites for business parks east of Camp Parks. Retail uses to serve nearby businesses and residents.*

- *Sufficient land for housing in relation to existing and proposed jobs shall be designated.*

The Eastern Dublin Specific Plan encourages the development of new jobs by designating approximately 811 acres of land as General Commercial, Neighborhood Commercial, Campus Office, Industrial Park and Public/Semi-Public. The Specific Plan estimates that buildout of this acreage will result in approximately 11 million square feet of development and approximately 28,290 jobs as shown in Table 3.2-5. The Specific Plan proposes policies to help guide the development of the employment generating land use categories:

- *Policy 4-19: Encourage employment-generating uses which provide a broad range of job types and wage/salary scales.*

- *Policy 4-20: Maintain enough Industrial Park land to accommodate the city's long-term needs for land-extensive, low-capital improvement type uses.*

- *Policy 4-21: Encourage high-intensity office and other employment-generating uses near the future BART station, and at freeway interchanges where the development can take advantage of convenient access, and the high visibility will make a distinctive, high quality statement at these important entry points into eastern Dublin.*

Further refinement studies required for the GPA Increment area would also include more specific employment and jobs policies, however, no such policies are proposed for this area at this time. Until such time, the GPA Increment area would be guided by existing *General Plan* policy.

REGIONAL HOUSING NEEDS DETERMINATION

Government Code Section 65584 defines Regional Housing Need as: "...a locality's share of the Regional Housing Need includes that share of the housing need of persons at all income levels within the area significantly affected by the jurisdiction's plan."

ABAG has estimated existing affordable housing needs as of January 1, 1990 and projected housing needs for the Bay Area communities through 1995. The Existing Housing Need is calculated as the difference between the number of units actually built in the jurisdiction and the number that "should have been available calculated from the optimal vacancy rate." (ABAG; *Housing Needs Determination*, September 1988) ABAG has used a vacancy goal of 4.5 percent for housing need calculations. Existing Housing Need is thus considered unmet demand for more affordable housing at a time when households were not formed because of housing costs. Table 3.2-4 shows existing housing stock and projected housing needs through the year 1995.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
POPULATION, HOUSING & EMPLOYMENT
Table 3.2-4
EXISTING HOUSING STOCK AND PROJECTED HOUSING NEEDS

	Housing Units		
Area	Existing 1990 (a)	Projected Need 1988-1990 (b)	Projected Need 1990-1995 (b)
BAY AREA	2,365,323	78,600	159,881
TRI-VALLEY			
Dublin	6,992	1,479	1,912
Livermore	21,489	291	1,666
Pleasanton	19,356	56	2,297
San Ramon	13,531	3,539	3,528
SUBTOTAL	61,368	5,365	9,403
Danville	11,466	995	1,449
Alamo-Blackhawk	4,337	(c)	(c)
SUBTOTAL	15,803	995	1,449
TOTAL	77,171	6,360	10,852

(a) Source: 1990 U.S.Census
(b) Source: ABAG, Projections '90, December 1989.
(c) Projected housing needs for Alamo-Blackhawk not available

According to ABAG's *Projections '90*, projected housing need is the number of units needed to accommodate the growth in households for the jurisdiction's planning area. This includes the existing need, and where applicable, the number of additional units needed to accommodate a greater share of the local labor supply than expected under current ABAG projections. It is important to note that ABAG's projections assume that local agencies will produce a greater number of residential units than their current zoning and general plans would currently allow.

ABAG has expressed the following regional goal related to jobs-housing balance: Those communities which add substantially more jobs than housing units for workers should ideally house up to 50 percent of the difference between the growth in local jobs and the growth in the local labor supply.

The following policies related to housing in the Project area are contained in the City of Dublin General Plan.

- *Guiding Policy 6.3.A: Encourage housing of varied types, sizes and prices to meet current and future needs of all Dublin residents.*
- *Implementing Policy 2.1.2.C: Require a mixture of dwelling types in large projects.*
- *Guiding Policy 2.1.3.A: Avoid abrupt transition between single-family development and higher density development on adjoining sites.*

- *Guiding Policy 2.1.4.A: Consider residential development on moderate slopes, with multi-family densities typically considered on flatter land and next to business park areas.*

- *Implementing Policy 6.4.B: Treat one-bedroom and studio apartments as equivalent to 75 percent of a housing unit when computing allowable density, provided that the maximum number of units permitted on a site shall not be increased by more than 25 percent including any state-mandated bonus.*

- *Implementing Policy 6.4.E: Require a percentage of units in large multi-family projects to be rented for a specified period of time.*

The Eastern Dublin Specific Plan designates 1,703 acres with a wide range of residential classifications and densities, resulting in the development potential for approximately 12,460 dwelling units. A summary of the residential and commercial land use of the Specific Plan is given in Table 3.2-5. A summary of Specific Plan land uses is given in Table 2.0-2; Population and employment generation of the Specific Plan are given in Table 3.2-5.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
POPULATION, HOUSING & EMPLOYMENT
Table 3.2-5
POPULATION AND EMPLOYMENT GENERATION: SPECIFIC PLAN AREA

Land Use Designation	S Ft/(Millions)	S Ft/Employees	Jobs
Non-Residential			
General Commercial	3.479 msf	510	6,822
Neighborhood Commercial	.980 msf	490	2,000
Campus Office	3.952 msf	260	15,200
Industrial Park	1.443 msf	590	2,446
Public/Semi Public	1.074 msf	590	1,820
TOTAL:	**10.928 msf**	--	**28,288**
Land Use Designation	**Dwelling Units**	**Persons/d.u.**	**Population**
Residential			
High Density	2,447 du	2.0	4,894
Medium High Density	2,712 du	2.0	5,444
Medium Density	4,891 du	2.0	9,782
Single Family	2,394 du	23.2	7,661
Rural	4 du	3.2	13
TOTAL:	**12,458 du**	--	27,794

Footnotes: d.u.=dwelling unit
msf=million square feet

One of the Specific Plan's goals is "To provide a diversity of housing opportunities that meets the social, economic and physical needs of future residents. The Specific Plan's housing policies are as follows:

- *Policy 4-2: Encourage higher density residential development within convenient walking distance of shopping areas, employment centers, transit stations/stops, and other community facilities.*

- *Policy 4-3: Permit residential development as an upper story use throughout the commercial areas in the Town and Village centers.*

- *Policy 4-4: Permit residential development in areas designated for campus office uses if it: 1) meets a specific housing need in the community; 2) reduces daily vehicle trips; 3) is designed to foster pedestrian access to employment and shopping areas; 4) creates an attractive neighborhood environment; and 5) does not comprise more than 50% of the developed area.*

- *Policy 4-5: Concentrate residential development in less environmentally constrained portions of the plan area, and encourage cluster development as a method of reducing or avoiding impact to constrained or environmentally sensitive areas.*

- *Policy 4-6: Encourage innovative approaches to site planning, unit design, and construction to create housing products for all segments of the community including single-parent families, the elderly, extended nuclear families, first-time buyers, "empty nesters", and non-auto households.*

The entire General Plan Amendment area designates approximately 5,000 acres as Residential land use which would result in approximately 17,970 dwelling units upon full buildout (Table 2.0-1). All but approximately 5,500 of these dwelling units are within the Specific Plan area. The residential land use designations in the GPA Increment area are for Medium Density, Single Family and Rural Residential. There are currently no areas designated as High Density or Medium-High Density in the GPA Increment area. Future development in the GPA Increment area would be subject to further refinement studies at which time more specific housing policies should be made. A summary of population and employment generation for in the total General Plan Amendment area is given in Table 3.2-6.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
POPULATION, HOUSING & EMPLOYMENT
Table 3.2-6
GPA AREA: POPULATION AND EMPLOYMENT GENERATION

Land Use Designation	S Ft/Millions	S Ft/Employee	Jobs
Non-Residential			
* General/Commercial	3.479	510	6,822
Neighborhood Commercial	1.069	490	2,182
* Campus Office	3.952	260	15,200
Industrial Park	2.075	590	3,516
* Public/Semi-Public	1.074	590	1,820
TOTAL	**12.002**		**29,540**
Land Use Designation	**Dwelling Units**	**Persons/d.u.**	**Population**
Residential			
* High Density	2,447	2.0	4,894
* Medium - High Density	2,712	2.0	5,424
Medium Density	7,203	2.0	14,406
Single Family	5,581	3.2	17,859
Rural Residential	27	3.2	86
TOTAL	**17,970**		**42,669**

* These Land Uses occur only within the Eastern Dublin Specific Plan. See Table 3.2-5

JOBS/HOUSING BALANCE

By the year 2005, Tri-Valley area population is expected to increase 65 percent to 281,700 while employment opportunities increase 173 percent to 164,700. (TJKM, Tri-Valley Transportation Study, 1985)

Tri-Valley area communities are projected to increase their employment several times faster than they increase their households in the period between 1985 and 2005.

The Tri-Valley is one of several subregional areas expected to undergo significant job growth for which ABAG's projections assume local policies will change to accommodate a sufficient resident labor force.

Few jurisdictions in approving proposed projects have had information available about incomes of prospective workers that would enable them to match the type of housing that is being approved to the ability of new workers to afford it. This lack of information about affordable housing needs in combination with very high land and site preparation costs in the Tri-Valley have caused employees in lower-paying service jobs to seek housing in less expensive communities in the San Joaquin Valley.

In response to this issue, the Specific Plan emphasizes the need to provide affordable housing. The Specific Plan includes the following policies and action programs in support of affordable housing:

- *Policy 4-7: Encourage the development of affordable housing throughout eastern Dublin, and avoid the concentration of such housing in any one area.*
- *Policy 4-8: Ensure that projects developed in the plan area provide affordable housing in accordance with the City's Housing Element, the Draft Inclusionary Housing Ordinance, the Density Bonus Ordinance, and the Rental Availability Ordinance.*
- *Policy 4-9: Affordable housing in eastern Dublin shall include both ownership and rental units and a mix of single family and multi-family units.*
- *Policy 4-10: Developers shall include affordable housing units within their developments pursuant to City housing ordinances.*
- *Program 4F: Develop an inclusionary housing program for eastern Dublin which requires a minimum percentage of all approved units to be affordable to very low, low, and moderate-income households.*
- *Program 4G: Explore the possibility of establishing an in-lieu fee to support the development of below-market-rate housing within eastern Dublin.*
- *Program 4H: Develop a monitoring program that will track residential growth in Dublin in terms of unit type and price categories. Such a program will provide City decision-makers with data necessary to make informed decisions relating to City housing goals and new development.*
- *Program 4I: Develop a specific numeric goal for percentage of affordable units in eastern Dublin which should be ownership units, as opposed to rental units.*

It is difficult to maintain a jobs-housing balance within an area, such as the Tri-Valley, when there are a number of jurisdictions and no comprehensive planning efforts between them. Given the need for California cities to raise revenues in the post-Proposition 13 economic climate, jurisdictions often compete for housing or employment-generating uses without consideration of regional implications. The Specific Plan attempts to avoid the impacts that can arise from the imbalance between jobs and housing. The Plan establishes a mix of residential and employment-generating land uses that are projected to maintain a reasonable balance between job and housing opportunities within the City of Dublin. Table 3.2-7 show both the existing jobs/housing balance in the City and the projected balance after buildout of the Eastern Dublin Specific Plan, the Western Dublin Specific Plan and the General Plan Amendment Increment Area. The Project at buildout would closely balance jobs and housing within the planning area (1.02:1.0 jobs per employed resident). When considered in the city-wide context, the balance is still close (0.91:1.0), falling slightly in the favor of housing.

In addition to attempting to establish a city-wide jobs/housing balance through the variety of proposed new land uses, the Specific Plan provides policies to help the City achieve and maintain a balance:

- *Policy 4-26: Maintain balanced growth of residential and employment-generating uses as the eastern Dublin area builds out, in order to avoid short term imbalances.*
- *Policy 4-27: Discourage amendments to the Specific Plan that would increase the employment generating potential within the planning area, without balancing it with an equivalent increase in housing potential.*

- *Program 4K: Develop a monitoring program that will track employment-generating uses developed in the planning area in terms of the numbers, type, and salary levels of employees. Project applicants can supply this information as part of their development application. This information, along with data relating to housing, can provide the basis for understanding the ongoing relationship between the jobs/housing balance and proposed development.*

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
POPULATION, HOUSING & EMPLOYMENT
Table 3.2-7
EXISTING AND PROJECTED JOBS/HOUSING BALANCE

Planning Area	Dwelling Units	Jobs	Employed Residents[1]	Balance[2]	Ratio[3]
Existing City of Dublin([4])	7,100	12,210	12,000	-210	1.02:1.0
Western Dublin Specific Plan Area	3,209	206	5,199	+4,993	0.04:1.0
Eastern Dublin General Plan Area					
Specific Plan Area	12,458	28,288	20,182	-8,106	1.40:1.0
Outside S.P. Area	5,521	1,252	8,942	+7,562	0.15:1.0
Subtotal:	17,979	29,540	29,124	-544	1.02:1.0
TOTAL:	**28,228**	**42,084**	**46,323**	**+4,239**	**0.91:1.0**

[1] Projections assume a ratio of 1.62 employed residents per household based on ABAG's Projections '90.
[2] The "balance" refers to the number of employed residents in relation to the number of jobs (i.e., a positive number means there are more employed residents than jobs).
[3] Ratio of jobs to employed residents
[4] Taken from ABAG's Projections '90.

Section 3.3

TRAFFIC AND CIRCULATION

3.3 TRAFFIC AND CIRCULATION

SETTING

This section describes the existing transportation and circulation conditions in the study area, future road improvements, and the existing and future transit systems.

EXISTING ROADS

The Eastern Dublin planning area is served by Interstate 580, Interstate 680 and several local routes which are primarily rural in character (Figure 3.3-A).

Freeways

Interstate 580 (I-580) is an eight-lane freeway which runs east-west along the south side of the planning area. I-580 connects with Interstate 680 in Dublin, and continues west through Dublin Canyon to serve western Alameda County and San Francisco. To the east, I-580 connects to Livermore, Tracy and Interstate 5 in the Central Valley. I-580 interchanges in the vicinity of the planning area include Dougherty Road/Hopyard Road, Hacienda Drive, Tassajara Road/Santa Rita Road, Fallon Road/El Charro Road, and Airway Boulevard. Between I-680 and Tassajara Road, recent improvement projects have added a fifth auxiliary lane in each direction to serve traffic entering and exiting the freeway.

Over the last several years, I-580 has changed from relatively free-flow operation to somewhat congested operation during peak periods. Traffic volumes on I-580 east of I-680 increased from 100,000 daily vehicles in 1985 to 145,000 daily vehicles in 1992; an increase of 45 percent. The key bottleneck for freeway travel in the Tri-Valley area is the interchange between I-580 and I-680, particularly the ramps which connect I-580 to the east with I-680 to the north. Congestion at these ramps can cause westbound traffic on I-580 and/or southbound traffic on I-680 to back up for over a mile during peak periods. The recent widening of the ramp from westbound I-580 to northbound I-680 from one lane to two lanes has reduced congestion for that movement.

Interstate 680 (I-680) is a six-lane freeway running north-south through the City of Dublin. To the north, I-680 provides access to central Contra Costa County and Sacramento, while it serves Pleasanton, Fremont and Santa Clara County to the south.

Local Streets

Dublin Boulevard is a four-lane east-west arterial street in the city of Dublin, extending from San Ramon Road to Dougherty Road. Dublin Boulevard provides direct access to much of the existing commercial development in Dublin. Scarlett Court, a two-lane extension of Dublin Boulevard, continues east from Dougherty Road and serves local businesses up to the Southern Pacific railroad right-of-way. The City of Dublin is currently constructing a two-lane extension of Dublin Boulevard east of Dougherty Road.

Dougherty Road is a two- to four-lane arterial street in Dublin, and a narrow two-lane rural road north of the Alameda/Contra Costa county line. Dougherty Road provides freeway access to commercial areas along Dublin Boulevard, resulting in traffic volumes of about 44,200 daily vehicles between I-580 and Dublin Boulevard. This section of Dougherty Road is six lanes.

Hacienda Drive is an arterial road which provides access to the Hacienda Business Park in Pleasanton. Hacienda Drive connects to a recently completed interchange on I-580. Hacienda Drive currently does not extend north of the interchange.

Tassajara Road is a two-lane rural road which connects with I-580 and continues south in Pleasanton as Santa Rita Road. To the north, Tassajara Road becomes Camino Tassajara in Danville. Tassajara Road is used for local traffic in the Tassajara Valley, with some through traffic to and from the Danville area. Improvements to four-lane arterial standards have been completed on portions of Tassajara Road in Contra Costa County in conjunction with new development east of Crow Canyon Road.

Santa Rita Road is a six-lane divided urban arterial from the I-580 interchange south to Valley Avenue. It serves the eastern side of Hacienda Business Park. South of Valley Avenue, Santa Rita Road continues as a four-lane street to Main Street in downtown Pleasanton.

Fallon Road is a two-lane local rural road which dead-ends north of I-580. It provides local access only to several properties, and traffic volumes are very small.

El Charro Road is a private two-lane road which serves the quarries between Pleasanton and Livermore. Traffic volumes on El Charro Road average about 3,600 daily vehicles. Multi-axle trucks traveling to and from the quarries account for about 60 percent of the traffic on El Charro Road and at the Fallon Road/El Charro Road freeway interchange.

Doolan Road is a two-lane local rural road which provides access to several ranches and residences. About two miles north of I-580, Doolan Road turns into a single-lane road for a half mile before ending at a gated road. The daily traffic volume is about 600 vehicles.

Airway Boulevard is a two-lane road which serves the Livermore Municipal Airport and the Las Positas golf course on the south side of I-580. A series of local arterial streets connect Airway Boulevard with northwest Livermore. On the north side of the Airway Boulevard freeway interchange, Airway Boulevard connects to Doolan Road and North Canyons Parkway.

North Canyons Parkway is a four-lane east-west arterial which serves the Triad Business Park and connects to Collier Canyon Road. It carries about 5,700 daily vehicles.

Collier Canyon Road is a two-lane rural road which connects to North Canyons Parkway and continues north to a junction with Highland Road. Collier Canyon Road provides access to the Las Positas College.

EXISTING TRAFFIC OPERATIONS

Traffic operations are evaluated in terms of "level of service" (LOS) which is a measure of driving conditions and vehicle delay. Levels of service range from A (best) to F (poorest). Levels of service A, B and C indicate satisfactory conditions where traffic can move relatively freely. Level of service D describes conditions where delay is more noticeable. Level of service E indicates conditions where traffic volumes are at or close to capacity, resulting in significant delays and average travel speeds which are one-third the uncongested speeds or lower. Level of service F characterizes conditions where traffic demand exceeds available capacity, with very slow speeds (stop-and-go) and long delays (over a minute) and queuing at signalized intersections.

City of Dublin Public Works staff has determined that level of service D during peak periods is the minimum acceptable level of service at street intersections in Dublin, and level of service E is considered to be acceptable during the peak hours on the freeway.

Road Segments

The level of service on a segment of roadway is based on the traffic volume on the roadway and the capacity characteristics of the type of roadway. The maximum daily traffic volumes per lane have been estimated for various types of roadways (Table 3.3-1). These estimates are based on hourly lane capacities as defined in the *Highway Capacity Manual* (Transportation Research Board, 1985), and typical relationships between daily and peak hour directional traffic volumes.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TRAFFIC AND CIRCULATION
Table 3.3-1
LEVEL OF SERVICE DEFINITIONS - ROADWAY SEGMENTS

Roadway Type	Maximum Daily Traffic Volume				
	LOS A	LOS B	LOS C	LOS D	LOS E
Freeway					
8 Lanes + 2 Auxiliary*	66,500	102,600	146,300	176,700	190,000
8 Lanes	56,000	86,400	123,200	148,800	160,000
6 Lanes	42,000	64,800	92,400	111,600	120,000
Major Arterial - 6 Lanes	22,000	37,000	45,000	50,000	56,000
Arterial - 4 Lanes (w/ raised median)	15,000	25,000	30,000	34,000	37,000
Major Collector - 4 Lanes (w/ painted median)	14,000	23,000	27,000	31,000	34,000
Collector					
4 Lanes (center line)	12,000	20,000	24,000	27,000	30,000
2 Lanes	1,900	4,000	7,000	11,000	16,000

* Assumes an hourly capacity of 1,500 vehicles per hour on auxiliary lanes versus 2,000 vehicles per hour on freeway lanes.
Sources: DKS Associates, based on Highway Capacity Manual, Transportation Research Board, 1985. City of Dublin, "Standard Street Segment Classification."

Most roads in the Project vicinity currently operate at level of service D or better in terms of overall daily conditions. Table 3.3-2 gives LOS designations for existing freeway operations. Higher levels of congestion may occur during portions of the peak periods in peak directions.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TRAFFIC AND CIRCULATION
Table 3.3-2
1992 EXISTING FREEWAY OPERATIONS

Location	Number of Lanes	Daily Volume	LOS
INTERSTATE 580			
West of I-680	8	147,000	D
West of Dougherty Road	10	152,000	D
West of Hacienda Drive	10	142,000	C
West of Tassajara Road	10	142,000	C
West of Fallon Road	8	131,000	D
West of Airway Boulevard	8	128,000	D
East of Airway Boulevard	8	127,000	D

INTERSTATE 680			
North of I-580	6	111,000	D
South of I-580	6	89,000	C

Source: Caltrans, 1990 Traffic Volumes on California State Highways; 1990 Traffic Volumes factored to 1992 estimates based on historical growth trends.

Intersection Operations

The evaluation of signalized intersection operations uses the operations methods described in the *1985 Highway Capacity Manual*. This method evaluates the amount of green signal time available to each traffic approach and the total intersection capacity used by the traffic demand, and assigns a level of service based on the average delay which drivers would experience at the intersection during the peak hour (Table 3.3-3).

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TRAFFIC AND CIRCULATION
Table 3.3-3
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Vehicle Delay (secs.)	Description
A	≤5.00	**Free Flow/Insignificant Delays:** No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.
B	5.1-15.0	**Stable Operation/Minimal Delays:** An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles.
C	15.1-25.0	**Stable Operation/Acceptable Delays:** Major approach phases fully utilized. Most drivers feel somewhat restricted.
D	25.1-40.0	**Approaching Unstable/Tolerable Delays:** Drivers may have to wait through more than one red signal indication. Queues may develop but dissipate rapidly, without excessive delays.
E	40.1-60.0	**Unstable Operation/Significant Delays:** Volumes at or near capacity. Vehicles may wait though several signal cycles. Long queues form upstream from intersection.
F	60.0	**Forced Flow/Excessive Delays:** Represents jammed conditions. Intersection operates below capacity with low volumes. Queues may block upstream intersections.

Source: Highway Capacity Manual, Transportation Research Board, Special Report No.209, Washington D.C., 1985.

Levels of service were calculated for five signalized intersections in the eastern Dublin area (Table 3.3-4). Signal timings are assumed to be optimized to meet demand (demand-actuated) with a maximum cycle length of 150 seconds.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TRAFFIC AND CIRCULATION
Table 3.3-4
EXISTING* INTERSECTION OPERATIONS
P.M. PEAK HOUR LEVELS OF SERVICE AND AVERAGE VEHICLE DELAY

SIGNALIZED INTERSECTIONS	LOS	Delay
Dougherty Road & Dublin Road	D	25
Dougherty Road & I-580 WB Ramps	B	8
Hopyard Road & I-580 EB Ramps	B	12
Tassajara Road & I-580 WB Ramps	B	8
Santa Rita Road & I-580 EB Ramps	C	23
UNSIGNALIZED INTERSECTIONS	**LOS**	**Delay**
Fallon Road & I-580 WB Ramps	A	n/a
El Charro Road & I-580 EB Ramps	A	n/a
Airway Boulevard & I-580 WB Ramps	A	n/a
Airway Boulevard & I-580 EB Ramps	A	n/a

Notes:

LOS = Level of service.
Delay = Average vehicle delay in seconds.
n/a = Average vehicle delays are not applicable for unsignalized intersections.
* Traffic counts at signalized intersections conducted in 1991. Traffic counts at unsignalized intersections conducted in 1988.

Source: DKS Associates.

All of the signalized intersections currently operate at acceptable levels of service during the P.M. peak hour. The intersection of Dougherty Road with Dublin Boulevard operates at level of service D due to high volumes of turning traffic between Dublin Boulevard and the I-580 freeway.

FUTURE ROAD IMPROVEMENTS

A number of improvement projects have been proposed for freeways, freeway interchanges and local roads in the eastern Dublin area (Figure 3.3-B). The most important of these are the Dublin Boulevard extension, planned improvements to the I-580/I-680 interchange, the proposed widening of I-680 and local street improvements related to development in Dougherty Valley and North Livermore.

Dublin Boulevard Extension

The City of Dublin has begun construction of an extension of Dublin Boulevard east of Dougherty Road to connect with Hacienda Drive and Tassajara Road. The City intends to recover the costs of construction through assessments, special taxes, exactions, or fees from properties benefitted in the planning area.

I-580/I-680 Interchange

The current I-580/I-680 interchange project includes construction of a flyover from southbound I-680 to eastbound I-580. The improvement will help to reduce congestion on one of the key bottlenecks in the Tri-Valley area. Construction is expected to begin in 1995 with work completed in 1996. Partial funding for this improvement will come from Alameda County's Measure "B" sales tax initiative, with the remainder to be made up from other sources.

Caltrans is currently studying further improvements to the I-580/I-680 interchange. These proposed improvements would replace all of the existing loop ramps with direct flyover ramps. The proposed improvements would improve freeway and ramp operations, but would restrict local access to individual freeway movements. For example, drivers from Dougherty Road would have access to I-580 east and west, but would not have access to I-680 as they do now. For this reason, the Caltrans study is considering local access freeway ramps on I-680 in Dublin south of Dublin Boulevard. The current *Tri-Valley Transportation Study* and the Alameda County Transportation Authority are evaluating funding sources for required transportation improvements, including improvements to the I-580/I-680 interchange and hook ramps.

Interstate 680

An improvement project has been planned for I-680 which will add one extra high occupancy vehicle (HOV) lane in each direction in the median, to provide four total lanes in each direction between I-580 and State Route 24 in Walnut Creek. The first phase of the project, which is currently under construction, involves the placement of soundwalls along the freeway. The second phase of the project, which will add the lanes in the median of the freeway, could be completed by 1993.

State Route 84

The Alameda County Measure B sales tax provides partial funding for completion of State Route 84 as a four-lane highway between I-680 and I-580, with construction of a new interchange on I-580 between Airway Boulevard and Portola Avenue.

Dougherty Valley Street Improvements

The *Dougherty Valley General Plan Amendment and Specific Plan* under consideration by Contra Costa County, and the *Dougherty Valley Growth Management and Specific Plan* under consideration by the City of San Ramon, both propose street improvements which would influence circulation in eastern Dublin. These include improvement of Dougherty Road to a four to six lane arterial street, extension of Bollinger Canyon Road as a four-lane arterial street east to Dougherty Road, and extension of a new four-lane east-west street connection between Dougherty Road and Tassajara Road.

North Livermore Street Improvements

The *North Livermore General Plan Amendment* under consideration by the City of Livermore proposes street improvements to serve development to the east of the Project site. These include new east-west arterial street connections from North Canyons Parkway at Collier Canyon Road, extending to connect with North Livermore Avenue, the Springtown area and potentially Vasco Road.

EXISTING TRANSIT

There are currently no transit lines which directly serve the planning area. The Dublin, Pleasanton and Livermore areas are served by local bus service and BART express bus service (Figure 3.3-C).

Livermore-Amador Valley Transit Authority

The Livermore-Amador Valley Transit Authority (LAVTA) provides local bus transit service (known as WHEELS) in Dublin, Pleasanton and Livermore, as well as unincorporated areas of Alameda County. In the vicinity of eastern Dublin, there are local bus routes on Dougherty Road between Amador Valley Road and I-580, and local bus service to the Fairlands Drive area of Pleasanton, just south of I-580 and east of Santa Rita Road.

BART Express Bus

The Bay Area Rapid Transit District (BART) provides express bus service connecting Dublin with BART stations in San Leandro, Hayward and Walnut Creek. These lines pass by the eastern Dublin planning area on I-580, but currently make no stops between Dougherty Road and Portola Avenue.

FUTURE TRANSIT

The most significant enhancement to transit service in the Tri-Valley area will be the extension of BART service to stations in Dublin and Pleasanton (Figure 3.3-D). Several studies have also investigated the potential for rail transit service on other corridors in the area.

BART Dublin-Pleasanton Extension

The BART board has adopted a policy for the proposed extension of BART rail service to Dublin and Pleasanton. Current BART policy would build a BART extension to three new stations, one in Castro Valley, a West Dublin/Pleasanton station in the median of I-580 between San Ramon Road/Foothill Boulevard and I-680, and an East Dublin/Pleasanton station in the I-580 median between Dougherty Road and Hacienda Drive. All three of the stations, including the Castro Valley station and the two Dublin/Pleasanton stations, will be constructed using BART and/or other public and private financing.

Light Rail Transit

Several studies have evaluated the feasibility of light rail transit in the Tri-Valley area.

Alameda County completed a study of light rail transit (*Feasibility Study for Light Rail Transit: Tri-Valley Area Transportation Corridors*, Alameda County, 1985) which identified various corridors which would have the potential for light rail transit service. Potential rail corridors which were evaluated include the Southern Pacific right-of-way between San Ramon and Pleasanton, the proposed Dublin Boulevard extension, Stanley Boulevard between Pleasanton and Livermore, and Niles Canyon between Pleasanton and Fremont. Alameda County has acquired the portion of the Southern Pacific right-of-way south of the county line for potential transportation use.

The *San Ramon Branchline Study* (DMJM, 1985) explored alternatives for a busway or light rail transit line along the I-680 corridor. The alternative alignments would use either the freeway corridor or the abandoned Southern Pacific railroad right-of-way, about one-half mile east of the freeway.

Contra Costa County has acquired ownership rights to the Southern Pacific right-of-way north of the Alameda County line. The *San Ramon General Plan* states a policy to locate future transit uses, such as light rail or BART, in the I-680 right-of-way. San Ramon has designated the Southern Pacific right-of-way as a route for a Class I bicycle path. The *Danville General Plan* states that the I-680 corridor should be considered as the appropriate location for major transit facilities. It also states that residential property shall be given prime consideration when determining right-of-way use. It is expected that rail transit in the Danville and San Ramon area would have to be developed adjacent to the I-680 freeway if it is developed at all.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

The roads in the planning area currently include no sidewalks, bicycle lanes, or other pedestrian or bicycle facilities. Recreational bicycle riders use Tassajara Road through the eastern Dublin area. Outside the eastern Dublin area, a Class I paved bicycle path has been constructed on the east side of Dougherty Road adjacent to Camp Parks.

IMPACTS AND MITIGATION MEASURES

The traffic and transportation impacts of the *Eastern Dublin General Plan Amendment and Specific Plan* are evaluated at a 2010 future scenario within the Tri-Valley study area. The impacts of full buildout of all proposed development in the Tri-Valley area, including the *Eastern Dublin General Plan Amendment and Specific Plan*, are also evaluated. Impacts are presented in terms of traffic increases on Project area freeways and roads, future peak hour traffic operations at study intersections, and implications for transit, bicycle and pedestrian travel. The analysis methodology used to determine Traffic and Circulation impacts is described below followed by the impacts and mitigation measures statements.

ANALYSIS METHODOLOGY

The transportation analysis for the *Eastern Dublin General Plan Amendment and Specific Plan* is based on a future *Year 2010* scenario for all land uses in the Tri-Valley study area. Future travel is first estimated assuming this *Year 2010* development occurs without any future development in eastern Dublin. The *Eastern Dublin General Plan Amendment and Specific Plan* land uses are then added to the future buildout. Traffic levels are compared between the future scenarios with and without eastern Dublin development to determine the net changes in transportation impacts caused by implementation of development under the *Eastern Dublin General Plan Amendment and Specific Plan.* A regional travel model of the Tri-Valley area is used to assess the changes in travel patterns and traffic levels for the various scenarios.

Analysis Scenarios

Transportation conditions are evaluated for four scenarios:

1. *Existing 1992 Conditions*
2. *Year 2010 Without Project*
3. *Year 2010 With Project*
4. *Cumulative Buildout With Project.*

Existing 1992 Conditions. The analysis of existing conditions is based on recent counts of traffic on roadway links and at study intersections.

Year 2010 Without Project. The Year 2010 future scenario assumes development of approved and proposed land uses throughout the Tri-Valley area at levels consistent with land use projections for the year 2010 by the Association of Bay Area Governments (ABAG). No new development is assumed within the Eastern Dublin General Plan Amendment area. Road and transit improvements are assumed if they have some level of committed funding, or if they are integral to assumed future land uses.

Year 2010 With Project. This scenario includes full development of the Eastern Dublin General Plan Amendment and Specific Plan, along with the road improvements included in the Project. Year 2010 development is assumed in the rest of the region.

Cumulative Buildout With Project. The cumulative buildout scenario includes full buildout of all approved development and all land uses included in adopted city General Plans. Buildout of general plan amendments under current consideration is also assumed, including *Western Dublin, Dougherty Valley, Tassajara Valley,* and *North Livermore.* This scenario also includes full development of eastern Dublin land uses and transportation improvements.

Land Use Projections

The *Eastern Dublin General Plan Amendment and Specific Plan* were evaluated with two levels of cumulative land use development: an estimate of development to the Year 2010; and full cumulative buildout (i.e. "buildout") of all potential land uses in the Tri-Valley area (Table 3.3-5). The two land use scenarios were obtained by compiling the cumulative buildout land uses from available sources, and then adjusting the cumulative buildout land uses for the *Year 2010* to conform to ABAG land use forecasts.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TRAFFIC AND CIRCULATION
Table 3.3-5
TRI-VALLEY LAND USES

Area	Households			Employment		
	1990	2010	Buildout	1990	2010	Buildout
DUBLIN						
Eastern Dublin	0	*13,900	18,000	0	*13,300	30,800
Western Dublin	0	1,400	3,300	0	200	200
Other Dublin	6,300	8,500	10,000	14,000	15,100	15,100
Total	6,300	23,800	31,300	14,000	28,600	46,100
PLEASANTON						
Hacienda Business Pk	600	900	1,000	18,700	28,700	44,500
Other	18,600	27,100	27,900	23,800	37,200	41,900
Total	19,200	28,000	28,900	42,500	65,900	86,400
LIVERMORE						
North Livermore	3,300	19,700	21,500	3,200	6,200	20,100
Other	17,100	22,300	22,600	34,700	46,300	98,900
Total	20,400	42,000	44,100	37,900	52,500	119,000
SAN RAMON						
Bishop Ranch	0	0	0	17,800	28,500	33,600
Other	13,500	18,500	18,600	13,700	18,700	19,000
Total	13,500	18,500	18,600	31,500	47,200	52,600
DANVILLE AREA	13,900	15,800	15,900	5,400	8,000	8,000
CONTRA COSTA COUNTY						
Alamo/Blackhawk	5,600	6,500	6,700	1,700	2,100	2,100
Dougherty Valley	0	5,000	11,000	0	1,400	1,400
Tassajara Valley	100	1,900	5,000	0	300	300
Total	5,700	13,400	22,700	1,700	3,800	3,800
TOTAL TRI-VALLEY	**79,000**	**141,500**	**161,500**	**133,000**	**206,000**	**315,900**

* Estimate based on ABAG Projections '90 for year 2010. Impact analysis assumes full buildout.

Source: DKS Associates based on references described in text.

Year 2010 Land Use. The Year 2010 land uses were estimated by adjusting the potential buildout land uses to match ABAG projections for the year 2010 on a census tract basis. Where the 2010 ABAG projection was lower than the potential buildout, the buildout land uses were reduced to match the ABAG totals. If the ABAG projections for 2010 in a particular census tract were higher than the maximum buildout land use anticipated under an existing or proposed General Plan, the excess land uses were allocated to other census tracts within the same jurisdiction.

This process is similar to the process being used for land use projections for the current *Tri-Valley Transportation Study*. However, the specific results of those land use forecasts were not available at the time of this analysis. The land use forecasts used in this analysis and the land use forecasts being prepared for the *Tri-Valley Transportation Study* both conform to ABAG *Projections '90* for the year 2010 within individual jurisdictions. The primary differences are the specific allocations of development to individual census tracts within a given city or unincorporated area.

Cumulative Buildout Land Use. The projections of potential cumulative buildout of land uses in the Tri-Valley were based primarily on the "Existing General Plans" scenario from the *Final Report on Growth Inducing Impacts Analysis of Tri-Valley Wastewater Authority Export Capacity Expansion* (Economic and Planning Systems, Inc., April, 1990), the most recent available published study of buildout land uses at a detailed geographical level. These projections considered existing development, planned projects and vacant land designated for urban uses in current General Plans. The projections were updated as noted below to reflect current proposals for general plan amendments.

Western Dublin. The potential land uses in Western Dublin are based on the *Western Dublin General Plan Amendment/Specific Plan Environmental Impact Report* (City of Dublin, 1991).

San Ramon. Future land uses for the City of San Ramon sphere-of-influence were compiled from *San Ramon General Plan Traffic Zone Land Use Data* (City of San Ramon Community Development Department, Planning Services Division, February 1990). For each parcel or group of parcels in the City, this document lists the existing development as well as the projected allowable development under the *San Ramon General Plan* or under specific project approvals. The land uses include the *Westside Specific Plan* and full buildout of all approved development in Bishop Ranch.

Dougherty Valley. Future land uses for Dougherty Valley are based on the *Dougherty Valley Growth Management and Specific Plan Report Draft EIR*, (City of San Ramon, September 1991). This plan includes about 11,000 housing units and 313,000 square feet of office, retail and other non-residential uses.

Tassajara Valley. Future land uses for the Tassajara Valley were based on the "General Plan Amendment Request of the Tassajara Valley Property Owners Association" submitted to Contra Costa County on August 1, 1991. The indicated land uses include up to 5,000 housing units plus local-serving commercial uses.

North Livermore. Future land uses in the North Livermore area are based on the *North Livermore General Plan Amendment Draft Environmental Impact Report*, (City of Livermore, January 30, 1992). This plan allows for a maximum of 16,513 housing units and 7.68 million square feet of business and commercial park and other commercial uses.

BART. A new BART station was assumed at the East Dublin/Pleasanton site, located on I-580 between Dougherty Road and Hacienda Drive. Traffic to and from this BART station was estimated based on information presented in the *Draft Environmental Impact Report for the Dublin/Pleasanton Extension Project* (Bay Area Rapid Transit District, September, 1989). The traffic estimates reflected future ridership projections, and estimated proportions of BART riders

who would access the station by transit, driving their own car, or by being dropped off and picked up. To provide a conservative analysis of traffic impacts in the eastern Dublin area, it was assumed that the East Dublin/Pleasanton station would be the only station constructed in the Tri-Valley area.

Outside the Tri-Valley. Growth rates for areas outside the Tri-Valley area, but within the nine-county Bay Area, were estimated based on *Projections '90* (Association of Bay Area Governments, December, 1989). Growth rates for the period from 1990 to 2010 were extrapolated from population and employment figures published for 1990 and 2005. Growth rates to the year 2010 for areas outside the Bay Area, such as San Joaquin County, were derived from population projections by the State of California Department of Finance, as well as land use projections compiled by San Joaquin County and Stanislaus County for use in their ongoing transportation planning studies.

Traffic Generation Assumptions

Traffic generation for the *Eastern Dublin Specific Plan* was projected based on trip generation rates which relate the type and size of a land use to the number of persons or vehicles traveling to or from the land use. The traffic generation rates used for the Eastern Dublin land uses are based on *Trip Generation* (Institute of Transportation Engineers) and specific counts of traffic generation conducted by DKS Associates (Table 3.3-6). These rates have been adjusted, particularly for the P.M. peak hour, based on local conditions as reflected during the validation of the regional traffic forecasting model. (Technical inputs and outputs from the regional traffic forecasting model are on file at the City of Dublin Dept. of Public Works.)

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TRAFFIC AND CIRCULATION
Table 3.3-6
TRAFFIC GENERATION RATES

Land Use	Units	Daily Rate	P.M. Peak Hour Rate
RESIDENTIAL			
Low Density (0-6 DU/acre) (RR and SF)	DU	10.00	0.93
Medium Density (6-14 DU/acre)	DU	10.00	0.93
Medium-High Density (14-25 DU/acre)	DU	7.00	0.65
High Density (25+ DU/acre)	DU	7.00	0.65
NON-RESIDENTIAL			
Retail	KSF	50.00	4.00
Office	KSF	15.00	1.46
Service/R&D	KSF	10.00	1.00
Industrial	KSF	5.00	0.50
Hotel	Rooms	10.10	1.01
School	Students	1.20	0.10
Parks	Acre	6.00	0.50

Note:

DU = Dwelling Units
KSF = 1,000 square feet

Source: DKS Associates based on Trip Generation, 5th Edition (Institute of Transportation Engineers, 1991).

The Project is expected to generate 482,900 daily vehicle trips, with 42,200 of those occurring during the P.M. peak hour (Table 3.3-7). The same basic trip generation rates were applied to all land uses in the future scenarios. The total future trip generation in the Tri-Valley area in the Year 2010 would be 3.9 million daily vehicle trips, as compared to 1.9 million in 1990, an increase of 104 percent. Eastern Dublin would represent about 12 percent of the future total traffic generation, or about 23 percent of the growth in the Tri-Valley area.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
CIRCULATION

Table 3.3-7

EASTERN DUBLIN TRAFFIC GENERATION

Land Use	Specific Plan			GPA INCREMENT AREA			THE PROJECT		
	Units	Daily Trips	P.M. Peak Trips	Units	Daily Trips	P.M. Peak Trips	Units	Daily Trips	P.M. Peak Trips
RESIDENTIAL									
Low Density	2,398 DU	24,000	2,230	3,210 DU	32,100	2,990	5,608 DU	56,100	5,220
Medium Density	4,891 DU	48,900	4,550	2,312 DU	23,100	2,150	7,203 DU	72,000	6,700
Med-Hi Density	2,712 DU	19,000	1,760				2,712 DU	19,000	1,760
High Density	2,447 DU	17,100	1,590				2,447 DU	17,100	1,590
Subtotal	12,448 DU	109,000	10,100	5,522 DU	55,200	5,140	17,970 DU	164,200	15,270
NON-RESIDENTIAL									
Retail	4,459 KSF	223,000	17,800	89 KSF	4,500	360	4,548 KSF	227,400	18,190
Office	3,952 KSF	59,300	5,770				3,952 KSF	59,300	5,770
Service	1,074 KSF	10,700	1,070				1,074 KSF	10,700	1,070
Industrial	1,443 KSF	7,200	720	632 KSF	3,200	320	2,075 KSF	10,400	1,040
School	6,150 Students	7,400	620	1,450 Students	1,700	150	7,600 Students	9,100	760
Parks	242 Acres	1,400	120	46 Acres	300	20	287 Acres	1,700	140
Subtotal		309,000	26,140		9,600	840		318,600	26,980
TOTAL		418,000	36,270		64,800	5,980		482,900	42,250

Source: DKS Associates

The Project, defined as development within the Eastern Dublin General Plan Amendment area, includes land uses within the Eastern Dublin Specific Plan area and land uses in the GPA Increment area. Land uses within the Eastern Dublin Specific Plan area would contribute 87 percent of the total traffic generated within the Eastern Dublin General Plan Amendment area. Land uses in the General Plan Amendment Increment area would account for 13 percent of the total traffic.

Trip Distribution Assumptions

The future distribution of travel to and from the eastern Dublin GPA was estimated using factors developed by the Metropolitan Transportation Commission (MTC) based on detailed travel surveys of Bay Area residents. These factors ("friction factors") reflect the effect that travel time exerts on the propensity for making a trip to a given location. Typically, the probability for making a particular trip declines as the travel time increases. Separate factors are applied for work trips, shopping trips, school trips and other non-commute trips. This accounts for the possibility that people may be willing to travel long distances to go to work, but only short distances for most shopping or school trips.

The trip distribution factors are applied within the travel forecasting model using a process known as the "gravity model." The trip distribution process was verified for existing local conditions during the validation of the travel forecasting model and then applied to future conditions.

The resulting estimates of eastern Dublin GPA trip distribution are summarized in Table 3.3-8, for commute trips by eastern Dublin GPA residents, commute trips by eastern Dublin GPA employees, and for total trips including all types of trips made by eastern Dublin GPA residents, employees, customers and visitors. Eastern Dublin GPA residents are projected to work in a variety of locations, including the proposed office/industrial developments within eastern Dublin, Livermore and Pleasanton, and Bishop Ranch and Hacienda Business Park. The employment provided within the Eastern Dublin Specific Plan area will attract workers from within eastern Dublin in addition to a significant number of residents from Pleasanton, Livermore, Dublin, Dougherty Valley and other areas of San Ramon. About 40 percent of total trips are projected to remain within eastern Dublin

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TRAFFIC AND CIRCULATION
Table 3.3-8
EASTERN DUBLIN TRIP DISTRIBUTION (2010)

Area	Employment Locations for Eastern Dublin Residents	Residence Locations for Eastern Dublin Employees	All Trips (Work, shopping, school, other)
Eastern Dublin	20%	16%	43%
Other Dublin	6%	4%	6%
Hacienda Business Park	14%	1%	6%
Other Pleasanton	13%	14%	13%
North Livermore	2%	11%	6%
Other Livermore	12%	15%	9%
Dougherty Valley	0%	2%	1%
Bishop Ranch	6%	0%	1%
Other San Ramon	3%	5%	4%
Tassajara Valley	0%	1%	1%
Alamo/Blackhawk	0%	1%	1%
Other Danville	1%	3%	1%
Outside Tri-Valley			
BART	1%	<1%	<1%
I-580 East	1%	8%	1%
I-580 West	10%	10%	4%
I-680 North	7%	6%	2%
I-680 South	4%	3%	1%
TOTAL	100%	100%	100%

Source: DKS Associates

GPA, reflecting the fact that shopping trips and school trips represent the majority of trips made by residents and will tend to stay within the eastern Dublin area.

Future Road Improvement Assumptions

Project Site

The *Eastern Dublin General Plan Amendment and Specific Plan* includes the following road improvements which were assumed in the "with Project" analysis scenarios. These improvements would be financed and implemented by development within the General Plan Amendment area:

- Construction of a new partial cloverleaf interchange on I-580 at Fallon Road and El Charro Road, similar in design to the interchange at Hacienda Drive, with a separate ramp for truck movements from northbound El Charro to westbound I-580.

- Hacienda Drive extended as a four-lane arterial north to Gleason Road, with six to eight lanes between I-580 and Dublin Boulevard.

- Tassajara Road improved to a four-lane arterial between I-580 and the Contra Costa County line, with six to eight lanes between I-580 and Dublin Boulevard.

- Fallon Road extended as a four-lane arterial to Tassajara Road, with six to eight lanes between I-580 and Dublin Boulevard.

- Doolan Road extended as a two-lane major collector to Tassajara Road.

- Dublin Boulevard extended as a six-lane major arterial street from Dougherty Road to North Canyons Parkway at Airway Boulevard.

- Transit Spine as a two or four lane transit-oriented major collector street from Dublin Boulevard to Fallon Road.

- Gleason Road as a four-lane arterial street from Hacienda Drive to Doolan Road.

Tri-Valley Area

Future road improvements in the Tri-Valley area were assumed for the future traffic projections if they are committed for construction, tied directly to assumed future land uses, or included in general plan circulation elements. The following road improvements are assumed in all future scenarios:

- **I-680 HOV Lanes.** The future analysis includes widening of I-680 to eight lanes to provide one high-occupancy vehicle lane in each direction between Rudgear Road and I-580.

- **I-580/I-680 Interchange.** A two-lane freeway-to-freeway flyover from southbound I-680 to eastbound I-580 is assumed to replace the existing one-lane loop-ramp connection. Hook ramps to City of Dublin are also required.

- **I-580 Improvements.** Eight lanes plus two auxiliary lanes are assumed on I-580 from I-680 to Tassajara Road.

- **Dougherty Road.** Widening of Dougherty Road to six lanes between Dublin Boulevard and Old Ranch Road is assumed, consistent with the *Land Use and Circulation Section* of the *Dublin General Plan* and the proposed *Dougherty Valley Specific Plan.* North of Old Ranch Road, Dougherty Road is assumed to be realigned and improved as a four-lane arterial as proposed in the *Dougherty Valley Specific Plan.*

- **Dublin Boulevard.** Extension of Dublin Boulevard as a two-lane street between Dougherty Road and Tassajara Road is assumed, with a connection to Hacienda Drive north of the new interchange. The vehicle access for the proposed East Dublin/Pleasanton BART station is assumed to connect to the Dublin Boulevard extension between the Southern Pacific right-of-way and Hacienda Drive.

- **Southern Pacific Right-of-Way Connector.** A new four-lane street is assumed parallel to the Southern Pacific right-of-way, connecting Dougherty Road north of Dublin Boulevard with the Dublin Boulevard extension between Dougherty Road and Hacienda Drive. This connection is shown as a future road in the Circulation Section of the Dublin General Plan.

- **State Route 84.** Completion of State Route 84 as a four-lane highway between I-680 and I-580 is assumed, with construction of a new interchange at I-580.

- **North Canyons Parkway.** Extension of North Canyons Parkway to Vasco Road is assumed as included in the *Circulation Element of the Livermore General Plan* and the higher population alternatives for the *North Livermore General Plan Amendment.*

- **Bollinger Canyon Road.** Bollinger Canyon Road is assumed to be extended as a four-lane arterial to Dougherty Road, consistent with the adopted San Ramon General Plan and the Dougherty Valley General Plan Amendment.

- **Tassajara Connection.** A connection between Dougherty Road in Dougherty Valley and Tassajara Road was assumed only for the cumulative buildout scenario. This connection would not be warranted by *Year 2010* development levels.

- **I-580 Overcrossings.** Based on preliminary analysis of the Cumulative Buildout scenario, it was determined that traffic demand would exceed the total capacities of the existing and planned overcrossings of I-580 in the eastern Dublin area. The cumulative buildout scenario includes an additional overcrossing of I-580, without ramps to and from the freeway, between Hacienda Drive and Tassajara Road, and an additional overcrossing between Tassajara Road and Fallon Road.

- **Other Local Improvements.** Additional local street improvements in San Ramon, Pleasanton, and Livermore south of I-580 were assumed consistent with adopted general plan circulation elements.

Traffic Assignment Assumptions

The regional travel forecasting model was used to assign Eastern Dublin traffic to the road system together with all other projected traffic in the Tri-Valley area. The assignment takes into account the fact that speeds become slower as traffic congestion increases, and drivers may switch to alternative routes to bypass congestion. The assignment attempts to balance congestion levels among all available routes. As with other steps in the travel forecasting process, the traffic assignment procedure was validated for existing conditions and then applied to the future projections.

Projected intersection volumes were derived from the future traffic forecasts. A factoring process was used to improve the intersection forecasts wherever existing traffic counts were available. The factoring process is intended to relate forecasts as closely as possible to actual traffic counts, and also to minimize the effects of error in the travel forecasting model process. The traffic growth projected by the model, between the existing year and future year scenario, is added to the actual traffic volume counted on each link entering or leaving an intersection. These adjusted future link traffic volumes are then used as a basis for factoring existing intersection turn movements to match future projected roadway link volumes.

Transportation impacts are discussed in terms of changes in daily traffic volumes, peak hour intersection operations, transit impacts, and bicycle and pedestrian impacts.

SIGNIFICANCE CRITERIA

For purposes of this EIR, traffic impacts are considered significant if any of the following conditions are present:

- The Project causes traffic operations to exceed Level of Service E on study freeway segments.

- The Project causes traffic operations to exceed Level of Service D at designated study intersections.

- Project-generated traffic would cause significant safety hazards.

IMPACTS AND MITIGATION MEASURES: DAILY TRAFFIC VOLUMES (*YEAR 2010 WITHOUT PROJECT*)

Daily traffic volumes on various freeway and street segments were projected for *Year 2010* conditions without and with the Project, and for cumulative buildout conditions with the Project (Figure 3.3-E). These volumes were compared to estimated daily capacities of each type of roadway, as described in Table 3.3-1. The resultant levels of service were estimated based on the daily traffic volumes (Table 3.3-9).

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TRAFFIC AND CIRCULATION
Table 3.3-9
FREEWAY OPERATIONS

Location	Lanes	1992 Existing		2010 Without Project		2010 With Project		Cumulative Buildout with Project	
		Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
INTERSTATE 580									
West of I-680	8 (10)	147,000	D	155,000	E	157,000	E	167,000	F (D)
West of Dougherty	10	152,000	D	178,000	E	199,000	F	209,000	F
West of Hacienda	10	142,000	C	164,000	D	191,000	F	194,000	F
West of Tassajara	10	142,000	C	166,000	D	184,000	E	189,000	E
West of Fallon	8 (10)	131,000	D	165,000	F (D)	185,000	F (E)	187,000	F (E)
West of Airway	8 (10)	128,000	D	153,000	E	163,000	F (D)	184,000	F (E)
East of Airway	8 (10)	127,000	D	141,000	D	155,000	E	179,000	F (E)
INTERSTATE 680									
North of I-580	8 (10)	111,000	D	157,000	E	168,000	F (D)	177,000	F (E)
South of I-580	6	89,000	C	95,000	D	113,000	E	115,000	E

Notes:

LOS = Level of service.
( ) = Potential lanes and LOS with widening.

Source: DKS Associates

IM 3.3/A I-580 Freeway, Tassajara-Fallon

Year 2010 growth without the Project would cause freeway volumes to exceed level of service E on I-580 between Tassajara Road and Fallon Road. This is a significant cumulative impact.

Mitigation Measure of the EIR

MM 3.3/1.0 *Caltrans, in cooperation with local jurisdictions, could construct auxiliary lanes on I-580 between Tassajara Road and Fallon Road.*

Implementation of *MM 3.3/1.0* would provide LOS D operations and reduce the impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: DAILY TRAFFIC VOLUMES (*YEAR 2010 WITH PROJECT*)

IM 3.3/B I-580 Freeway, I-680-Hacienda

Year 2010 growth with the Project would cause I-580 between I-680 and Hacienda Drive to exceed level of service E. This freeway section has been widened to its maximum practical capacity within Caltrans' right-of-way. This is a significant impact.

This impact is also a significant cumulative impact and an unavoidable adverse impact as discussed in *Chapter 5*.

Mitigation Measure of the Specific Plan

MM 3.3/2.0 *(Policy 5-21). Require all non-residential projects with 50 or more employees within the Eastern Dublin General Plan Amendment and Specific Plan area to participate in a Transportation Systems Management (TSM) program. A TSM program would include strategies to reduce the use of single-occupant vehicles such as on-site distribution of transit information and passes, provision of shuttle services to and from BART stations, participation in regional ridesharing services, preferential parking for vanpools and carpools, and flexible or staggered work hours.*

Mitigation Measure of the EIR

MM 3.3/2.1 *The Project shall contribute a proportionate amount to regional transportation mitigation programs as determined by the current study by the Tri-Valley Transportation Council. Regional mitigation measures may include implementation of enhanced rail and feeder bus transit services, construction or upgrading of alternative road corridors to relieve demand on the I-580 and I-680 freeways.*

MM's 3.3/2.0-3.3/2.1 are applicable to the total Project site. Implementation of these mitigation measures would reduce the impact, but the impact would remain significant.

IM 3.3/C I-580 Freeway, Tassajara-Fallon-Airway

Year 2010 growth with the Project would cause freeway volumes to exceed level of service E on I-580 between Tassajara Road and Airway Boulevard. This is a significant impact.

This impact is also a significant cumulative impact as discussed in *Chapter 5*.

Mitigation Measure of the EIR

MM 3.3/3.0 *The Project shall contribute to the construction of auxiliary lanes on I-580 between Tassajara Road and Airway Boulevard. The auxiliary lanes would provide LOS E operations between Tassajara Road and Fallon Road, and LOS D operations between Fallon Road and Airway Boulevard.*

MM 3.3/3.0 is applicable to the total Project site. Implementation of this mitigation measure would reduce the impact to a level of insignificance on the Fallon-Airway segment but LOS on the Tassajara-Fallon Road segment would remain potentially significant.

IM 3.3/D I-680 Freeway, North of I-580

Year 2010 growth with the Project would cause freeway volumes to exceed level of service E on I-680 north of the I-580 interchange. This is a significant impact.

This impact is also a significant cumulative impact as discussed in *Chapter 5*.

Mitigation Measure of the EIR

MM 3.3/4.0 *The Project should contribute a proportionate share to planned improvements at the I-580/I-680 interchange and the associated mitigation on adjacent local streets. The improvements would provide additional capacity on I-680 north of I-580 and would provide LOS D operations.*

MM 3.3/4.0 is applicable to the total Project site. Implementation of this mitigation measure would reduce the impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: DAILY TRAFFIC VOLUMES *(CUMULATIVE BUILDOUT WITH PROJECT)*

IM 3.3/E Cumulative Freeway Impacts

Cumulative Buildout with the Project would cause additional freeway sections to exceed level of service E compared to Year 2010 With Project, including I-580 west of I-680 (from E to F), and I-580 east of Airway Boulevard (from E to F). This is a significant cumulative impact and an unavoidable adverse impact as discussed in *Chapter 5*.

Mitigation Measure of the EIR

MM 3.3/5.0 *Local jurisdictions shall require that future developments participate in regional transportation mitigation programs as determined by the current study by the Tri-Valley Transportation Council.*

Implementation of *MM 3.3/5.0* would reduce the impact, but the impact would remain **significant**.

IMPACTS AND MITIGATION MEASURES: PEAK HOUR INTERSECTION OPERATION

Detailed P.M. peak hour turn movement traffic volumes were projected at intersections which would be significantly impacted by Project traffic (Figure 3.3-F). Levels of service were evaluated at these

intersections (Table 3.3-10) and mitigation measures were identified for each intersection which is projected to exceed the LOS D standard. (Projected intersection turn volumes and capacity calculations are on file at the City of Dublin Department of Public Works.)

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TRAFFIC AND CIRCULATION
Table 3.3-10
P.M. PEAK HOUR INTERSECTION OPERATIONS WITHOUT MITIGATION
LEVELS OF SERVICE & AVERAGE VEHICLE DELAY

Intersection	Existing		2010 Without Project		2010 With Project		Cumulative Buildout With Project	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Dougherty & Dublin	D	26	D	32	F	218	F	128
Dougherty & I-580 WB Ramps	B	8	B	14	C	20	B**	9
Hopyard & I-580 EB Ramps	B	12	C	20	C	26	C	32
Hacienda & Dublin	*	*	B	8	D	38	F	67
Hacienda & I-580 WB Ramps			A	4	B	6	C	16
Hacienda & I-580 EB Ramps			B	10	F	183	F	109
Tassajara & Fallon	*	*	*	*	C	22	F	202
Tassajara & Gleason	*	*	C	22	D	32	F	67
Tassajara & Transit Spine	*	*	*	*	D	34	F	133
Tassajara & Dublin	*	*	C	15	D	34	E	45
Tassajara & I-580 WB Ramps	B	8	A	3	F	79	D**	33
Santa Rita & I-580 EB Ramps	C	23	C	17	F	201	F	312
Fallon & Dublin	*	*	*	*	D	34	D	40
Fallon & I-580 WB Ramps	A	n/a	C	15	B	12	B**	12
El Charro & I-580 EB Ramps	A	n/a	A	4	C	22	B**	8
Airway & Dublin	*	*	B	12	E	42	E	45
Airway & I-580 WB Ramps	A	n/a	B	12	F	67	F	68
Airway & I-580 EB Ramps	A	n/a	B	11	C	17	C	21

Notes:

LOS = Level of service based on average vehicle delay.
Delay = Average vehicle delay in seconds.
n/a = Average vehicle delays are not applicable for unsignalized intersections.
* = Intersection does not exist under alternative.
** = Cumulative buildout calculations assume additional overcrossings of I-580 which would improve operations at certain interchange intersections.

Source: DKS Associates

IMPACTS AND MITIGATION MEASURES: PEAK HOUR INTERSECTION OPERATION *(YEAR 2010 WITH PROJECT)*

IM 3.3/F Dougherty Road & Dublin Boulevard

Year 2010 development with the Project would cause level of service F operations at the intersection of Dougherty Road with Dublin Boulevard. This is a significant impact.

Mitigation Measure of the EIR

MM 3.3/6.0 *The City of Dublin shall coordinate construction of additional lanes on all approaches at the intersection. The required lanes on the northbound approach on Dougherty Road include two left-turn lanes, three through-lanes (one more than existing) and one right-turn lane (one more than existing). The required lanes on the southbound approach on Dougherty Road include two left-turn lanes (one more than existing), three through-lanes (one more than existing) and one right-turn lane. The required lanes on the eastbound approach on Dublin Boulevard include one left-turn lane, three through-lanes (one more than existing) and one right-turn lane. The required lanes on the westbound approach on Dublin Boulevard include two left-turn lanes, three through-lanes and one right-turn lane. The Project shall contribute a proportionate share of the improvement costs. The improvements would provide LOS D operations.*

MM 3.3/6.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.3/G Hacienda Drive & I-580 Eastbound Ramps

Year 2010 development with the Project would cause level of service F operations at the intersection of Hacienda Drive with the I-580 eastbound ramps. This is a significant impact.

Mitigation Measure of the EIR

MM 3.3/7.0 *The City of Dublin shall coordinate with the City of Pleasanton and Caltrans to restripe the I-580 eastbound off-ramp to provide two left-turn lanes and one right-turn lanes (existing lanes are one left-turn lane and two right-turn lanes). The Project shall contribute a proportionate share of the improvement costs. The improvements would provide LOS C operations.*

MM 3.3/7.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.3/H Tassajara Road & I-580 Westbound Ramps

Year 2010 development with the Project would cause level of service F operations at the intersection of Tassajara Road with the I-580 westbound ramps. This is a significant impact.

Mitigation Measure of the EIR

MM 3.3/8.0 *The City of Dublin shall coordinate with Caltrans to widen the I-580 westbound off-ramp to provide two left-turn lanes and two right-turn lanes, and to modify the northbound approach to provide three through lanes. The Project shall contribute a proportionate share of the improvement costs. The improvements would provide LOS B operations.*

MM 3.3/8.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.3/I Santa Rita Road & I-580 Eastbound Ramps

Year 2010 development with the Project would cause level of service F operations at the intersection of Santa Rita Road with the I-580 eastbound ramps. This is a significant impact.

This impact is also an unavoidable adverse impact as discussed in *Chapter 5*.

Mitigation Measure of the EIR

MM 3.3/9.0 *The City of Dublin shall coordinate with the City of Pleasanton and Caltrans to widen the I-580 eastbound off-ramp to provide two left-turn lanes and two right-turn lanes. These improvements would provide LOS E operations. Further improvement to the level of service could be provided by prohibiting left turns from southbound Santa Rita Road to eastbound Pimlico Drive during peak periods. This left-turn prohibition would require out-of-direction travel for drivers wishing to access Pimlico Drive, but would provide level of service D operations. The Project shall be required to contribute a proportionate share of the improvement costs.*

MM 3.3/9.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact but will introduce out-of-direction travel for certain drivers, thereby resulting in a potentially significant impact.

IM 3.3/J Airway Boulevard & Dublin Boulevard

Year 2010 development with the Project would cause level of service E operations at the intersection of Airway Boulevard with Dublin Boulevard/North Canyons Parkway. This is a significant impact.

Mitigation Measure of the EIR

MM 3.3/10.0 *The City of Dublin shall coordinate with the City of Livermore to modify the intersection to provide three through-lanes and a right-turn lane eastbound, and two left-turn lanes and two through-lanes westbound. The Project shall contribute a proportionate share of the improvement costs. The improvements would provide LOS C operations.*

MM 3.3/10.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.3/K Airway Boulevard & I-580 Westbound Ramps

Year 2010 development with the Project would cause level of service F operations at the intersection of Airway Boulevard with the I-580 westbound ramps. This is a significant impact.

Mitigation Measure of the EIR

MM 3.3/11.0 The City of Dublin shall coordinate with the City of Livermore and Caltrans to widen the Airway Boulevard overcrossing of I-580 by 12 feet to provide adequate storage for northbound left-turns, and widen of the off-ramp to provide one left and one left-right lane. The Project shall contribute a proportionate amount toward the cost of these improvements. The improvements would provide LOS D operations.

MM 3.3/11.0 is applicable to the total Project site. Implementation of this mitigation measure would reduce the impact to a level of insignificance.

IM 3.3/L El Charro Road

Project traffic could introduce stops and delays for loaded trucks from the quarries on El Charro Road south of I-580. This is a potentially significant impact and an unavoidable adverse impact as discussed in *Chapter 5*.

Mitigation Measure of the EIR

MM 3.3/12.0 The City of Dublin shall coordinate with Caltrans to ensure that modifications to the I-580 interchange at Fallon Road/El Charro Road include provisions for unimpeded truck movements to and from El Charro Road. The Project shall contribute a proportionate share of improvement costs.

Implementation of *MM 3.3/12.0* would reduce the impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: PEAK HOUR INTERSECTION OPERATIONS (CUMULATIVE BUILDOUT WITH PROJECT)

IM 3.3/M Cumulative Impacts on Dublin Boulevard

Cumulative buildout with the Project would cause level of service F operations at the intersection of Hacienda Drive with Dublin Boulevard and level of service E operations at the intersection of Tassajara Road with Dublin Boulevard. This is a significant cumulative impact.

Mitigation Measure of the EIR

MM 3.3/13.0 No further widening of these intersections would be feasible. Buildout of proposed non-Project related development (i.e., outside Eastern Dublin) beyond Year 2010 levels would require the construction of grade-separated interchanges on Dublin Boulevard and/or establishment of alternative routes to redistribute traffic flow, and participation in regional transportation improvement programs as determined by the ongoing Tri-Valley Transportation Council studies.

Implementation of *MM 3.3/13.0* would reduce the impact, but the impact would remain significant.

IM 3.3/N Cumulative Impacts on Tassajara Road

Cumulative Buildout with the Project would cause level of service F operations at the intersections of Tassajara Road with Fallon Road, Gleason Road and the Transit Spine. These impacts would be caused primarily by traffic from the Tassajara connection to Dougherty Valley, and full buildout of the Tassajara Valley. This is a significant cumulative impact and an unavoidable adverse impact as discussed in *Chapter 5*.

Mitigation Measure of the EIR

MM 3.3/14.0 *Buildout of proposed non-Project related development (i.e., outside Eastern Dublin) beyond Year 2010 levels would require the widening of Tassajara Road to six lanes between Dublin Boulevard and the Contra Costa County line. Widening of Tassajara Road would mitigate the projected traffic impact, but would not be compatible with planned land uses in the Eastern Dublin General Plan Amendment and Specific Plan, particularly in the Town Center area between Dublin Boulevard and Gleason Road.*

Implementation of *MM 3.3/14.0* would reduce the traffic impact, but would not be compatible with planned land uses, resulting in a potentially significant impact.

IMPACTS AND MITIGATION MEASURES: TRANSIT

IM 3.3/O Transit Service Extensions

The Project would introduce significant development in an area not currently served by public transit, creating the need for substantial expansion of existing transit systems. This is a significant impact.

Mitigation Measures of the Specific Plan

As development occurs in the Project area, the City shall coordinate with LAVTA to:

MM 3.3/15.0 *(Policy 5-10). Provide transit service within one-quarter mile of 95 percent of the population in accordance with LAVTA service standards.*

MM 3.3/15.1 *(Policy 5-11). Provide transit service at a minimum frequency of one bus every 30 minutes during peak hours, to 90 percent of employment centers with 100 or more employees in accordance with LAVTA service standards.*

Mitigation Measures of the EIR

MM 3.3/15.2 *The Project shall contribute a proportionate amount to the capital and operating costs of transit service extensions.*

MM 3.3/15.3 *As BART service to the East Dublin/Pleasanton BART station is put into operation, the City shall coordinate with BART and LAVTA to provide feeder transit service between the General Plan Amendment area and the East Dublin/Pleasanton BART station. Until the BART extension is completed, the City shall coordinate with BART to ensure that BART express bus service is available to eastern Dublin residents.*

MM's 3.3/15.0-3.3/16.3 are applicable to the total Project site. Implementation of these mitigation measures will reduce the impacts on transit to a level of insignificance.

IMPACTS AND MITIGATIONS MEASURES: PEDESTRIANS AND BICYCLES

The *Eastern Dublin General Plan Amendment and Specific Plan* would provide pedestrian and bicycle facilities for travel through and within Eastern Dublin as well as for recreational use.

IM 3.3/P Street Crossings

Pedestrians and bicycles would cross major streets in eastern Dublin with high projected traffic volumes, such as Dublin Boulevard, Tassajara Road and Fallon Road, introducing potential safety hazards for pedestrians and bicyclists. This is a potentially significant impact.

Mitigation Measure of the Specific Plan

MM 3.3/16.0 Provide a Class I paved bicycle/pedestrian path parallel to Tassajara Creek.

Mitigation Measure of the EIR

MM 3.3/16.1 Locate pedestrian and bicycle paths so that their crossings of major arterial streets coincide with signalized street intersections, providing a signalized pedestrian and bicycle crossing of the major street.

MM's 3.3/16.0-3.3/16.1 are applicable to the total Project site. Implementation of these mitigation measures will reduce the impact to a level of insignificance.

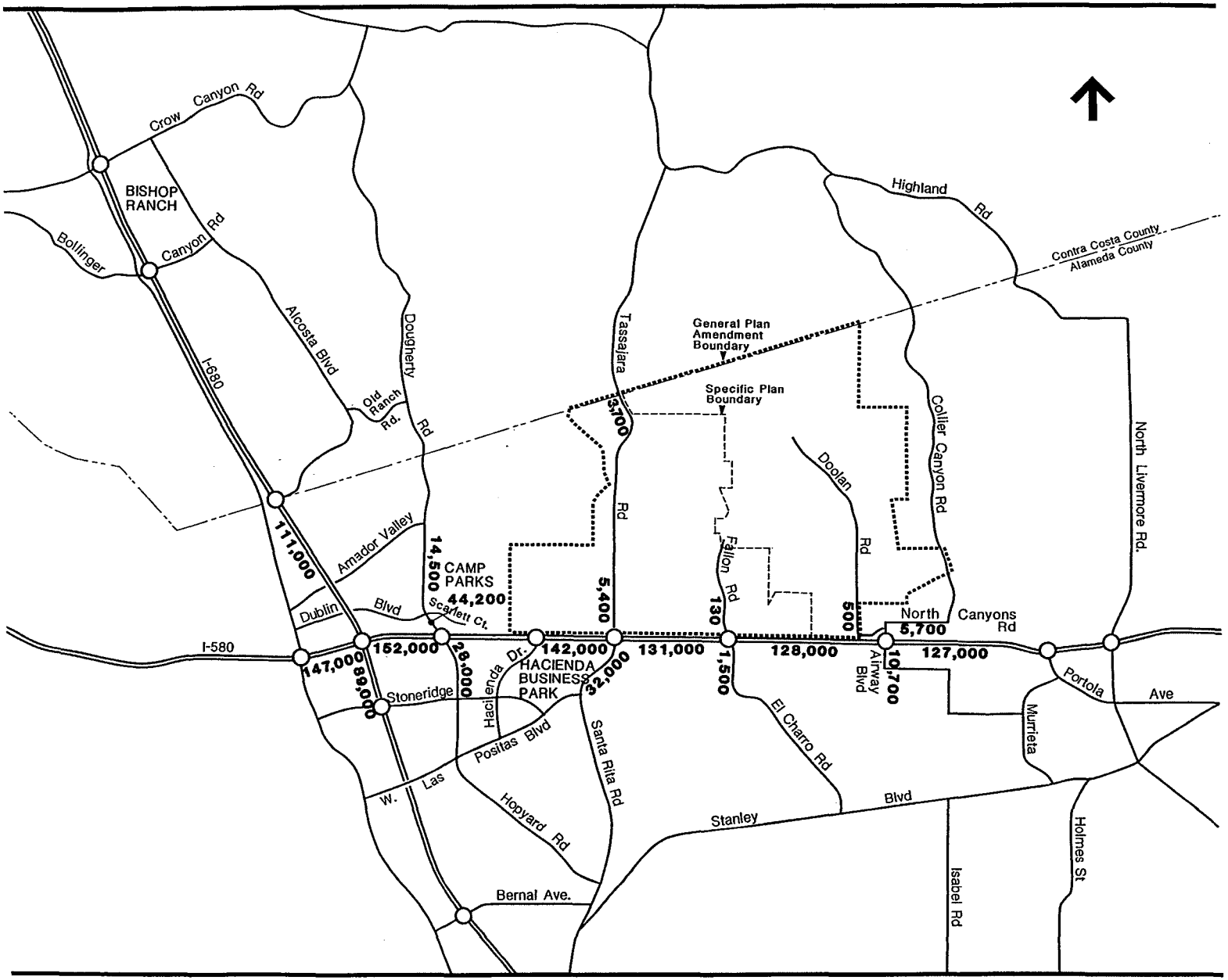


Figure 3.3-A

Existing 1992 Daily Traffic Volumes

SOURCES: Caltrans
City of Dublin
DKS Associates
Traffic Counts, 1988 and 1991

SOURCE: DKS Associates

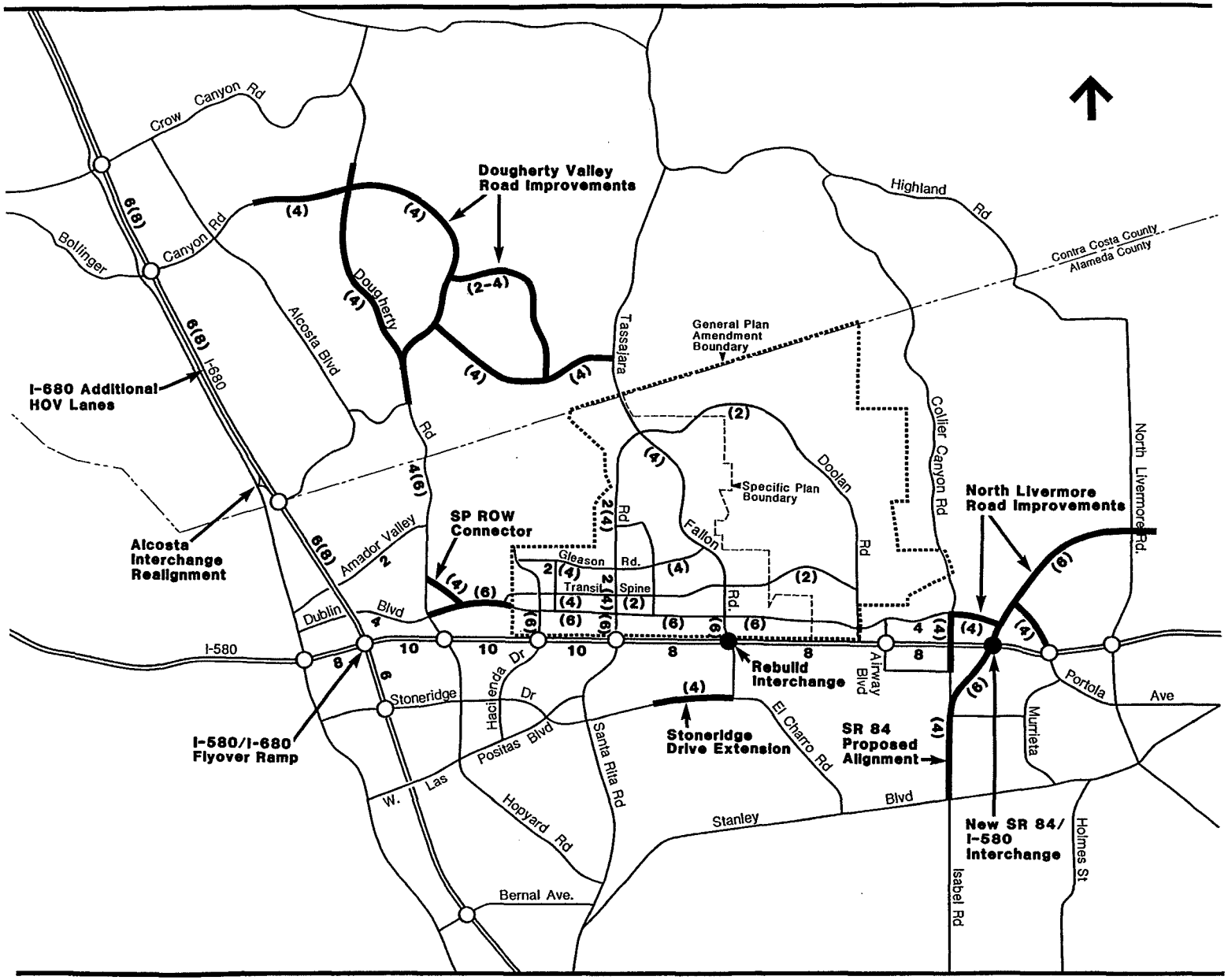


Figure 3.3-B

Future Road Improvements

2 Existing Number of Lanes

(6) Proposed Number of Lanes

SOURCE: DKS Associates

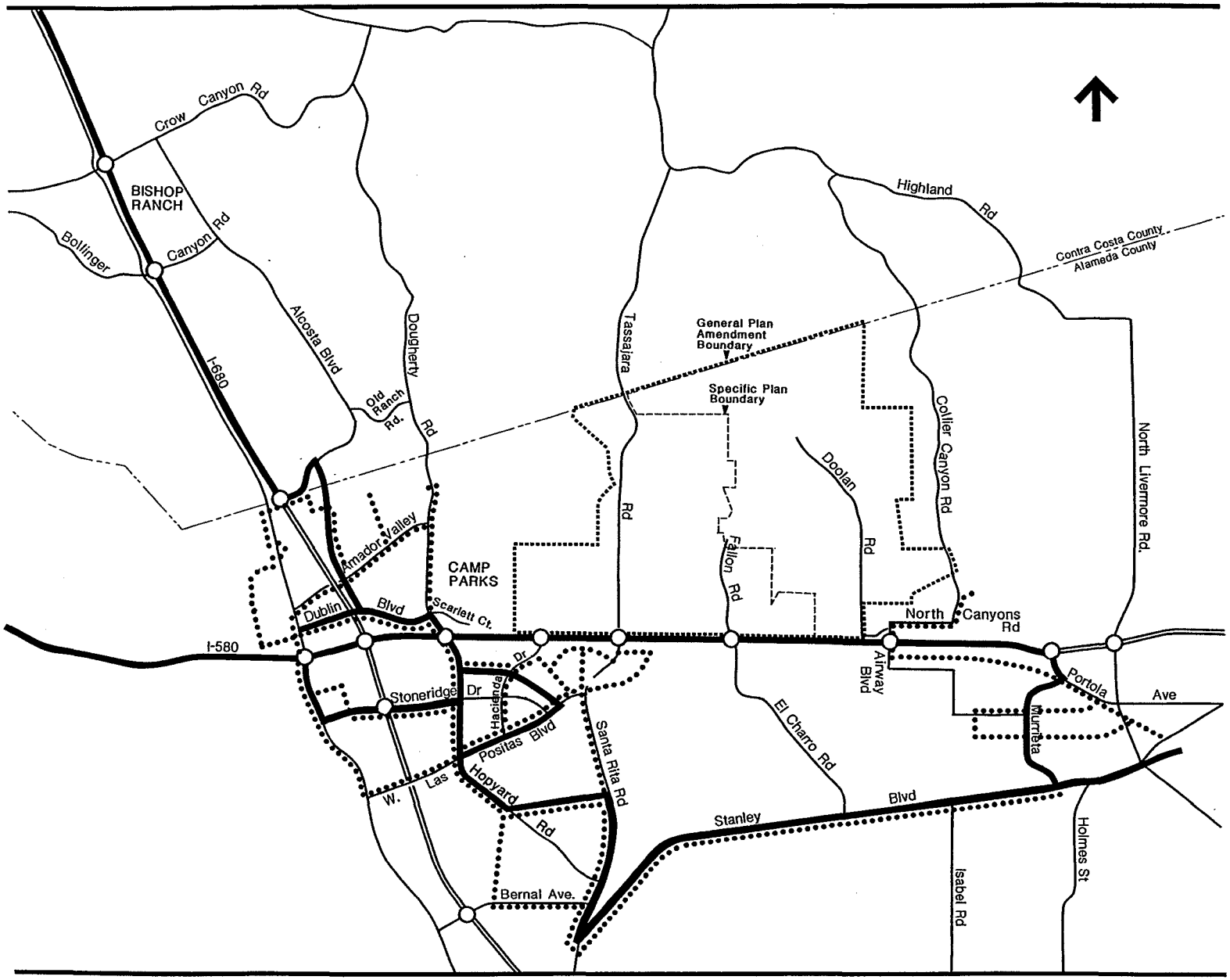


Figure 3.3-C

Existing 1992 Transit

BART Express Bus

Wheels

SOURCE: DKS Associates

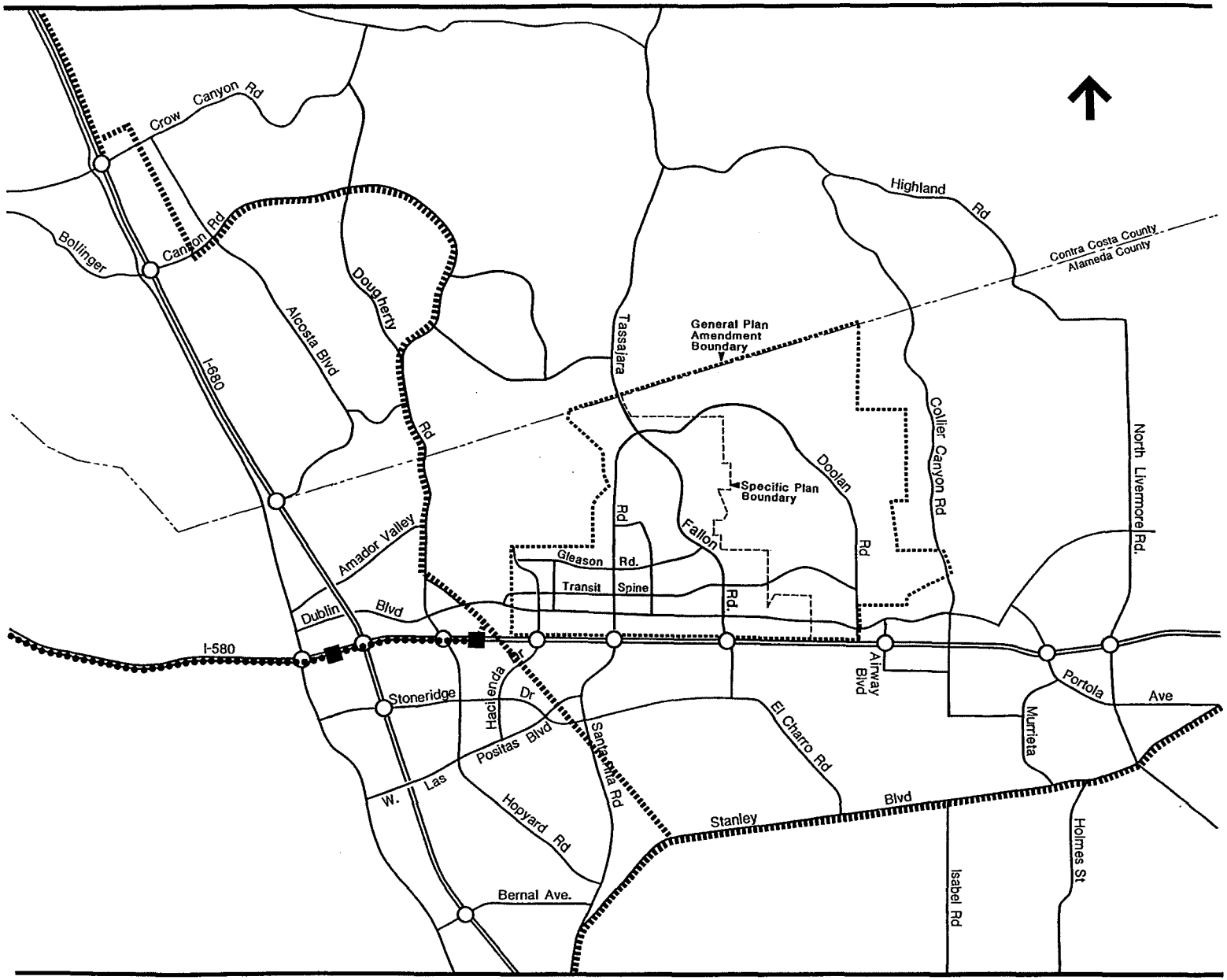


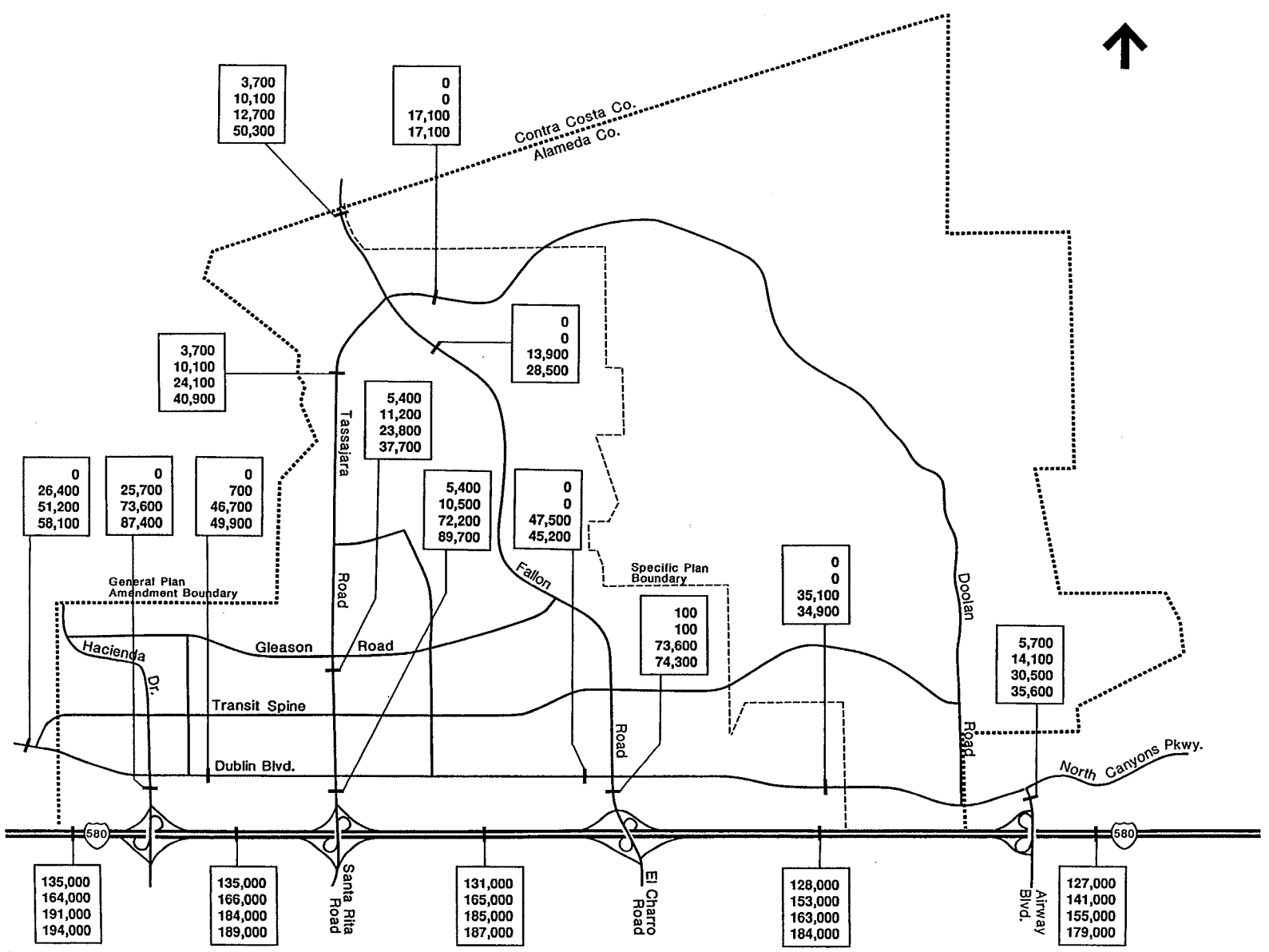
Figure 3.3-D

Future Transit Improvements

- Proposed BART Extension
- Proposed BART Station
- Potential Light Rail

SOURCE: DKS Associates

Figure 3.3-E
Future Daily
Traffic Volumes



3,700	Existing
10,100	2010 without Project
12,700	2010 with Project
50,300	Buildout with Project

SOURCE: DKS Associates

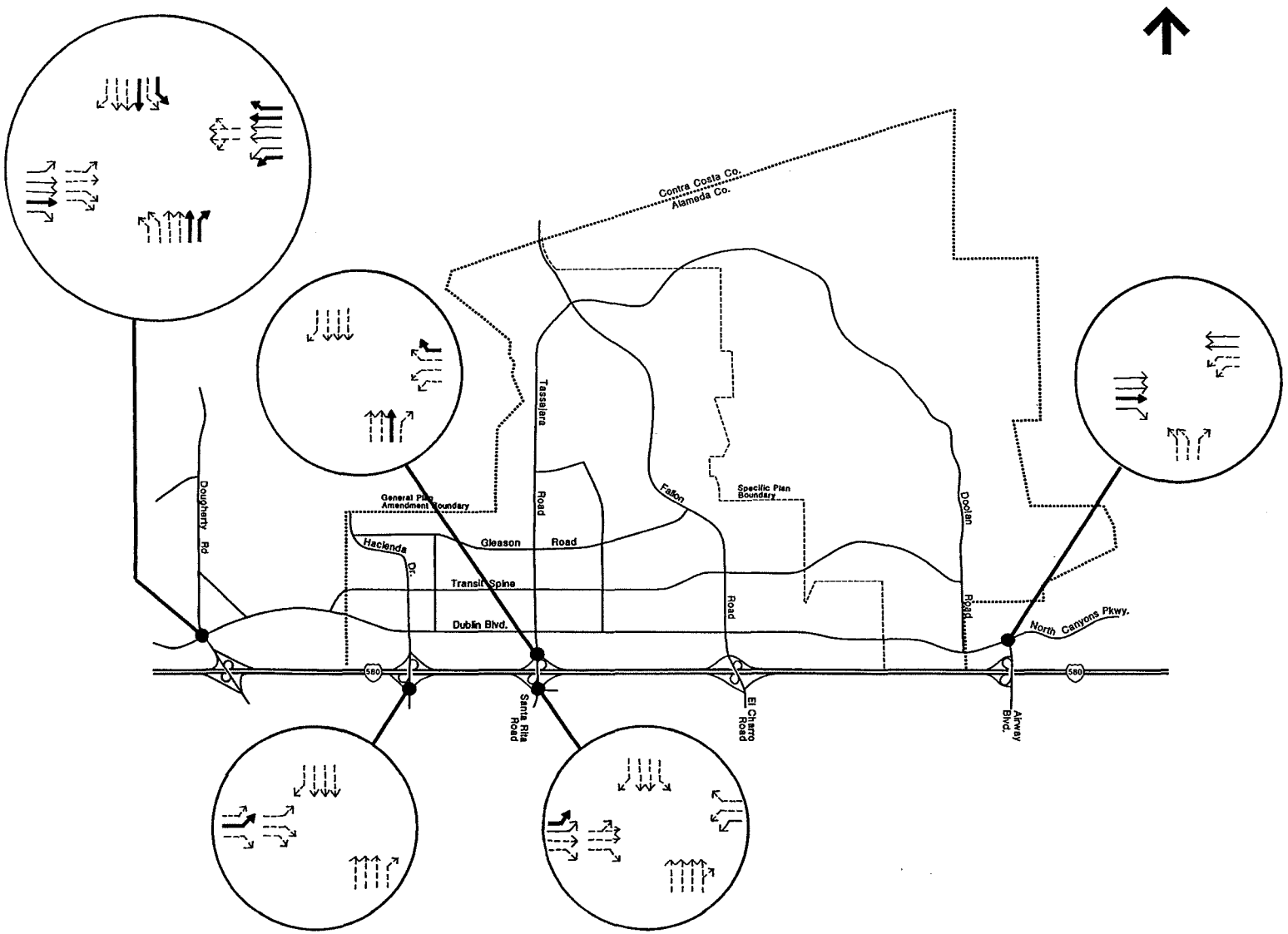


Figure 3.3-F

Proposed Intersection Lanes

---> Existing

—> Planned

➞ Project Mitigation

SOURCE: DKS Associates

Section 3.4

COMMUNITY SERVICES AND FACILITIES

3.4 COMMUNITY SERVICES AND FACILITIES

Community services discussed in this section include police services, fire protection services, schools, park and recreation facilities, solid waste management, gas, electric and telephone services, postal services; and libraries. The location of current and proposed public service offices and buildings as well as the boundaries of public service districts are shown on Figure 3.4-A.

SETTING

POLICE SERVICES

Police services for the General Plan Amendment area are provided by the Dublin Police Department, the Alameda County Sheriff's Department and the California Highway Patrol. The Sheriff's Department is responsible for law enforcement services in the unincorporated portions of the Project area, and the Dublin Police Department is responsible for the incorporated area (i.e., the County property). The CHP's duties are to ensure road safety and to enforce traffic and circulation laws.

The Dublin Police Department provides full municipal law enforcement services (police services) to the City of Dublin from its central station located at the Dublin Civic Center. The Department would assume service responsibility for the entire planning area following annexation.

The Dublin Police Department is a division of the Alameda County Sheriff's Office and is funded by the City through a contractual agreement between the City of Dublin and the County of Alameda. The City of Dublin owns the Police Department's facilities and equipment, but the Police Department personnel are employed by the County Sheriff's Department. The Dublin Police Department is a full-service operation with the exception of dispatch, which is provided through the County Sheriff's Department dispatch office in San Leandro.

Existing staffing in the Department is 28 sworn officers and 3 civilian staff. The police officer-to-resident ratio in Dublin is 1.2 police officers per 1,000 people. This is slightly below the State standard of 1.5 police officers/1,000 residents. Average response time is approximately 4 minutes which is considered an acceptable standard.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Appendix I of the *CEQA Guidelines* indicates that a project could have a significant effect on the environment if it results in a need for new or increased demand for police protection, particularly if this increase is in excess of the service provider's current capacity.

As a rural district with limited accessibility, the Project site has traditionally demanded a low level of police services. Future development of Eastern Dublin will dramatically change the police services needs of the planning area. The service area of the Dublin Police Department will be expanded and additional personnel and equipment will be needed. The Police Department may consider the establishment of a "beat" system to patrol different areas of the City.

The expansive size of the Project site, its hilly terrain, and the potential for diverse and dispersed development during the early phases of buildout may necessitate a higher ratio of patrol cars and staff to population in order to maintain the City's current service level. At the current ratio of 1.2 officers/1,000 residents, the Specific Plan area would ultimately require 33 additional officers. At full buildout of the General Plan Amendment area, the police force would require 51 additional officers to maintain current service standards. At State standards of 1.5 officers/1,000 population the number of officers would be 41 and 64 respectively for the Specific Plan and the General Plan Amendment areas.

IMPACTS AND MITIGATION MEASURES: POLICE SERVICES

IM 3.4/A Demand for Increased Police Services

Buildout of the General Plan Amendment area will increase demand for police protection and services from the Dublin Police Department, require increases in administrative and sworn staff, and necessitate a re-organization of police operations to provide new patrol beats to serve the Project area. This is a potentially significant impact on existing police services.

IM 3.4/B Police Services Accessibility

The hilly topography of most of the General Plan Amendment area may present some accessibility and crime-prevention problems and result in potentially significant impacts.

Mitigation Measures of the Specific Plan (Applicable to both **IM 3.4/A** and **IM 3.4/B**)

MM 3.4/1.0 *(Policy 8-4). Provide additional personnel and facilities and revise "beats" as needed in order to establish and maintain City standards for police protection service in Eastern Dublin.*

MM 3.4/2.0 *(Action Program 8D). Coordinate with the City Police Department regarding the timing of annexation and proposed development, so that the Department can adequately plan for the necessary expansion of services to the area.*

MM 3.4/3.0 *(Action Program 8E). Incorporate into the requirements of project approval Police Department recommendations on project design that affect traffic safety and crime prevention.*

Mitigation Measures of the EIR (Applicable to both **IM 3.4/A** and **IM 3.4/B**)

MM 3.4/4.0 *Budgeting for Police Services. Upon annexation of the Eastern Dublin Specific Plan and General Plan Amendment areas, police services would become the responsibility of the City of Dublin's Police Department. This will necessitate the City preparing a budget strategy to hire the required additional personnel and implement a "beat" system.*

MM 3.4/5.0 *Police Review of Proposed Projects. As a part of the development approval process in Eastern Dublin, the City shall require the Police Department to review and respond to the planned development with respect to:*

- *Project design layout relating to visibility, security and safety.*

- *Project circulation system and access issues.*
- *Project implications for emergency response times.*

Prior to final approval of non-residential development and improvement plans, the City Police Department shall review the proposed use, layout, design, and other project features for police surveillance/access, security devices, such as alarms and lighting, visibility, and any other police issues or concerns.

The above mitigations are applicable to the entire Project site. As mitigation for the projected increase in demand for police services and to minimize disruption of existing service to the City of Dublin, the *Specific Plan* includes Policy 8-4 and Action Programs 8D and 8E. Additional mitigation is provided by *MM 3.4/4.0* and *MM 3.4/5.0*. Implementation of all of these mitigation measures will mitigate project impacts on police services to a level of insignificance.

SETTING

FIRE PROTECTION

Fire Protection Facilities, Services and Response Time

Fire protection services for the unincorporated portion of the planning area are provided by the Alameda County Fire Patrol of the Alameda County Sheriff's Department and by the California Department of Forestry. The Alameda County Fire Patrol is responsible for general fire protection services. The County firefighting facility closest to the planning area is located on College Avenue in the southeast section of Livermore. The California Department of Forestry is responsible for wildlands fire protection services.

The Dougherty Regional Fire Authority (DRFA), which provides fire protection services to the cities of San Ramon and Dublin is the service provider for the County-owned land within the incorporated portion of the planning area. With annexation, the DRFA would assume responsibility for fire services to the entire planning area. The DRFA has a total of forty-five line firefighters and four officers based at two fire stations; one in San Ramon, and one on Donahue Drive in Dublin across from the public library. The Dublin station is capable of sending three engines, a three-story aerial truck ladder, and thirteen firefighters to a fire emergency.

The DRFA receives approximately 1,500 calls yearly. Each station is responsible for a one and one-half mile response zone and a response time of five minutes can be provided to 98 percent of the existing service area. A City of Dublin ordinance requires the installation of sprinklers whenever a new development is planned outside the one and one-half mile response zone.

The current Insurance Service Office (ISO) rating for the DRFA is 3. (The ISO rates community fire service on a 1-10 scale with 1 as the highest rating. The ISO rating is a measure of risk to assess liability for insurance purposes. The ISO is an office funded solely by the insurance industry to determine this liability rating.)

Under the Twin Valley Mutual Aid System Agreement (TVMASA: first signed in 1963), the DRFA can call upon neighboring fire departments and volunteer fire protection groups when its fire fighting capacity is exceeded. The current signatories to the Agreement are the cities of San Ramon, Pleasanton, Livermore, the Dougherty Regional Fire Authority, the Lawrence Livermore Laboratory the County of Alameda Fire Patrol, Camp Parks, and the San Ramon Valley Fire Protection District.

A mutual aid agreement established by Alameda County provides additional fire protection services to Tri-Valley communities, including Dublin.

In addition to its fire fighting duties, the DRFA is responsible for providing emergency medical service (EMS) to the City of Dublin. The DRFA is equipped with three ambulances to provide basic life support during emergencies. In extreme emergency situations, transport and advanced life support is also provided by the Alameda County Regional Ambulance Service.

The DRFA plans to hire two more firefighters to improve its staffing levels. Once hired, the DRFA will have four duty chiefs (including a fire chief, assistant fire chief, training officer, and fire marshal) and both the Dublin and San Ramon stations will be fully and adequately staffed for the current service area. The DRFA is the "first response" agency in hazardous materials spill situations within the City of Dublin. Six DRFA fire fighters have received training as Hazardous Materials Technicians.

Development fees imposed on new development in Dublin and San Ramon help to fund the DRFA. In Dublin, new residential development is currently assessed a $600/dwelling unit fee. Non-residential space pays a fee of $600 per 2,000 square feet. The use of these funds is restricted to building for capital improvements and cannot be used for operation and maintenance.

Wildlands Fire Hazards

Wildland fires in the dry grasslands that comprise these areas would present a potential safety and fire hazard to new residents of Eastern Dublin. The exposure of structures and people increases as development of the planning area occurs and people settle along the fringes of these open space areas. Also, the potential for fire from vandalism or carelessness is likely to increase as these areas become more populated.

The Project would preserve 47% of the GPA area and 27% of the Specific Plan area as open space or rural residential lands. Fires caused by lightning and human carelessness are fairly common. The summer months can mean a great amount of very dry fuel and when coupled with wind, can result in large wildland fires. The relatively remote location can make access for fire fighting equipment and personnel difficult.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Appendix I of the *CEQA Guidelines* indicates that a project could have a significant effect on the environment if it results in a need for new or increased demand for fire protection services, particularly if this increase is in excess of the service provider's current capacity. The exposure of the new population to potential wildlands fire hazards is also considered a significant effect.

IMPACTS AND MITIGATION MEASURES: FIRE PROTECTION SERVICES

Until new firefighting facilities are constructed in the Project site area, initial response to fire emergencies, hazardous materials spills and emergency medical situations will be from Fire Station #1 on Donahue Drive.

IM 3.4/C Demand for Increased Fire Services

Buildout of the Project will substantially expand the DRFA service area and increase demand for new fire stations and firefighting personnel. This will significantly increase response times and reduce service standards unless new facilities and personnel are added. This is a significant impact of the Project.

IM 3.4/D Fire Response to Outlying Areas

Based on DRFA's preliminary locations for new fire stations, the northern-most portions of the GPA increment area would be outside the District's standard response area. This would result in potential significant impacts on development in these areas (particularly the north end of Doolan Road and Tassajara Road) relative to fire hazard exposure and emergency response.

IM 3.4/E Exposure to Wildlands Hazards

Settlement of population and construction of new communities in proximity to high fire hazard open space areas would pose an increasing wildfire hazard to people and property if open space areas are not maintained for fire safety. This is a significant impact of the Project.

This is also a significant cumulative impact as further discussed in Chapter 5.0.

Mitigation Measures of the Specific Plan (Applicable to **IM 3.4/C, IM 3.4/D** and **IM 3.4/E**)

MM 3.4/6.0 *(Policy 8-5). Time the construction of new facilities to coincide with new service demand in order to avoid periods of reduced service efficiency. The first station will be sited and begin construction concurrent with initial development in the planning area.*

MM 3.4/7.0 *(Program 8F). Establish appropriate funding mechanisms (e.g., Mello Roos District, developer financing with reimbursement agreements, etc.) to cover up-front costs of capital improvements (i.e., fire stations and related facilities and equipment).*

MM 3.4/8.0 *(Program 8G). Coordinate with DRFA to identify and acquire specific sites for new fire stations. The westernmost site in the Specific Plan area must be acquired prior to the approval of the first development plans in Eastern Dublin. Timing for acquisition of the subsequent sites will be determined by DRFA.*

MM 3.4/9.0 *(Program 8H) Incorporate DRFA recommendations on project design relating to access, water pressure, fire safety and prevention into the requirements for development approval. Require that the following DRFA design standards are incorporated where appropriate:*

- *Use of non-combustible roof materials in all new construction.*
- *Available capacity of 1,000 GPM at 20 PSI fire flow from project fire hydrants on public water mains. For groupings of one-family and small two-family dwellings not exceeding two stories in height, the fire flow requirements are a minimum of 1,000 GPM. Fire flow requirements for all other buildings will*

be calculated based on building size, type of construction, and location.

- *A buffer zone along the backs of homes which are contiguous with the wildland area. This buffer zone is to be landscaped with irrigated (wet banding) or equivalent fire-resistive vegetation.*
- *Automatic fire alarm systems and sprinklers in all non-residential structures for human use.*
- *Compliance with DRFA minimum road widths, maximum street slopes, parking recommendations, and secondary access road requirements.*
- *Require residential structures outside the DRFA's established response time and zone to include fire alarm systems and sprinklers.*

MM 3.4/10.0 (Action Program 8I). Ensure, as a requirement of project approval, that an assessment district, homeowners association, or some other mechanism is in place that will provide regular long-term maintenance of the urban/open space interface.

MM 3.4 11.0 (Program 8J). Integrate fire trails and fire breaks into the open space trail system. Meet fire district standards for access roads in these areas while minimizing environmental impacts.

Mitigation Measures of the EIR (Applicable to **IM 3.4/C, IM 3.4/D** and **IM 3.4/E)**

MM 3.4/12.0 The City, in consultation with DFRA and a qualified wildlife biologist, shall prepare a wildfire management plan for the project area.

- *The plan objective should be to reduce the risk of open land wildfire to the lowest practical level consistent with reasonable protection of wildlife habitat and other open space values.*
- *The plan should define how the open lands of the project will be owned, used and maintained (consistent with the open space management plan), what wildfire hazard mitigation measures will be implemented, and how vegetation and wildlife habitat are likely to change over time as a result.*
- *The selection or formation of an entity responsible for maintenance of the open lands should be subject to the Fire Chief's approval, and any financial obligations of property owners to the maintenance entity should be disclosed to potential purchasers.*
- *Where open lands are to be removed from grazing use, one or a combination of brush control measures, such as mowing, discing, herbicide application or the removal of combustible materials, should be selected to achieve the objectives of the plan.*

- *Where new landscape planting is proposed, fire-resistant qualities should be a major consideration. New planting near structures should be irrigated. As a basic rule, a minimum of thirty feet shall be provided between new or existing homes and non-irrigated grassland.*

- *The plan should specify who will be responsible for its implementation, and how its implementation will be paid for.*

- *Since the scientific basis for wildland management is still inexact, it is also important that the plan provide for periodic monitoring of vegetation growth, wildlife habitat and fire risk, and for the adoption of amendments if necessary to achieve the objectives of the plan on an ongoing basis.*

MM 3.4/13.0 The City shall consult with the DFRA to determine the number, location and timing of any additional fire station(s) needed to serve the GPA Increment area at such time when the GPA Increment area is proposed for annexation.

The above mitigation measures shall be incorporated into a comprehensive fire protection/fire service program and are applicable to the entire Project area. Implementation of all of the mitigation measures would reduce the potential significant impacts relative to fire services response time and wildfire exposure to a level of insignificance.

SETTING

SCHOOLS

School Districts

The project area is within the boundaries of two school districts; the Dublin Unified School District (DUSD) and the Livermore Valley Joint Unified School District (LVJUSD).

Dublin Unified School District

The Dublin Unified School District was created on July 1, 1988. Its formation is a result of a school-city unification process which resulted in the creation of separate K-12 districts for Pleasanton and Dublin and the dissolution of the Amador Valley Joint Union High School District in which the two cities shared Dublin's high school.

The Dublin Unified School District provides service to the City of Dublin. In March 1992, the District had 3,190 students enrolled in three elementary (K-5), one intermediate (6-8), and one high school (9-12). This enrollment is less than half the 6,949-seat capacity of the DUSD's existing facilities. Specifically, Dublin High School has room for another 1,899 students and two of the District's schools are being used to serve other educational needs: Cronin/Valley High (capacity: 406 students) is the City's continuation high school and also provides space for adult education classes and a private nursery school; Dublin Elementary School (capacity: 850 students) is leased to a private school.

Table 3.4-1 gives enrollment and capacity figures for the Dublin Unified School District's facilities

in March 1992.

The current teacher/student ratios, as agreed to in the 1992 contract between the School District and the teachers union, are 1:31 (K-3), 1:32 (4-5), 1:185 per day (6-8) and 1:27 (9-12). The student generation factor used by the Project to project student enrollment in K-5 is 0.3 students per single family dwelling unit (includes Medium Density Residential) and 0.1 students per multi-family dwelling unit. For K-8, the District uses a 0.2 student generation factor for single family dwellings and has not calculated a generation factor for grades 9-12.

The Dublin Unified School District does not provide busing for its students. However, "WHEELS", the local bus company, provides State-subsidized transportation for students with special needs along established routes (see Section 3.3: *Traffic and Circulation* for discussion of transit service). Dublin schoolchildren either walk, bicycle, carpool or are driven to school by parents.

Livermore Valley Joint Unified School District

The Livermore Valley Joint Unified School District (LVJUSD) covers a 285-square mile area that includes the City of Livermore, portions of unincorporated Alameda County, and a small portion of Contra Costa County along the Morgan Territory Road. All of the Project site east of Tassajara Road (with the exception of a small portion of the Santa Rita property) falls within the jurisdictional boundary of the LVJUSD. (Refer to *School District Boundaries and Jurisdiction* below.)

In December 1991, the LVJUSD had ten elementary schools, four middle schools, and four high schools. Total enrollment at that time was 10,726 students with 5,097 in elementary schools; 2,382 in intermediate schools; and 3,247 in high schools. Busing is not provided by the District.

According to a District profile cited in 1988, "enrollment peaked in 1975 with 14,500 students and declined to 10,000 students in 1985. This decline has resulted in the closure of five elementary schools. While the secondary schools continue to have declining enrollment, elementary school enrollment is increasing. The STET coupled with city growth means that Livermore will need another elementary school north of I-580 by 1993." Refer to Section 3.2: Population, Housing & Employment, for additional discussion of population increases.

Based on City of Livermore growth projections and LVJUSD generation factors (0.30 children/dwelling unit for K-6; 0.15 children/dwelling unit for 7-8; 0.20 children/dwelling unit for 9-12), the District projects that it will need four new elementary schools, two new middle schools, and one new high school by the year 2010. At present, only one of the District's schools (Christensen Middle School with an enrollment of less than 200) is over-capacity.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
COMMUNITY SERVICES AND FACILITIES
Table 3.4-1
DUBLIN UNIFIED SCHOOL DISTRICT
CURRENT CAPACITY AND ENROLLMENT (March 1992)

School	Grades	Total Enrollment Capacity	March 1992 Enrollment	Available Seats
Fredericksen	K-5	753	623	+ 130
Murray	K-5	600	389	+ 211
Nielsen	K-5	810	627	+ 183
Subtotal		2,163	1,639	+ 524
Wells	6-8	890	689	+ 201
Dublin High	9-12	2,640	741	+1,899
Subtotal		5,693	3,069	+2,624
Cronin/Valley (a)	10-12	406	59	+ 347
Dublin (b)	K-5	850	-0-	+ 850
Subtotal		1,256	59	+1,197
Total		6,949	3,128	+3,821

FOOTNOTES:

(a) Continuation High School.
(b) Leased to private school.

Source: Dublin Unified School District; March 1992

School District Boundaries and Jurisdiction

The boundary of the Dublin Unified School District (DUSD) generally extends east to include the area west of Tassajara Road that is within the City's sphere of influence. The jurisdiction of the Livermore Valley Joint Unified School District generally extends east from Tassajara Road. The one exception is a small portion of the County Property which lies within the LVJUSD. The boundaries of the two school districts are shown in Figure 3.4-A.

Because the Project site falls within the jurisdiction of two school districts, the question of which district will serve development in the Project area has become an important planning concern. Many property owners in the planning area feel that the school district should be coterminous with the City in order to facilitate the financing of future services and infrastructure. Additionally, a coterminous school district would be more responsive to community concerns and would play an important role in building a strong civic identity in the Project area. This view is shared by the Superintendent of Dublin's School District and by its Board of Trustees Until a determination of new jurisdiction is made, however, the LVJUSD is legally obligated to serve most of the Project site.

Financing School Improvements

The Dublin Unified School District currently has no mechanism for funding school expansion or for upgrading facilities. A $3,500,000 general obligation bond election was passed in November 1988 to

raise funds for a new gym in the middle school and for general improvements in several of the other schools. The final portion of these monies is currently being used and the District is considering a new bond measure.

The Livermore Valley Joint Unified School District uses various methods for funding the expansion of school services. Some of these include using monies available from the State school building program, general obligation bonds, lease-back options, and Community Facilities Districts (special assessment districts), as allowed under the Mello-Roos legislation of 1982.

The LVJUSD has a five-year plan and a twenty-year plan for school facilities. Neither plan takes projected development in the Eastern Dublin planning area into account.

Enrollment and Future School Need

Two variables, permanent capacity and operating capacity, are used to assess a school district's ability to provide classroom space for current and future students. Permanent capacity is a measure of a district's built classroom space; operating capacity includes the number of seats provided by portable classrooms. According to data compiled by the DUSD in September 1990, four of the District's schools (Cronin/Valley High, Fredericksen, Nielsen, and Wells) used portables to supplement permanent classroom space. While school officials recognize that portables are generally less desirable than permanent structures, portables are becoming more common and are factored into a school's operating capacity.

In March 1992, the Dublin Unified School District owned four elementary schools (K-5) with 3013 seats, one intermediate school (6-8) with 890 seats, and two senior high schools (9-12) with 3046 seats. Of this total, 1,256 seats were found in either Dublin Elementary (850 seats) or Cronin/Valley High (406). These schools are currently serving special educational uses and are considered part of the DUSD's available permanent capacity if enrollment levels increase.

The impact of the Project on school enrollment and future school need is estimated on the basis of proposed residential development. As shown in Table 3.4-2, at buildout the Project is projected to generate a total of 9,462 students: 4,360 new K-5 students, 2,179 new 6-8 students, and 2,923 new 9-12 students. Of these totals, 2,703 (K-5); 1,351 (6-8) and 1,819 (9-12) are expected from development of the Specific Plan.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
COMMUNITY SERVICES AND FACILITIES
Table 3.4-2
NEW STUDENT YIELD

	Specific Plan			GPA Increment Area			The Project
Grades	SF (a)	MF (b)	Subtotal	SF (a)	MF (b)	Subtotal	Total
K-5	2,187	516	2,703	1,657	0	1,657	4,360
6-8	1,093	258	1,351	828	0	828	2,179
9-12	1,458	361	1,819	1,104	0	1,104	2,923
Total	4,738	1,135	5,873	3,589	0	3,589	9,462

FOOTNOTES:

(a) Single Family Generated Students
(b) Multi-Family Generated Students
Source: Wallace Roberts & Todd; August 1992

IMPACTS AND MITIGATION

SIGNIFICANCE CRITERIA

Appendix I of the *CEQA Guidelines* indicates that a project could have a significant effect on the environment if it results in a need for new or increased demand for school services, particularly if this increase is in excess of the service provider's current capacity.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN
COMMUNITY SERVICES AND FACILITIES
Table 3.4-3
PROVISION OF NEW SCHOOLS

Specific Plan	Projected Students	New School Size	New Schools Needed	New Schools Provided
K-5	2,703	500	5.4	6.5
6-8	1,351	800	1.7	1.75
9-12	1,819	1,500	1.2	1
The Project				
K-5	4,360	500	8.7	9
7-8	2,179	800	2.7	2
9-12	2,923	1,500	1.95	1

Source: Wallace Roberts & Todd: August 1992

IM 3.4/F Demand for New Classroom Space

Buildout of the Project will increase the demand for new classroom space and school facilities in proportion to the number of residential units constructed, far exceeding the current available capacity of either school district and resulting in a significant impact.

Sites for new schools have been provided by the Project based upon the projected number of new residential dwelling units in the Project area. School sites were selected based on student generation potential in each area, developability of each site, integration with the surrounding neighborhood, and student safety in retaliation to automobile traffic. As shown in Table 3.4-3, the Project provides less than the estimated need for intermediate and junior high schools and high schools based on buildout of the General Plan Amendment area. While Project student generation would justify development of two high schools, with almost 1,900 seats of capacity available in existing Dublin high schools there is no apparent need for more than one high school in Eastern Dublin. The GPA area would generate a need for approximately 2.7 junior high schools, but the Plan only provides for two junior high school sites. While there is remaining capacity for approximately 200 students in existing junior high schools, the Project could still generate about 375 more students (i.e., less than half a school's capacity) than accommodated by new junior high schools.

IM 3.4/G Demand for Junior High Schools

Project buildout could result in potentially significant impacts on junior high school classroom capacity based on projected student generation for the General Plan Amendment Increment area and the assumed school size. Planned junior high school capacity for the Specific Plan area is adequate.

Mitigation Measures of the Specific Plan (Applicable to **IM 3.4/F** and **IM 3.4/G**)

MM 3.4/13.0 (Policy 8-1). Reserve school sites designated in the Specific Plan (and General Plan Amendment) Land Use Map to accommodate the future development of schools in Eastern Dublin.

Mitigation Measures of the EIR (Applicable to **IM 3.4/F** and **IM 3.4/G**)

MM 3.4/14.0 The school district serving the project area should anticipate the potential shortage of junior high school capacity in one of two ways: 1) plan for two junior high schools with a capacity of 1,000 students each (compared to the more typical 800 student capacity), or 2) identify a potential site for a third junior high school in Doolan Canyon, if it appears that students generated by the Project will meet or exceed projections.

IM 3.4/H Overcrowding of schools

Another potential impact of the Project is possible overcrowding at existing schools if insufficient new classroom space is provided. This could occur if residential development in eastern Dublin is allowed to outpace the construction of new school facilities.

Existing school facilities could be adversely affected by overcrowding due to slow development of new classroom space in eastern Dublin resulting in potentially significant impacts on these facilities.

Mitigation Measures of the Specific Plan

MM 3.4/15.0 (Policy 8-2). Promote a consolidated development pattern that supports the logical development of planning area schools, and ensure that adequate classroom space is available prior to the development of new homes.

Mitigation Measures 3.4/13.0, 3.4/14.0 and *3.4/15.0* are applicable to the entire Project site and, when fully implemented, would reduce overcrowding and school space impacts to a level of insignificance.

IM 3.4/I Impact on School Financing District Jurisdiction

Development of eastern Dublin under existing jurisdictional boundaries would result in the area's being served by two different school districts. The division of the Project site by two different school districts would adversely affect financing of schools in eastern Dublin and complicate provision of education to planning area students. This is considered a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.4/16.0 (Action Program 8A). Work with the Dublin School District and the Livermore Valley Joint Unified School District to resolve the

jurisdictional issue regarding which district(s) should serve the Eastern Dublin planning area. Determine the service district arrangement that best serves the needs of planning area students and minimizes the fiscal burden of the service providers.

Mitigation Measures of the EIR

None required.

Implementation of *MM 3.4/16.0* would reduce this impact to a level of insignificance.

IM 3.4/J Financial Burden on School Districts

The cost of providing new school facilities proposed in the General Plan Amendment and Specific Plan could adversely impact local school districts by creating an unwieldy financial burden, unless some form of financing is identified. Given the shortage of local or State funding to fund the development of new schools, the construction of new school facilities may place a burden on local school districts. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.4/17.0 (Policy 8-3). Ensure that new development in Eastern Dublin, including both residential and non-residential development, fully mitigates the impact of such growth on school facilities.

MM 3.4/18.0 (Action Program 8B). Work with appropriate school district(s) to ensure that the development of new facilities is provided for through the dedication of school sites and/or payment of development fees by developers.

MM 3.4/19.0 (Action Program 8C). Establish appropriate funding mechanisms, such as a Mello Roos Community Facilities District, development impact fees, or a general obligation bond measure, to fund new school development in Eastern Dublin.

Mitigation Measures of the EIR

None required.

Mitigation Measures 3.4/13.0 - 3.4/19.0 are applicable to the entire Project site. These mitigations work interactively and need to be implemented on a comprehensive basis. For instance, *Mitigation Measures 3.4/13.0* and *3.4/14.0* reserving school sites, would not prove to be effective without the financing measures in *Mitigation Measures 3.4/17.0, 3.4/18.0* and *3.4/19.0*. These measures work together to reduce significant school impacts to a level of insignificance.

SETTING

PARKS AND RECREATION

Existing City Facilities and Standards

Park and recreation facilities serving the City of Dublin are shown in Figure 3.4-B. The regional park and recreation facilities in this figure are owned and operated by the East Bay Regional Park District.

The City of Dublin's 1992 inventory of park and recreation facilities is comprised of neighborhood and community parks, and community centers. Table 3.4-4 gives acreages of these current facilities:

Dougherty Hills Open Space, located between Dougherty and Stagecoach roads, is the most recent addition to the City's park and recreation facilities inventory. The 90-acre site was donated to the City in 1988. The plan for this park calls for primarily open space and passive type facilities such as trails and picnic areas.

Currently the City provides active park and recreation facilities at a rate of approximately 2.5 acres per 1,000 residents (57.75 acres of parkland and a 1990 U.S.Census population of 23,229). The size and distribution of Dublin's neighborhood and community parks are generally considered adequate to meet existing residents' recreational needs. The Sports Grounds facility, however, is not sufficiently large to accommodate any increased demand for organized sports.

For fiscal year 1992, 65 percent of the City's parks and recreation budget comes from grants and the City of Dublin General Fund; the remaining 35 percent is generated by park dedication and user fees. The City is working on a *Parks and Recreation Master Plan 1992* which will provide park standards, policies, phasing and priorities that would be applicable to the existing City and the Eastern Extended Planning Area.

East Bay Regional Park District (EBRPD)

All regional parkland in the Tri-Valley is owned and operated by the East Bay Regional Park District (EBRPD). Regional park and recreational facilities serving the Tri-Valley and adjacent areas of Alameda and Contra Costa County are shown in Figure 3.4-B. The EBRPD is a State-authorized special district established for the purposes of "acquiring, developing, and operating regional parklands for public use in perpetuity to serve residents of Alameda and Contra Costa Counties."

EBRPD's *1989 Master Plan* shows the site of the Tassajara Creek Regional Park (425 acres), a major regional facility located along Tassajara Creek and to the west (see Figure 3.4-B; site #6). The majority of this land was originally obtained from Camp Parks. In 1988, EBRPD returned approximately 400 acres of the land to Camp Parks for military use. Provisions of the land transfer arrangement specify that transferred land will revert to the EBRPD if not used by the U.S. Army. EBRPD continues to have an open space easement on 25 acres of land along the west side of Tassajara Creek, and owns in fee simple another 2.2 acres on the east side of the creek (with frontage on Tassajara Road). These 27.2 acres are included within the Specific Plan area.

EBRPD plans to incorporate this area into its regional trail system with a trail along the Creek and a staging area on the east side of the Creek with access from Tassajara Road. The District has long-range plans for a regional trail linking Sycamore Valley, Mt. Diablo State Park, and Morgan Territory Regional Preserve with the proposed Tassajara Creek Regional Park. EBRPD has recommended that a trail/open space dedication be provided north of the Specific Plan area. An open space corridor at this location would connect the proposed development at Gumpert Ranch in San Ramon to the

Specific Plan area. The EBRPD has also recommended that future improvements to Tassajara Road include a bicycle and hiking trail linking the park to public transit facilities on I-580.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
COMMUNITY SERVICES AND FACILITIES
Table 3.4-4
CITY OF DUBLIN
INVENTORY OF PARK AND RECREATION FACILITIES (1992)

Name	Type	Acres	Features
1) Shannon	Community	10	Children's play area, large turf meadow, picnic area, Shannon Center building, creek
2) Kolb	Neighborhood	5	Tennis courts, children's play area, group picnic area, fitness course
3) Mape	Neighborhood	3	Passive recreational activities
4) Dolan	Neighborhood	5	Basketball, children's play area, group picnic area, fitness course
5) Dougherty Hills Open Space	Urban Open Space	90	Hiking, trails, undeveloped
6) Sports Grounds	Community	23	Organized sports fields
7) Dublin Swim Center	Community	3	Swim center
8) Alamo Creek	Neighborhood	8	Basketball, children's play area, group picnic area, meadow
9) Stagecoach	Neighborhood	.75	Children's play area, individual picnic areas
10) Senior Center	Community Center	n.a.	Senior Center Building

Source: Dublin Recreation Department; May 1992.

Public Access and Trails System

The Project site's scenic ridgelines and riparian corridors present ideal conditions for the creation of a trail system that would serve as a major recreational resource for Dublin residents. Additionally, the Project's location at the "core" of the Tri-Valley's proposed regional trail system means that ensuring dedication of trail easements and access to trails has become a priority of local and regional recreation planning efforts. The following impacts of the Project on public access to trails and on the development of a trail system have been identified:

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Appendix I of the *CEQA Guidelines* indicates that a project could have a significant effect on the environment if it results in a need for new or increased demand for parks and recreation services, particularly if this increase has an effect on the quality of quantity of existing recreational opportunities.

IMPACTS AND MITIGATIONS: PARK FACILITIES

IM 3.4/K Demand for Park Facilities

Without the addition of new parks and facilities, the increased demand for new park and recreation facilities resulting from buildout of the Project would create potentially significant impacts on the City's ability to serve community residents and result in inadequate park space for future residents.

Residential growth in Eastern Dublin would result in a significant deterioration of the City's parks provision standard unless adequate parklands acreage is reserved on the Project site. If acquisition and improvement of new park and recreation facilities does not keep pace with residential construction, it would result in a significant impact to the City's ability to provide new services or maintain existing services and facilities.

The impact on park facilities is also considered a significant cumulative impact discussed in *Chapter 5*.

Although current parklands appear to be adequately meeting the recreation needs of the existing Dublin community, the ratio of developed parkland to population is below the 5 acres/1,000 population standard that most communities now try to maintain (refer to Table 3.4-5.) The potential for a further decrease in this standard is recognized as a potential impact of the Project. Park and recreation services could also be adversely impacted if acquisition and improvement of new park facilities lags behind construction of new residential areas.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
COMMUNITY SERVICES AND FACILITIES
Table 3.4-5
PARKS AND OPEN SPACE PROVISION

	Population	Parks/ Community Centers	Open Space	Total	Standard (b)
1990	23,229 (a)	57.75	90.0	147.75	2.5
Specific Plan	27,774	241.5	412.4	653.9	8.7
The Project	42,669	287.2	571.1	858.3	6.7

FOOTNOTES

(a) Source: 1990 U.S. Census
(b) Acres of parks/1,000 residents

Mitigation Measures of the General Plan Amendment

The *General Plan Amendment* includes policies in *Section 3.3: Open Space for Outdoor Recreation* which constitute general mitigation measures addressing the projected increase in demand for new park and recreation facilities:

MM 3.4/20.0 (Guiding Policy A). Expand park area throughout the Primary and Extended Planning Areas to serve new development.

MM 3.4/21.0 (Guiding Policy B). Maintain and improve outdoor facilities in conformance with the recommendations of the City's Park and Recreation Master Plan 1992.

MM 3.4/22.0 (Guiding Policy G). Provide active parks and facilities which are adequate to meet citywide needs for open space, cultural, and sports facilities, as well as the local needs of the Eastern Extended Planning Area.

MM 3.4/23.0 (Implementing Policy D). Acquire and improve parklands in conformance with the priorities and phasing recommended in the City's Park and Recreation Master Plan.

MM 3.4/24.0 (Implementing Policy K). Require land dedication and improvements for the 25 parks designated in the General Plan Eastern Extended Planning Area. Collect in-lieu park fees as required by City standards.

Mitigation Measures of the Specific Plan

MM 3.4/25.0 The Project sets aside 241.5 acres of parklands in the Specific Plan and an additional 45.7 acres of parklands in the General Plan Amendment Extension. With a projected residential population of 42,669 in Eastern Dublin, the Project would provide parkland at a ratio of 6.7 acres/1,000 population. On a citywide basis (with buildout of eastern and western Dublin), the parkland ratio would be 4.8 acres/1,000.

MM 3.4/26.0 Designate sites for 17 parks in the Specific Plan area and 8 additional sites in the General Plan Amendment Extension to ensure maintenance of the City's parks provision standard.

MM 3.4/27.0 (Policy 4-28). Ensure that park development in eastern Dublin is consistent with the standards and phasing recommended in the City of Dublin's Park and Recreation Master Plan 1992, and provides a full range of recreational activities from intense active sports to passive open space enjoyment.

MM 3.4/28.0 The Specific Plan includes a number of policies relative to the provision of open space. Implementation of the following policies help provide open space, access and areas for public recreation:

- Policy 6-1: Establish a continuous open space network that integrates large natural open space areas, stream corridors, and developed parks and recreation areas.
- Policy 6.2: Locate development so that large, continuous open space areas/corridors are preserved. Avoid creating open space islands.
- Policy 6.3: Provide convenient access from developed areas to designate open space areas and trails. Emphasize pedestrian connections between developed and natural areas.
- Policy 6.4: Preserve views of designated open space areas.
- Policy 6-5: Ensure adequate access to open space areas for maintenance and management purposes.

- Policy 6.6: Establish a mechanism for ownership, management and maintenance of open space areas in eastern Dublin, prior to final map approvals.

Mitigation Measures of the EIR

None Needed

The above mitigation measures combine to reduce the impact on existing park facilities and new park demand to a level of significance.

IMPACTS AND MITIGATIONS: PARK FINANCING

IM 3.4/L Park Facilities Fiscal Impact

Acquisition and improvement of new park and recreation facilities may place a financial strain on existing City of Dublin revenue sources. This is a potentially significant impact. (See also *Section 3.12: Fiscal Considerations.)* In order for the City to provide the parks designated in the Project, financing and implementation mechanisms must be designed. If sufficient financial resources to purchase and improve new park sites are not generated from the Project itself, there is a possibility that General Fund revenues would be tapped. This use of existing revenue sources to fund new parks represents a potential impact of the Project on the City's finances and would not be consistent with the stated goal that the development in eastern Dublin not create an adverse fiscal impact on City resources.

Mitigation Measures of the Specific Plan

MM 3.4/29.0 (Policy 4-29). Ensure, as part of the approval process, that each new development provide its fair share of planned open space, parklands and trail corridors.

MM 3.4/30.0 (Action Program 4M). Develop a Parks Implementation Plan for eastern Dublin that identifies: the preferred phasing of land dedication and improvements; facilities priorities and their location; and City responsibilities for design and construction of parks.

MM 3.4/31.0 (Action Program 4N). Calculate and assess in-lieu park fees based on the City's parkland dedication ordinance. Credit toward parkland dedication requirements will only be given for level or gently-sloping areas suitable for active recreation use.

Mitigation Measures of the EIR

None Needed

MM 3.4/28.0 - 3.4/31 reduce the impact on City financial resources to a level of insignificance.

IMPACTS AND MITIGATIONS: PUBLIC ACCESS AND TRAIL SYSTEM

IM 3.4/M Impact on Regional Trail System

Development of residential and commercial areas in eastern Dublin without adequate provision of trail easements may thwart efforts to develop a regional trail system. This is a potentially significant

impact.

Mitigation Measures of the General Plan Amendment

The following policy is included in *Section 3.3 Open Space for Outdoor Recreation* of the *General Plan Amendment:*

MM 3.4/32.0 (Guiding Policy H). Establish a trail system with connections to planned regional and subregional system, including the north-south corridors such as EBRPD's proposed trail along Tassajara Creek north to Mt. Diablo State Park.

IM 3.4/N Impact on Open Space Connections

Urban development along Project stream corridors and ridgelines would adversely impact outdoor recreational opportunities for future Dublin residents and obstruct the formation of an interconnected open space system. Natural site features such as stream corridors and major ridgelines need to be understood as part of an overall open space network. Urban development in eastern Dublin has the potential to obscure the relationships between different elements of the site's open space framework and to eliminate recreational opportunities if not adequately designed and implemented. This is a potentially significant impact.

Mitigation Measures of the GPA (Applicable to **IM 3.4/M** and **IM 3.4/N**)

MM 3.4/33.0 (Guiding Policy I). Using the natural stream corridors and major ridgelines, establish a comprehensive, integrated trail network within the planning area that permits safe and convenient pedestrian and bicycle access within urban areas and between urban areas and open space areas.

Mitigation Measures of the Specific Plan (Applicable to **IM 3.4/M** and **IM 3.4/N**)

MM 3.4/34.0 (Policy 6-1). Establish a continuous open space network that integrates large natural open space areas, stream corridors, and developed parks and recreation areas. (See MM 3.4/23.0)

MM 3.4/35.0 (Policy 6-3). Provide convenient access from developed areas to designated open space areas and trails. Emphasize pedestrian connections between developed and natural areas. (See MM 3.4/23.0)

MM 3.4/36.0 (Action Program 4O). Require developers to dedicate public access easements along ridgetops and stream corridors to accommodate the development of trails and staging areas.

MM 3.4/32.0 - 3.4/36.0 combine to reduce impacts relative to the regional trail system, trail corridors and open space areas to a level of insignificance and are applicable to the entire Project site. Implementation of these mitigations would occur at the time that tentative maps or development plans are filed with the City.

Park District Boundaries and Jurisdiction

The Project site falls within the jurisdiction of two separate park districts. Most of the General Plan Amendment area (the eastern portion) lies within the Livermore Area Recreation and Park District (LARPD). The western portion is within the jurisdiction of Dublin's Recreation Department. As

described in *Jurisdictional Boundaries* in *Section 3.1*, the issue of jurisdiction in not considered an environmental impact. This EIR identifies the following jurisdictional concerns:

Unless jurisdictional boundaries are revised, the majority of the new parks and recreational facilities in Eastern Dublin would be acquired, developed and maintained by the LARPD. This could create potentially significant concerns relating to park planning, financing, and operations.

To address this concern, the *General Plan Amendment* includes the following policy in *Section 3.3: Open Space for Outdoor Recreation:*

> *(Implementing Policy J). Work with the LARPD to revise jurisdictional lines so that City of Dublin departments have jurisdiction over all parkland within the Dublin Sphere of Influence.*

SETTING

SOLID WASTE

Coordination of solid waste management activities in Alameda County is the joint responsibility of the county's Solid Waste Management Authority and local jurisdictions. The City of Dublin currently has a Franchise Agreement with Oakland Scavenger Co. for residential and commercial garbage collection within the city limits. As part of its collection service to residential customers, the company conducts a curbside recycling program through a subsidiary. The current franchise agreement expires in 1996 and is subject to renewal. The current disposal service company does not foresee any problems in providing garbage collection service to the planning area once it is developed.

The *California Integrated Waste Management Act* (Act), also known as AB 939, was enacted by the California legislature in 1989. This Act requires cities and counties in California to divert 25% of solid waste from landfill disposal by the year 1995, and 50 percent of solid waste by the year 2000.

The Act further requires that each city in California prepare a *Source Reduction and Recycling Element* (SRRE) and a *Household Hazardous Waste Element* (HHWE) for its jurisdiction. In addition, each county must prepare SRRE and HHW Elements for the unincorporated portion of the county. Upon completion of these Elements, the County is then required to prepare a *Countywide Siting Element*. This *Countywide Siting Elements* combined with the *County/City SRREs* and *HHWEs* constitutes the *Alameda County Integrated Waste Management Plan (CIWMP)*. This comprehensive document then must go through numerous local approvals and ultimately be approved by the California Integrated Waste Management Board.

As a component of its *SRRE/HHWE*, the City of Dublin was required by AB 939 to prepare a study analyzing its existing solid waste generation (*Solid Waste Generation Study*). This report identified the quantity and composition of wastes generated by the City's population and businesses and the total waste disposed and diverted. Based upon a proportional share of Alameda County's total population and number of businesses, the major types of waste generated in Dublin in 1990 were determined to be: concrete and asphalt (16.3 percent); paper (33.7 percent); and yard waste (8.4 percent). The total quantity of waste generated in Dublin in 1990 was 55,143 tons, of which 41,707 were taken to landfills for disposal and 13,437 tons were diverted through source reduction and recycling programs. The overall diversion rate of waste materials for Dublin in 1990 was determined to be 24.4 percent.

The current waste stream in Dublin includes many other materials that can be easily diverted and recycled, thereby reducing the total amount of disposed solid waste. In particular, construction and demolition debris contribute significantly to the City's waste stream.

All solid waste collected in Dublin is trucked to the Altamont Sanitary Landfill. Estimated remaining capacity at the Altamont landfill is 24.5 million cubic yards. This is anticipated to provide landfill capacity for eight years. Although the owners of this landfill are pursuing an expansion which would provide 350 million cubic yards of capacity, the additional capacity cannot be counted until it is fully permitted. The estimated eight years remaining of capacity assumes a countywide increase in the amount of solid waste disposed of at 0.8 percent per year.[1] Additional capacity after eight years is uncertain at this time.

The City of Dublin, in fulfillment of the requirement to prepare a local waste management plan under AB 939, adopted its local *Source Reduction and Recycling Element/Hazardous Household Waste Element (SRRE/HHWE)* on March 23, 1992. The *SRRE/HHWE* does not address the potential growth areas in Dublin, including the Western and Eastern Dublin Extended Planning Areas. Therefore, there is no updated quantitive analysis of the relationship of these major growth areas relative to projected solid waste facility capacity.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Appendix I of the *CEQA guidelines* indicates that a project could have a significant effect on the environment if it results in a need for new or increased demand for solid waste services, particularly if this increase is in excess of the current solid waste management capacity. The project will result in the need for increased capacity to handle the projected increment of solid waste generated by residential and commercial land uses.

IMPACTS AND MITIGATIONS: SOLID WASTE

IM 3.4/O Increased Solid Waste Production

Increased population and commercial land use will cause a proportional increase in the total projected amount of solid waste and household hazardous waste generated by the City of Dublin. This is a potentially significant impact of the Project.

The environmental impacts of the Project associated with solid waste generation are considered to be indirect or secondary impacts resulting from the direct impacts of projected growth in population and commercial land use development. Stated simply, as population and commercial land use acreage increases, there is a proportional increase in the amount of solid waste generated. This increment to the City's existing waste stream creates a need for increased landfill capacity, personnel and vehicles to collect, sort and transport waste to landfill sites. Improperly-handled solid waste can create a public health hazard or, when disposed of improperly, contaminate local soils and water sources. Increased collection and disposal of waste will generate additional truck traffic on the local street system and will contribute to noise and air quality ambient conditions.

IM 3.4/P Impact on Solid Waste Disposal Facilities

The disposal of the projected increment of solid waste and household hazardous waste generated by

[1]Memorandum from Paul Rankin, Assistant City Manager, to City Manager October 29, 1991.

the Project may accelerate the closing schedule for Altamont landfill unless additional capacity is developed or alternate disposal sites are identified. This is a potentially significant impact of the Project.

It is also potentially significant cumulative impact, as discussed in *Section 5.1, Cumulative Impacts.*

The *Specific Plan* envisions a buildout population of 27,794 persons and 10.9 million square feet of new commercial space; development of the remaining portion of the General Plan Amendment area would add 14,875 people and .720 million square feet of commercial space to these figures. According to the City's *SRRE/HHWE*, solid waste generation projections are based on population growth projections. It is assumed that the proportions of each generator category (residential, commercial/industrial, construction/demolition debris, and self-haul) will contribute a similar proportion to the total waste stream in future years as it does under existing conditions. The population projections used in the *SRRE/HHWE* are based on estimated ABAG percentage increases from the (preliminary) 1990 Census data and do not include full buildout of potential high growth areas in Dublin including the Project area, and may underestimate current conditions.

Mitigation Measures of the Specific Plan (Applicable to **IM 3.4/O** and **IM 3.4/P**)

The *Specific Plan* contains policies designed to mitigate the environmental impacts of increased waste generation. Because the City has already complied with AB 939 and developed a long-range program (set forth in the *SRRE/HHWE)* to meet State disposal and diversion targets for the years 1995 and 2000, mitigation measures are largely actions which support already-adopted policies.

MM 3.4/37.0 (Action Program 8K): Prepare a solid waste management plan for Eastern Dublin which includes the following:

- *A requirement for the City to compost all organic wastes resulting from the ongoing maintenance of public parks and open space.*
- *Extension of Dublin's curbside collection program for recyclable materials.*
- *Specific areas designated for the collection of recyclable materials in multi-family and commercial areas, with coordination as needed for pick-up.*
- *Support for re-use of composted materials in landscaped areas of all new development.*

Note: This action program reiterates the adopted policies and programs of the *SRRE/HHWE* and would be the first step in integrating Eastern Dublin into the City's overall waste disposal and diversion strategy. Composting programs would start after a City-wide program became operational.

Mitigation Measures of the EIR (Applicable to **IM 3.4/O** and **IM 3.4/P**)

MM 3.4/38.0 Revise Waste Generation Projections of the City's SRRE/HHWE to reflect the population and commercial land use projections of the Project and determine updated solid waste generation and disposal capacity characteristics.

MM 3.4/39.0 Solid Waste Management Plan - Additional Requirements. The Solid Waste Management Plan (SWMP) for Eastern Dublin should address

and incorporate the goals, objective and programs of Dublin's SRRE and HHWE. This plan should be submitted to the City of Dublin's City Manager's Office and Public Works Department prior to building permit issuance. This plan should provide estimates of the amount of waste to be generated, and the estimated diversion by program. Impacts on available landfill capacity shall be calculated. The plan should also develop a public education and citizen awareness program to promote the attainment of target diversion and disposal levels. The program should provide information to residents, merchants, and employers about alternative diversion measures that are available, such as: area buyback centers and markets for recyclable; other information and incentives for recycling and use of recycled products; use of recycled materials in construction; and provision of project space for recycling containers for residential and retail units.

MM 3.4/40.0 Given the possibility that additional capacity would not be approved in the future, a condition of approval for all new development will be the availability or the reasonable expectation of adequate landfill capacity to accommodate project wastes.

The above mitigation measures combine to reduce the impacts relative to solid waste generation and solid waste disposal capacity to a level of insignificance and they are applicable to the entire Project site. It should be noted that MM 3.4/40.0 depends on the generation of information that may have significant implications regarding the point in time when development on the Project site could be approved.

SETTING

ELECTRICITY, NATURAL GAS AND TELEPHONE SERVICE

Electric and natural gas service are provided to the City of Dublin by the Pacific Gas and Electric Company (PG&E). Existing service to the Project site includes major electrical service to the old Santa Rita rehabilitation center and minor electrical lines to homes along Tassajara and Doolan Canyon roads. There are no natural gas lines in rural portions of the Project site; the County property has natural gas lines in place.

Telephone service to the Project site is currently provided by Pacific Bell.

IMPACTS AND MITIGATION

SIGNIFICANCE CRITERIA

Appendix I of the *CEQA Guidelines* indicates that a project may have a significant effect if:

- The Project will result in a substantial increase in the demand upon existing sources of energy and may require the development of new sources of energy.

- The Project will use substantial amounts of fuel and energy in the construction phase and as an ongoing use in the future.
- The development of the Project will require the expansion of electrical and gas lines onto undeveloped lands in agricultural and opens space use.
- The commitment of non-renewable fuel resources to generate electricity.

IMPACTS AND MITIGATIONS: EXTENSION OF UTILITY LINES

IM 3.4/Q Demand for Utility Extensions

Development of the Project site will significantly increase demand for gas, electric and telephone services. To supply adequate electrical service to the Project, PG&E estimates that a new distribution system will have to be constructed with overall service upgraded to a three-phase, 21 kilovolt (kv) line. Gas service will be provided to the Project site by means of a connection to the existing PG&E gas line that parallels I-580. This service would require in some cases, substantial extensions thus requiring expansion of electrical and natural gas lines onto undeveloped lands currently in agricultural and open space uses. This is considered a significant growth-inducing impact and an unavoidable adverse impact as discussed in *Chapter 5*.

Mitigation Measures of the EIR

Extension of utility lines are necessary if the Project is to approved and built.

There is no mitigation to this impact. It remains an unavoidable adverse impact.

IM 3.4/R Utility Extension Visual and Biological Impacts

Expansion of electrical, gas and telephone lines could result in potentially significant impacts to visual and biological resources if not appropriately sited. See also **IM 3.8/8** and **IM 3.7/A.**

Mitigation Measures of the Specific Plan

In order to ensure adequate service to future residents, the *Specific Plan* calls for coordination of infrastructure and facilities construction with Pacific Gas and Electric.

MM 3.4/41.0 (Action Program 8L). Require project applicants to provide documentation that electric, gas, and telephone service can be provided to all new development.

Mitigation Measures of the EIR

MM 3.4/42.0 Require all utilities to be located below grade where feasible and designed according to City of Dublin's street and infrastructure guidelines to reduce visual impact on the rural setting.

MM 3.4/43.0 To more substantially mitigate the effects of utilities expansion, the City can work with PG&E to plan the undergrounding of all new electric lines and to route infrastructure away from sensitive habitat and open space lands. See also MM 3.1/19.0

MM 3.4/44.0 Project applicants shall submit a service report to the City of Dublin Planning Department for review prior to Public Improvement Plan approval.

The above mitigation measures are applicable to the entire Project site and would reduce impacts to a level of insignificance.

IM 3.4/S Consumption of Non-Renewable Natural Resources

The provision of adequate natural gas and electrical service to the Project will require the consumption of non-renewable natural resources. This impact is considered a significant impact of the Project and an unavoidable impact.

Mitigation Measures of the EIR

MM 3.4/45.0 Demonstration Projects. The City shall require major developers in eastern Dublin to provide one or more demonstration projects of cost-effective energy conservation techniques. Demonstration of techniques such as photovoltaics, which are not currently cost-effective, shall be encouraged but not required. The developer shall be encouraged to coordinate efforts with PG&E in planning and design of demonstration projects. Options for demonstration projects may include:

- *Model Homes. Solar water heating, space heating, and demonstration of thermal mass. Demonstration landscaping for energy and water conservation. Use of trellises and arbors for shading.*
- *Public Facilities. Use of solar water heating, space heating, and thermal mass. Possible use of photovoltaics, windpower, or innovative cooling technology.*

MM 3.4/46.0 Site Planning, Building Design, and Landscaping. The City shall require project applicants to demonstrate that specific site planning, building design, and landscaping measures have been incorporated into their projects to conserve the use of energy during construction and long-term operation. Such measures might include orientation of lots, buildings and windows; protection of solar access; active and passive solar applications; use of energy efficient materials; and function of landscaping. These measures will be incorporated into an energy conservation plan and shall be reviewed and approved by the City as part of specific development proposals.

The above mitigation measures are applicable to the entire Project site. Implementation of these mitigations may still result in the significant consumption of non-renewable resources and therefor the residual impact of the Project is considered an unavoidable adverse impact as discussed in *Chapter 5.*

SETTING

POSTAL SERVICE

The City of Dublin is currently served by one post office located in downtown Dublin. Mail service to the Project site is currently provided by the Pleasanton and Livermore Post Offices.

IMPACTS AND MITIGATION

SIGNIFICANCE CRITERIA

Appendix I of the *CEQA Guidelines* indicates that a project could have a significant effect on the environment if it results in a need for new or increased demand for other governmental services, particularly if this increase is in excess of the service provider's current capacity.

IMPACTS AND MITIGATION MEASURES: POSTAL SERVICE

IM 3.4/T Demand for Increased Postal Service

Buildout of the Project will increase the demand for postal service that could create potential adverse impacts on the existing main post office in Dublin and create the demand for an additional post office. This is a potentially significant impact. Although the *Specific Plan* does not designate an exact location, the area designated as Public/Semi-Public in the heart of the Town Center is suggested as a highly-suitable site. In addition to providing convenient service, a post office in this location would be an important public facility that would contribute to the sense of civic identity in Eastern Dublin.

Mitigation Measures of the Specific Plan

MM 3.4/47.0 (Policy 8-10). Provide a post office within the eastern Dublin Town Center.

MM 3.4/48.0 (Action Program 8M). Coordinate with the U.S. Postal Service to identify facility needs and site criteria for a new post office in Eastern Dublin, and direct the land owner/developer of the Public/Semi-Public designated area in the Town Center to explore the potential of a post office in this location.

The above mitigation measures are applicable to the entire Project site and reduce the potentially significant impact to a level of insignificance.

SETTING

LIBRARY SERVICE

The planning area is served by the Alameda County Library system. The City of Dublin's branch library is the major reference center in the Tri-Valley area and the second largest branch library in the County system. It is open seven days a week and contains more than 70,000 volumes. It has special programs for children and senior citizens, as well as a bookmobile service which travels to community centers and outlying areas on a two-week rotation.

The Dublin library is a free-access service funded by property tax collection within the County. Supplemental funding comes from the City of Dublin which subsidizes 15 of the 55 hours the library is open per week; the Dublin Library Corporation also owns the building in which the library is housed.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Appendix I of the *CEQA Guidelines* indicates that a project could have a significant impact on the environment if it results in a need for open or increased demand for other governmental services, particularly if this increase is in excess of the service provider's current capacity.

IM 3.4/U Demand for Increased Library Service

Without additional library facilities and staff, the increase in population resulting from the project would create significant impacts on existing library service and facilities. Development in eastern Dublin will require the addition of at least one library. According to the administration of the Alameda County Library System, a new library will be considered for Eastern Dublin if people in the service area reside two and one-half to four miles from an existing branch library and if there is a service population of at least 5,000. To maximize user convenience, commute, shopping and traffic patterns are factored into the decision-making process. The City Library Task Force is currently studying the impact of growth in both eastern and western Dublin on the current library. Issues being considered include remodeling and expanding the current library, building a new library bin Eastern Dublin, or some combination of both.

Mitigation Measures of the Specific Plan

MM 3.4/49.0 (Policy 8-11). Provide a library(ies) and associated services for Eastern Dublin as determined to be appropriate given the size and population of the planning area.

MM 3.4/50.0 (Action Program 8N). Coordinate with Alameda County to provide library services to eastern Dublin, including the following options:

- *A new branch library*
- *Bookmobile service in Eastern Dublin*
- *Possible assessment of fees to fund new branch library*

Mitigation Measures of the EIR

MM 3.4/51.0 The City Library Task Force shall consider the development in the Project site in terms of development location and phasing and determine when, where and under what conditions the new library would be sited and build.

The above mitigation measures are applicable to the entire General Plan Amendment and reduce the impacts to a level of insignificance.

Community Services

Legend

General Plan Amendment Area

Specific Plan Area

Community Facilities

1. Dublin City Offices and Police
2. Dougherty Regional Fire Department
3. Dublin Public Library
4. Dublin Elementary
5. Cronin / Valley High
6. Fredricksen Elementary
7. Murray Elementary
8. Nielsen Elementary
9. Wells Middle School
10. Dublin High School
11. Civic Center Site
12. Dublin Post Office

Service Districts

- Dublin Unified School District
- Police (Dublin City Limits)
- Dougherty Regional Fire Authority
- Livermore Valley Joint Unified School District

Full boundary extension of LVJUSD not shown

Full boundary extension of LVJUSD not shown

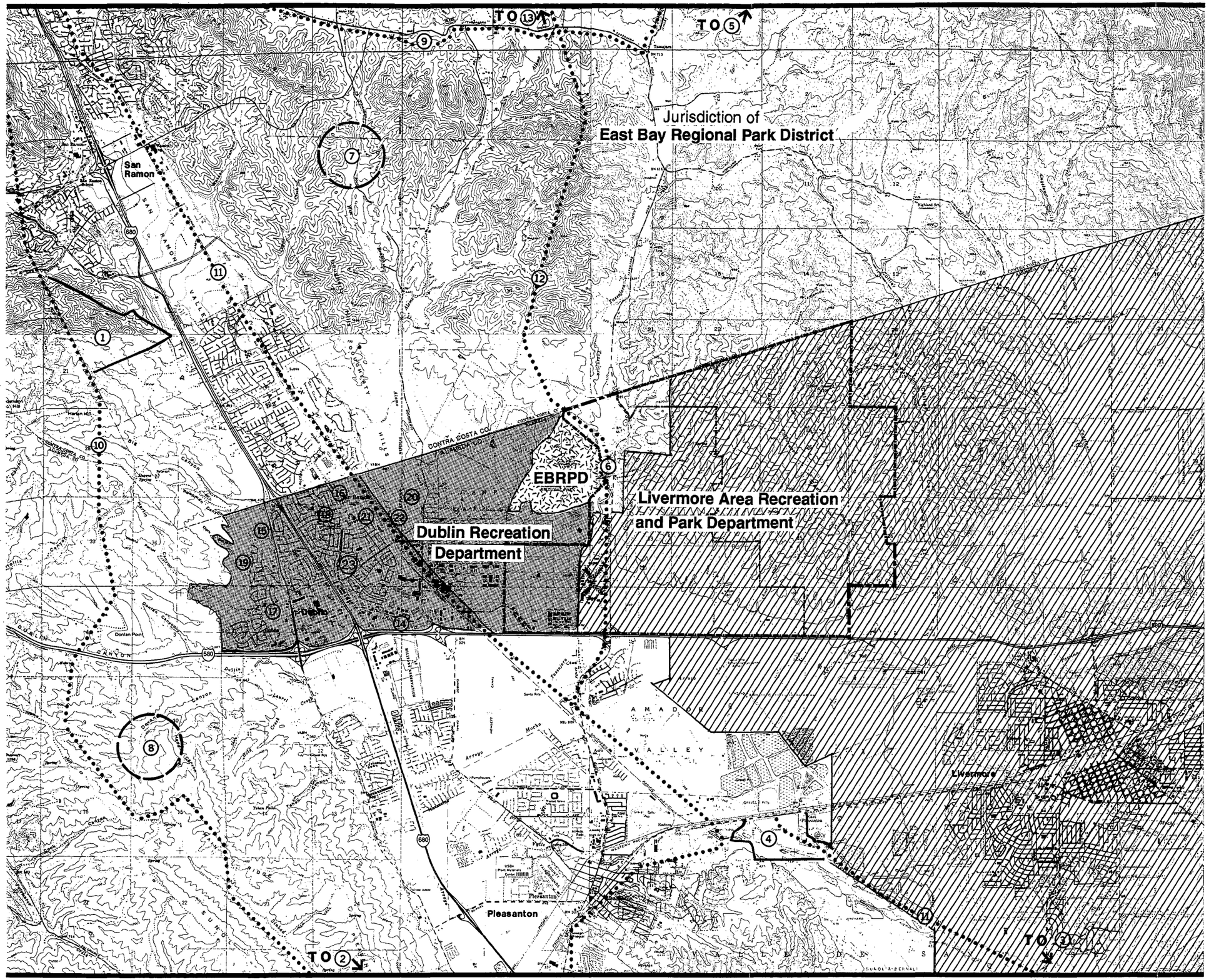
EASTERN DUBLIN
GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.4 - A**

Acres: 10, 40, 160

0 2000 4000 Feet

0 1/4 1/2 1 Mile 2



Park and Recreation Facilities

Legend

General Plan Amendment Area

Specific Plan Area

East Bay Regional Park District (Existing Parklands)

1 Bishop Ranch Regional Open Space
2 Pleasanton Ridge Regional Park
3 Del Valle Regional Park
4 Shadow Cliffs Regional Recreation Area
5 Morgan Territory Regional Preserve
6 Tassajara Creek Regional Park

Proposed Parklands

7 Sycamore Dougherty Valley Regional Open Space
8 Devaney Canyon Regional Park

Proposed Trails

9 Sycamore Valley - Mt. Diablo State Park - MorganTerritory Regional Preserve
10 Las Trampas Regional Wilderness Area - Bishop and Regional Open Space - Pleasanton Ridge Regional Park
11 San Ramon Valley (Concord) - Shadow Cliffs Regional Recreation Area - Del Valle Regional Park
12 Sycamore Valley - Tassajara Creek Regional Park (Highway 580) - San Ramon Valley Trail
13 **Mount Diablo**

City of Dublin Existing Parks and Recreation Facilities

14 Sports Grounds
15 Shannon Park / Community Center
16 Dublin Swim Center
17 Mape Park
18 Kolb Park
19 Dolan Park
20 Alamo Creek Park
21 Stagecoach Park
22 Dougherty Hills Open Space
23 Dublin Senior Center

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.4 - B**

Acres 10 40 160

0 2000 4000 Feet

0 1/4 1/2 1 Mile 2

Section 3.5

SEWER, WATER AND STORM DRAINAGE

3.5 SEWER, WATER AND STORM DRAINAGE

SETTING

SEWER

EXISTING SERVICE PROVISION

Project Site and Vicinity

Wastewater service for the Specific Plan area and the General Plan Amendment area will be provided by the Dublin San Ramon Services District (DSRSD). DSRSD owns and operates a wastewater collection and treatment system with disposal to other agencies described below.

Dublin San Ramon Services District

Currently, the DSRSD wastewater service boundary extends east to Tassajara Road, and only includes that portion of the Specific Plan area that is west of Tassajara Road. Lands in the Specific Plan area and the General Plan Amendment area east of Tassajara Road would have to be annexed to DSRSD. DSRSD is actively planning to provide wastewater collection, treatment and disposal service to the Specific Plan area and General Plan Amendment area.

DSRSD owns and operates a collection system that serves all of City of Dublin and the southern portion of the City of San Ramon. DSRSD also jointly owns a wastewater treatment plant with City of Pleasanton, with the plant operated by DSRSD. The majority of the lands within the Specific Plan area and General Plan Amendment area are not currently served by a wastewater collection system. Most existing facilities within the Specific Plan area are on septic systems and only the old Santa Rita Jail facilities are currently served by DSRSD.

There is a major 36-inch DSRSD trunk sewer is currently connected to the old Santa Rita Jail. It also serves Camp Parks and the New Santa Rita Rehabilitation Center, which are both outside the Specific Plan area. DSRSD is a member of two existing wastewater disposal agencies in the Valley: the Livermore Amador Valley Water Management Agency (LAVWMA) and the Tri-Valley Wastewater Authority (TWA).

Livermore Amador Valley Water Management Agency (LAVWMA)

The Livermore Amador Valley Water Management Agency (LAVWMA) currently owns and operates wastewater export facilities that pump DSRSD's treated wastewater to the East Bay Dischargers Authority (EBDA) disposal system which discharges the treated wastewater to the San Francisco Bay.

Tri-Valley Wastewater Authority (TWA)

The Tri-Valley Wastewater Authority (TWA) is the agency that is planning construction of additional export facilities for disposal of wastewater beyond the capacity of the LAVWMA system. Currently TWA has no facilities.

East Bay Dischargers Authority (EBDA)

East Bay Dischargers Authority (EBDA) owns and operates a wastewater disposal system that receives treated wastewater from LAVWMA and several East Bay communities and discharges the treated wastewater through an outfall into the San Francisco Bay.

EXISTING WASTEWATER COLLECTION SYSTEM

The majority of the lands within the Specific Plan area and Project area are not currently served by the DSRSD wastewater collection system. Most existing facilities within the Specific Plan area and Project area are on septic systems and only the old Santa Rita Jail facilities are currently served by DSRSD. There is a major 36-inch DSRSD trunk sewer that currently serves the old Santa Rita Jail. It also serves Camp Parks and the new Santa Rita Rehabilitation Center, which are both outside the Specific Plan area. The existing collection system is adequate for these existing land uses.

EXISTING WASTEWATER TREATMENT SYSTEM

The DSRSD Wastewater Treatment Plant is jointly owned by DSRSD and the City of Pleasanton and is operated by DSRSD. The current average dry weather flow (ADWF) capacity of the plant is 11.5 MGD. The breakdown of the plant capacity between the two agencies is shown below:

DSRSD Wastewater Treatment Plant Capacity

DSRSD Capacity	4.365 MGD-ADWF
City of Pleasanton Capacity	7.135 MGD-ADWF
Total Capacity	11.5 MGD-ADWF

In the 1990s, the average dry weather flows to the plant were about 8.0 MGD-ADWF, and have averaged about 7.8 MGD-ADWF over the past six years. Thus, there still is about 3.5 MGD-ADWF of treatment plant capacity. This remaining treatment plant capacity is for both DSRSD and the City of Pleasanton.

DSRSD sells sewer permits in terms of its portion of remaining treatment plant capacity. DSRSD sewer permits are based on Dwelling Unit Equivalents (DUE's). Each DUE represents the flow from a typical single family residence or multi-family residence. DSRSD uses a flow rate of 220 gpd/DUE for a single family residences and 180 gpd/DUE for multi-family residences. For non-residential developments, wastewater flow is estimated in gpd, and an equivalent DUE is determined, normally based on 220 gpd/DUE. As of March 1992, DSRSD has approximately 2,900 DUE's available for purchase. All sewer permits are sold on a first come, first served basis. Based on the above analysis, it would appear that DSRSD has about 0.64 MGD of capacity remaining at the plant (2,900 DUE's x 220 gpd/DUE). However, DSRSD staff have indicated that there may actually be slightly more capacity available due to water conservation in homes which appears to be yielding wastewater flows less than 220 gpd/DUE.

EXISTING WASTEWATER DISPOSAL SYSTEM

Disposal of treated wastewater from the DSRSD Wastewater Treatment Plant is through export through the LAVWMA and EBDA systems with final disposal in San Francisco Bay. A summary of the Valley's wastewater treatment and disposal system is shown on Figure 3.5-A. The current LAVWMA capacity is 21.0 MGD average day maximum month (ADMM).

PROJECTED WASTEWATER FLOWS

TWA is planning construction of a wastewater disposal system to handle flows in excess of the LAVWMA system. In the January 1992 Draft Subsequent Environment Impact, TWA estimated projected wastewater flows for the Tri-Valley based on three growth scenarios: 1) existing general plans; 2) prospective general plans; and 3) constrained general plans, which represents a lower impact scenario of the existing general plans, less the employment potential constrained by transportation

capacity and labor force availability. These wastewater flow estimates for the Tri-Valley are presented below:

Additional Sewage Export Requirements Given Projections of Employment and Population Potential TWA Service Area

Scenario	Total Export Capacity Needed to Accommodate Growth (MGD-ADWF)	Existing LAVWMA Export Capacity (MGD-ADWF)	TWA Export Expansion Required to Accommodate Growth (MGD-ADWF)
Existing General Plans	36.36	19.72	16.64
Prospective General Plans	45.80	19.72	26.08
Constrained General Plans	29.46	19.72	9.74

PLANNED WASTEWATER COLLECTION SYSTEM IMPROVEMENTS DSRSD

DSRSD is in the process of preliminary planning for a wastewater collection system for the Specific Plan area and Project area. The most recent DSRSD planning was completed in March 1991 and was based on eastern Dublin land uses proposed in April 1990, exclusive of Doolan Canyon. A proposed wastewater collection system was developed by DSRSD through the use of a computer model. In general, a collection system was developed that collected flows from north to south through the eastern Dublin area and then west through the Interstate 580 corridor to existing collection facilities along Hacienda Drive.

PLANNED WASTEWATER TREATMENT SYSTEM IMPROVEMENTS

DSRSD has prepared a master plan for treatment plant expansion. The current treatment plant capacity is 11.5 MGD-ADWF. Presented below are the planned expansions for the plant.

Planned Staged Expansion at DSRSD Wastewater Treatment Plant

Stage 4	14.7 MGD-ADWF
Stage 4B	18.3 MGD-ADWF
Stage 5	22.0 MGD-ADWF
Stage 6	36.0 MGD-ADWF

DSRSD has been collecting the required funds for future plant expansion through its connection fees. It should be noted that the limiting factor in the plant expansion schedule is available export disposal capacity which is the responsibility of TWA. DSRSD has the funds available to participate in the TWA export project. Also, if the current TWA proposal (as discussed below) is constructed, less wastewater would need to be treated locally and the planned DSRSD treatment plant expansions may not be required.

PLANNED WASTEWATER DISPOSAL SYSTEM IMPROVEMENTS

Livermore Amador Valley Water Management Agency (LAVWMA)

There are no planned system improvements for the existing LAVWMA export system. Planning efforts for future wastewater disposal capacity are now primarily through TWA. Zone 7 and DSRSD are studying wastewater recycling as a method of wastewater disposal and water supply augmentation.

Tri-Valley Wastewater Authority (TWA)

Currently TWA is proposing the construction of a wastewater disposal system by which untreated wastewater would be collected and pumped north to Central Contra Costa Sanitary District (CCCSD) for treatment. Under this proposal, up to 40 MGD peak wet weather flow of untreated wastewater would be pumped to the north to an existing CCCSD sewer interceptor in San Ramon. From this point, the raw wastewater would flow by gravity to the CCCSD Wastewater Treatment Plant in Martinez for treatment. Final effluent disposal would be through CCCSD's outfall to Suisun Bay. Improvements would be required to certain potential bottlenecks in the existing CCCSD collection system and the existing CCCSD wastewater treatment plant would have to be expanded.

Zone 7/DSRSD - Recycled Water

Another potential form of wastewater disposal is wastewater recycling and reuse. Zone 7 in conjunction with DSRSD and City of Livermore recently prepared a study on recycling and reuse and has determined it would be possible to re-use up to 25,000 AFY through groundwater basin recharge and surface irrigation. The study recommends the following three reuse projects:

- W-1 -- Use of non-demineralized recycled water for landscape irrigation in San Ramon, Dublin, North Pleasanton and Dougherty Valley. During the winter when irrigation demand is low, the recycled water would be stored in an aquifer.
- W-4 -- Use of demineralized recycled water for groundwater recharge to the Chain of Lakes (i.e. local quarries to be used for groundwater recharge and for recreation once aggregate resources are fully extracted).
- E-6 -- Use of demineralized recycled water for groundwater recharge via arroyos and spreading basins.

Current and future reuse volumes are presented below.

Livermore-Amador Valley Water Recycling Study
Current and Potential Buildout Reuse Volumes

	Current	Potential Buildout
Project	Annual use, acre-ft/yr	Annual use, acre-ft/yr
W-1	3,100	8,981
W4	0	4,000
E-6	7,500	12,500
Total	10,600	25,481

a) Brown and Caldwell, Livermore-Amador Valley Water Recycling Study, May 1992 for Zone 7

IMPACTS AND MITIGATION MEASURES

SEWER

SIGNIFICANCE CRITERIA

CEQA Guidelines: Appendix G define significant effects of a project on the environment. As identified by *CEQA*, the following are significant effects if the wastewater service has the potential to:

- Substantially degrade water quality;
- Contaminate a public water supply;
- Substantially degrade or deplete groundwater resources;
- Induce substantial growth or concentration of population;
- Encourage activities which result in the use of large amounts of fuel, water or energy; or
- Extend a sewer trunk line with capacity to serve new development.

Not all of the significant effects given above are applicable to wastewater service for eastern Dublin. The applicable significant effects are discussed in the following specific sections on impacts and mitigation measures.

IMPACTS AND MITIGATION MEASURES: SERVICE PROVISION

IM 3.5/A Indirect Impacts Resulting from the Lack of a Wastewater Service Provider to the Project Site

The Project assumes annexation of the Project site to the DSRSD which will provide wastewater service. No indirect impacts resulting the lack of a wastewater service provider are identified.

No mitigation is required.

IMPACTS AND MITIGATION MEASURES: WASTEWATER COLLECTION

IM 3.5/B Lack of a Wastewater Collection System

Currently, there is no wastewater collection system in the Project Area, with the exception of the DSRSD trunk sewer to the old Santa Rita Jail facilities. Estimated wastewater flow for the Specific Plan area is 4.2 MGD-ADWF (See Table 3.5-1) and the estimated wastewater flow for the General Plan amendment area is 5.6 MGD (see Table 3.5-2). These flows are based on full buildout and on wastewater flow factors used by DSRSD. It should be noted that these estimated wastewater flow rates could vary depending on changes in land use and water conservation efforts. With the development of the Specific Plan and the Project, a wastewater collection system will be required. A wastewater collection system has been proposed to serve the Specific Plan area as shown on Figure 3.5-B. This conceptual system would have to be expanded to serve the entire Project area. It has been sized in anticipation of serving the entire Project. If a wastewater collection system is not constructed, this will be a significant impact.

Mitigation Measures of the Specific Plan

MM 3.5/1.0 (Program 9P). Connection to Public Sewers. Require that all development in the Specific Plan area be connected to public sewers. Exceptions to this requirement, in particular septic tank systems, will only be allowed upon receipt of written approval from the Alameda County Environmental Health Department and DSRSD.

MM 3.5/2.0 (Program 9I). Wastewater Collection System Master Plan. Request that DSRSD update its wastewater collection system master plan computer model reflecting the proposed Specific Plan area land uses to verify the conceptual proposed wastewater collection system presented in Figure 3.5-B.

MM 3.5/3.0 (Program 9O). Onsite Wastewater Treatment. In conjunction with DSRSD, discourage on-site wastewater treatment systems such as package plants and septic systems in accordance with the policies of the San Francisco Bay Regional Water Quality Control Board.

MM 3.5/4.0 (Program 9M). DSRSD Service. Require a "will-serve" letter from DSRSD prior to permit approval for grading.

MM 3.5/5.0 (Program 9N). DSRSD Standards. Require that design and construction of all wastewater systems be in accordance with DSRSD standards.

Mitigation Measures of the EIR

None.

MM's 3.5/1.0 - 3.5/5.0 are applicable to the total Project site. Implementation of all these mitigation measures would reduce this impact to insignificant.

IM 3.5/C Extension of a Sewer Trunk Line with Capacity to Serve New Developments.

Construction of a wastewater collection system for the Project could result in the development of other projects outside and adjacent to the Project that would connect up to the Project's collection system. This is a potentially significant impact.

This impact is also a potentially significant growth-inducing impact as discussed in *Chapter 5.*

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/6.0 The proposed wastewater system in Figure 3.5-B has been sized only to serve the Specific Plan Area with additional capacity for only the Project.

MM 3.5/6.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce impacts to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: WASTEWATER TREATMENT

IM 3.5/D Current Limited Treatment Plant Capacity.

There is a limited available treatment capacity at the DSRSD Wastewater Treatment Plant. Available export capacity limits wastewater treatment plant expansion. This available capacity is reflected in the available sewer permits DSRSD has to sell to developers. Thorough calculation of estimated wastewater flows is critical to efficient use of remaining sewer permits. If sewer permits are not available for purchase, this would adversely affect the Project and could halt development. This is a significant impact.

Mitigation Measures of the Specific Plan

MM 3.5/7.0 (Program 9L). Design Level Wastewater Investigation. Require eastern Dublin applicants to prepare (in coordination with DSRSD) a detailed wastewater capacity investigation including means to minimize wastewater flows, to supplement the information in the Specific Plan. The investigation should include a review of proposed phasing matched against the allocation of server permits and the proposed TWA project; and a thorough estimate of planned land uses at the site and estimated wastewater flows to be generated at the site. Base the estimation of the wastewater flows for sewer permits on the DSRSD approved wastewater flow factors.

Mitigation Measures of the EIR

None.

MM 3.5/7.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce this impact to a level of insignificance.

IM 3.5/E Future Lack of Wastewater Treatment Plant Capacity

Development of the Specific Plan and the Project will require an increase in wastewater treatment plant capacity to adequately treat the additional wastewater flows to meet discharge standards. This is a significant impact.

Mitigation Measures of the Specific Plan

MM3.5/8.0 (Policy 9-6) Ensure wastewater treatment and disposal facilities are available to meet the needs of future development in Eastern Dublin.

Mitigation Measures of the EIR

MM3.5/9.0 *In order to meet projected wastewater flow rates, DSRSD has prepared a master plan for wastewater treatment plant expansion as follows:*

DSRSD WWTP Staged Expansion	*Total Planned Plant Capacity*
Stage 4	*14.7 MGD-ADWF*
Stage 4B	*18.3 MGD-ADWF*
Stage 5	*22.0 MGD-ADWF*
Stage 6	*36.0 MGD-ADWF*

DSRD has the funds available to design and construct wastewater treatment plant expansions once export capacity is available.

MMs 3.5/8.0 and *3.5/9.0* are applicable to the total Project site. Implementation of these mitigation measures will reduce this impact to insignificant.

IM 3.5/F Increase in Energy Usage Through Increased Wastewater Treatment.

Development of the Project will result in increased wastewater flows (as shown in Tables 3.5-1 and 3.5-2) and will require increased energy use for treatment of wastewater. This is a potentially significant impact.

This impact is also a potentially significant irreversible change as discussed in *Chapter 5*.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/10.0 *Expansion of the DSRSD WWTP should include the use of energy efficient treatment systems. The expanded plant should be operated to take advantage of off peak energy.*

MMs 3.5/10.0 is applicable to the total Project site. Implementation of this mitigation measure will partially mitigate the impact; however, energy use will increase and this impact will remain potentially significant.

IMPACTS AND MITIGATION MEASURES: WASTEWATER DISPOSAL

IM 3.5/G Lack of Wastewater Current Disposal Capacity.

The increase in wastewater flows through the development of the Specific Plan and the Project will require an increase in wastewater disposal. Additional wastewater disposal can be achieved through developing additional export capacity and/or recycled water projects. TWA has estimated that the Tri-Valley wastewater flow would exceed the capacity of the LAVWMA system in the early 1990's. TWA has estimated that the Tri-Valley will require additional average daily export capacity of 9.74 MGD-ADWF to 26.08 MGD-ADWF, and additional peak wet weather flow capacity of up to 40 MGD. This is a significant impact.

Mitigation Measures of the Specific Plan

MM 3.5/11.0 (Program 9H). Export Pipeline. Support TWA in its current efforts to implement a new wastewater export pipeline system, which would also serve eastern Dublin.

MM 3.5/12.0 (Policy 9-5). Promote recycled water use for landscape irrigation in eastern Dublin through upgrading of treatment as required at the DSRSD Wastewater Treatment Plant and construction of a recycled water distribution and storage system in eastern Dublin.

MM 3.5/13.0 (Program 9J). Recycled Water Distribution System. Request DSRSD to update its proposed recycled water distribution system computer model reflecting the proposed Specific Plan land uses and verify the conceptual backbone recycled water distribution system presented on Figure 3.5-C.

MM3.5/14.0 (Program 9K). Wastewater Recycling and Reuse. Support the efforts of the Tri-Valley Water Recycling Task Force Study through Zone 7, encouraging wastewater recycling and reuse for landscape irrigation within the Eastern Dublin Specific Plan area.

Mitigation Measures of the EIR

None.

MMs 3.5/11.0-3.5/14.0 are applicable to the total Project site. Implementation of these mitigation measures will reduce this impact to insignificant.

IM 3.5/H Increase in Energy Usage Through Increased Wastewater Disposal.

Development of the Project will result in increased wastewater flows (as shown in Tables 3.5-1 and 3.5-2) and will require increased energy use for disposal of wastewater. Energy for wastewater disposal will be required for 1) pumping of raw wastewater to CCCSD for treatment under the TWA proposed project; and/or 2) operation of an advanced treatment and distribution system for recycled water. This is potentially significant impact.

This impact is also a potentially significant irreversible change as discussed in *Chapter 5.*

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/15.0 Energy for Export Disposal. Currently LAVWMA makes every attempt to pump wastewater through its export system at off-peak hours in the night in order to help balance electric demands in the PG&E system. Once the TWA export system is in place, a similar program of off-peak pumping should be encouraged.

MM 3.5/16.0 Energy for Disposal Through Recycled Water System. The recycled water treatment system should be planned, designed and constructed for energy efficiency in operation. This would include use of energy

efficient treatment systems, optimal use of storage facilities and pumping at off-peak hours.

MMs 3.5/15.0 and 3.5/16.0 are applicable to the total Project site. Implementation of mitigation measures will partially mitigate this impact; however, energy consumption will still increase and the impact will still be potentially significant.

IM 3.5/I Potential Failure of Export Disposal System.

A failure in the operation of the proposed TWA wastewater pump stations would have serious impacts on the overall operation of the wastewater collection system for the Tri-Valley subregion as well as the eastern Dublin Project. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/17.0 According to the TWA Draft Subsequent EIR[1], it is very unlikely that a pump station would be out of service for a long time because of redundancy that would be built into the pump station as well as provisions for emergency power generators.

MM 3.5/17.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance

IM 3.5/J Pump Station Noise and Odors.

The proposed TWA wastewater pump stations could generate noise during their operation and could potentially produce odors. This is potentially significant impact.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/18.0 According to the TWA Draft Subsequent EIR, the pump and motors would be designed to meet local noise standards and odor control equipment would also be provided.

MM 3.5/18.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.5/K Storage Basin Odors and Potential Failure.

The proposed TWA Emergency Wastewater Storage Basins could potentially emit odors and/or the basins could have structural failure due to landslides, earthquakes or undermining of the reservoir from inadequate drainage. This is potentially significant impact.

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[1] Long-Range Wastewater Management Plan for the Livermore-Amador Valley, Subsequent EIR (DRAFT), Tri-Valley Wastewater Authority, January 31,1992

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/19.0 According to the TWA Draft Subsequent EIR, the basins will be covered and buried concrete tanks equipped with odor control equipment. The basins will also be designed to meet the current seismic codes.

MM 3.5/19.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.5/L Recycled Water System Operation.

The proposed recycled water system must be constructed and operated properly in order to prevent any potential contamination of or cross-connection with potable water supply systems. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/20.0 Require construction of the recycled water distribution system be in accordance with all applicable regulations of State Department of Health Services (DHS) and San Francisco Bay Regional Water Quality Control Board (SFRWQCB).

MM 3.5/20.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.5/M Recycled Water Storage Failure.

Recycled water storage is critical to the operation of the proposed recycled water distribution in order to meet the peak demands of landscape irrigation. Loss of storage could occur through damage to the reservoir from landslide, earthquakes, and undermining of the reservoir through inadequate drainage. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/21.0 Require reservoir construction meet all applicable standards of DSRSD and appropriate health agencies. Include adequate soils/geotechnical investigation of the proposed site to determine potential impacts to site from landslides and earthquakes. Reservoir must be designed to meet all current seismic codes. The reservoir site must be designed to provide for adequate site drainage.

MM 3.5/21.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.5/N Loss of Recycled Water System Pressure.

Loss of pressures in the proposed recycled water distribution systems could result in the system being unable to meet peak irrigation demand. This could require increased demands on potable water for backup irrigation and potentially result in loss of vegetation through lack of irrigation water. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/22.0 Require the proposed recycled water pump stations to meet all the applicable standards of DSRSD and include emergency power generation at each pump station with an automatic transfer switch to run the pumps in the event of a power failure.

MM 3.5/22.0 is applicable to the total Project site. Implementation of this mitigation measure would reduce the impact to insignificance.

EXISTING SERVICE PROVISION

IM 3.5/O Secondary Impacts from Recycled Watersystem Operation

The existing DSRSD wastewater treatment plant may require significant modification to remove salt from recycled water if required by Zone 7 or the Regional Water Quality Control Board. The present plant may also need additional filtration and other modifications to produce recycled water for areas with unrestricted access. Failure to identify and implement required improvements make increase salinity in the groundwater basin. This is a potentially significant impact.

Mitigation Measure of the EIR

MM 3.5/23.0 Recycled water projects shall be coordinated with any salt mitigation requirements of Zone 7. Present Zone 7 study results, however, indicate the area may be in a fringe groundwater basin and recycled water would not require demineralization.

MM 3.5/23.0 is applicable to the total Project site. Implementation of this mitigation measure would reduce the impact of this impact is a level of insignificance.

SETTING

WATER

Water service for the Specific Plan area and the General Plan Amendment area will be provided by the Dublin San Ramon Services District (DSRSD). DSRSD owns and operates a water distribution system that supplies water to the City of Dublin. DSRSD currently obtains all of its water supplies from Zone 7 of the Alameda County Flood Control and Water Conservation District (discussed below).

Dublin San Ramon Services District

Currently, the DSRSD water service boundary is the same as the city limits of the City of Dublin, which extend as far east as Tassajara Road. However, DSRSD now provides water service only as far east as roughly Dougherty Road. Lands in the Specific Plan area and General Plan Amendment area east of Tassajara Road will have to be annexed to DSRSD. DSRSD has been actively planning to provide water service to the Specific Plan area and General Plan Amendment Area. It should be noted that the County of Alameda does have a direct water supply connection to Zone 7 for the Santa Rita Rehabilitation Center (outside of the Specific Plan area) and to the Old Santa Rita Jail (inside the Specific Plan area). The United States of America has a direct water supply connection to Zone 7 for the Camp Parks Reserve Forces Training Area (outside the Specific Plan area) and Camp Parks also has a well in the property. DSRSD would be the logical agency to ultimately combine all the water services into one system.

DSRSD does not have policy requiring all developments to connect to its water distribution system. Thus, developments are free to explore other options for water supply -- such as groundwater wells.

Zone 7 of the Alameda County Flood Control and Water Conservation District

Zone 7 of the Alameda County Flood Control and Water Conservation District (Zone 7), as water wholesaler to DSRSD, has projected that at current water consumption rates and with current available supplies, they have enough water supply to meet demand for the next 9 to 14 years. This assumes consumption at 210 gallons per capita/per day and a nominal 2 percent to 3 percent annual growth rate. In order to meet demands in the future, Zone 7 is investigating other sources of water including water marketing, recycled water and additional storage, as well as increased water conservation.

EXISTING WATER SUPPLY

DSRSD owns and operates a water distribution system that supplies water to the City of Dublin. DSRSD obtains all of its water from two turnouts on the Zone 7 water supply system. Zone 7 has three main sources for its water supply as noted below.

Zone 7 Sources of Water

• Local Surface Water:	Zone 7 captures local surface runoff at Lake Del Volley near Livermore.
• Local Groundwater:	A large groundwater basin exists in the Valley and Zone 7 has two well fields to pump this groundwater -- Hopyard Well Field and Mocho Well Field.
• Imported Surface Water:	Zone 7 contracts with the Department of Water Resources through its State Water Project for delivery of imported water form the Delta through the South Bay Aqueduct.

EXISTING WATER TREATMENT SYSTEM

Zone 7, as the only water supplier to DSRSD, owns and operates water treatment facilities that provide a safe and potable water to DSRSD. Zone 7 has two surface water treatment plants: Patterson Pass Water Treatment Plant and Del Volley Water Treatment Plant. There are also chlorination facilities at the Hopyard Well Field and at the Mocho Well Field.

Additionally, at each of the two turnouts from the Zone 7 system, DSRSD has constructed chlorination/fluoridation facilities. The chlorination facilities are to insure an adequate chlorine

residual remains in the water since there are long travel times from the Zone 7 treatment plants where original disinfection occurs. The fluoridation is for health reasons, to prevent decay of teeth.

EXISTING WATER DISTRIBUTION SYSTEM

As was noted above, DSRSD currently has two turnouts on the Zone 7 water supply system. Turnout No. 1 is located at Dougherty Road and the old Southern Pacific right of way and Turnout No. 2 is located at Amador Valley Boulevard and Stagecoach Road. Turnout No. 1 has a 5,000 gallon per minute (gpm) capacity and Turnout No. 2 has a 5,500 gpm capacity.

Currently DSRSD does not provide water service to the Specific Plan area nor the Project. The closest DSRSD water service to the Specific Plan are is an 8-inch diameter main at the end of Scarlett Court adjacent to the old Southern Pacific right-of-way near the western edge of Camp Parks. Zone 7 does have direct water supply connections to: 1) the County of Alameda for the old Santa Rita Jail (inside the Specific Plan area) and for the Santa Rita Rehabilitation Center (outside of the Specific Plan area); and 2) the United States of America for the Camp Parks Reserve Force Training area (outside, but adjacent to the Specific Plan area).

PROJECTED WATER SUPPLY AND DEMAND

Zone 7 prepared a Water Supply Update in February 1992 presenting findings on its current water supply situation and the potential demands within the Zone 7 service area as growth occurs in the Livermore-Amador Valley. In that study, Zone 7 estimated the average annual existing water supplies available to meet municipal and industrial demands, as shown in Table 3.5-3. The average annual current water supply for Zone 7 is 40,900-acre feet per year (AFY). Zone 7 currently uses an overall community consumption rate of 210 gallons per capita per day (gpcd). At this consumption rate, 40,900 AFY could support a Valley-wide population of 174,000. In 1991, the population estimate for the Zone 7 service area by the Alameda County Planning Department was 133,000. Zone 7 has noted that if the annual growth rate were 2 percent to 3 percent, the growth from 133,000 to 174,000 would occur in 9 to 14 years. Zone 7 has also noted that if a 10 percent reduction in water use is achieved through water conservation, then the 40,900 AFY could meet the needs of a population of 192,000. This could then provide three to five additional years of growth before supply is exceeded.

Zone 7 has reported that the current general plans for the Valley indicate a potential population of 188,000 and that the prospective general plans indicate a potential population of 274,000. In order to meet the water demands of 274,000 people, Zone 7 would need a water supply of 64,400 AFY (@ 210 gpcd). This is about 25,000 AFY more than the current available supply of 40,900 AFY.

Thus, Zone 7 would have to develop an additional 25,000 AFY of water supply in order to meet the potential water demands of the "prospective" General Plans. Zone 7 has identified the following potential water sources to meet this future demand:

Zone 7 Potential Water Sources	Potential Yield (AFY)
Los Banos Grande Reservoir	8,400
Water Marketing	14,300
Additional Storage	20,000
Recycled Water	25,000

PLANNED WATER SUPPLY IMPROVEMENTS

Zone 7

In a 1991 Capital Facilities Plan Update, Zone 7 prepared an analysis on needed water supply and water quality improvements. In this study, the following new facilities were proposed to improve the water supply source:

- Hopyard Well No. 6 (at the Pleasanton Sports Ground) upgrade to 6 MGD (Completed).
- 3 MGD Well in or near Hopyard Well Field at the Pleasanton Sports Grounds.
- Four new wells.
- Gravel Pit Lakes pump station and pipelines for emergency supply to Del Volley Water Treatment Plant.
- Tri-Valley Water Recycling Task Force Study.

Groundwater Wells

Recognizing that it basically only has one source of water (Zone 7), DSRSD will soon have groundwater wells as an additional supply source. Currently, the City of Pleasanton is constructing these wells for DSRSD since the wells are located adjacent to the City of Pleasanton's water system. DSRSD will reimburse the City of Pleasanton for the construction of the wells and will also negotiate a reimbursement rate for City of Pleasanton to "wheel" the water from these wells through the City's water system to the DSRSD water system. DSRSD staff feels that the addition of wells would give DSRSD additional flexibility in meeting peak water demands in summer months. Also, the wells would serve as a backup, should the Zone 7 distribution system fail.

Conservation

A major element of improvements to water supply sources is the development of a water conservation program, to efficiently use the current water supply and delay the need for development of additional water supplies. This is especially true in California which is now undergoing its fifth year of drought. Both Zone 7 and DSRSD have actively been planning water conservation programs for their respective service areas.

Zone 7 Urban Water Management Plan Update

In April 1991, Zone 7 prepared an Urban Water Management Plan Update under the requirements of Assembly Bill 797, the Urban Water Management Planning Act. This act requires all urban water purveyors serving more than 3,000 customers either directly or indirectly, or more than 3,000 acre-feet of water annually, to prepare and submit a plan or plan update once every five years. The purpose of the plan is to evaluate and develop water management polices to achieve conservation and efficient use of urban water supplies. The urban water management plan update presented the following water management programs to be implemented over the next five years by Zone 7:

- Xeriscaping
- Landscaping Ordinance(s)
- In-School Education
- Public Information/Water Awareness Program
- Distribution System Water Audit/Leak Detection Program
- Water Recycling
- Water Conservation (voluntary or mandatory depending on status of drought and water availability from State Water Project)

DSRSD Water Use Reduction Plan

DSRSD recently enacted a water use reduction plan for its service area. The plan was prepared because DSRSD recognized that demands on the State Water Project (by which DSRSD gets up to 70% of its water through Zone 7) are growing faster than capacity to deliver water and that five years of subnormal rainfall has made this chronic situation acute.

PLANNED WATER TREATMENT SYSTEM IMPROVEMENTS

Zone 7

In the 1991 Zone 7 Capital Facilities Plan Update, Zone 7 identified the following new facilities that would improve water treatment for their system:

- 18 MGD Del Volley Water Treatment Expansion to 36 MGD (Completed).
- New Water Quality Laboratory and Maintenance Shop Upgrade at Del Volley Water Treatment Plant.
- New Clarifier at Patterson Pass Water Treatment Plant.
- 1 MGD Reverse Osmosis Treatment Plant at or near Mocho Well Field or Hopyard Well Field.
- Ozone installation at Del Volley Water Treatment Plant and at Patterson Pass Water Treatment Plant.

PLANNED WATER DISTRIBUTION IMPROVEMENTS

Zone 7

In the 1991 Zone 7 Capital Facilities Plan Update, Zone 7 identified the following new facilities that would improve their distribution system:

- Mocho Pipeline (Under construction).
- Vineyard Pipeline.
- Booster Pump Stations to allow water to be delivered in a west-to-east direction in the Zone 7 system.

DSRSD

In May 1989, DSRSD completed a Water System Master Plan Update that included planning for an "Eastside Study Area." The Eastside study area included the majority of the Specific Plan area, except it did not include the Alameda County lands west of Tassajara Road that are part of the Specific Plan. More recently, DSRSD prepared an update to this water system master plan based on land uses proposed in eastern Dublin in April 1990, exclusive of Doolan Canyon. A proposed water distribution system was developed by DSRSD through the use of a computer model. The proposed water distribution has three pressure zones, five reservoirs and four pumping stations. Water would be supplied to the distribution system through two turnouts from Zone 7's Cross Valley Pipeline along Interstate 580 and potentially from DSRSD's existing pressure Zone 1. Also, the system was planned under the assumption that a portion of the demand in Dougherty Valley must be provided through eastern Dublin.

IMPACTS AND MITIGATION MEASURES

WATER

SIGNIFICANCE CRITERIA

CEQA Guidelines: Appendix G defines significant effects of a project on the environment. The following significant effects are related to water service.

- Substantially degrade water quality;
- Contaminate a public water supply;
- Substantially degrade or deplete groundwater resources;
- Interfere substantially with groundwater recharge;
- Induce substantial growth or concentration of population;
- Encourage activities which result in the use of large amounts of fuel, water or energy.

Not all the above significant effects are applicable to water service for eastern Dublin. The applicable significant effect are discussed in the following specific sections on impacts and mitigation measures.

IMPACTS AND MITIGATION MEASURES: SERVICE PROVISION

IM 3.5/P Overdraft of Local Groundwater Resources.

If the Project site is not annexed to the DSRSD, Project-related development may need to drill wells in the planning area to obtain water supplies. Because existing groundwater resources are limited, wells could cause an overdraft of existing groundwater supplies. Even if the Project is annexed to DSRSD, DSRSD does not have a policy requiring all developments to connect to its water distribution system. Thus, developments are still free to explore other options for water supply -- such as groundwater wells. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.5/24.0 *(Policy 9-2) Coordinate with DSRSD to expand its service boundaries to encompass the entire Eastern Dublin Specific Plan area. The City shall work with DSRSD in developing annexation conditions in its application to LAFCO that will: 1) specify provisions required to ensure use of recycled water; water efficient landscaping; best management practices for urban water conservation; and 2) the relate means to promote efficient use of potable water in the Eastern Dublin Planning Area. Expansion of the DSRSD water system into Eastern Dublin should be coordinated with expansion of the Zone 7 wholesale water delivery system.*

Mitigation Measures of the EIR

MM 3.5/25.0 *Encourage all developments in the Specific Plan and Project to connect to the DSRSD water system.*

MM 3.5/24.0 and *3.5/25.0* are applicable to the total Project site. Implementation of these mitigation measures will eliminate the need for local groundwater wells and reduce this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: WATER SUPPLY

IM 3.5/Q Increase in Demand for Water.

Development of the Specific Plan and the Project will increase water demand. Estimated average day water demands for the Specific Plan Area is 5.8 MGD (see Table 3.5-4) and the estimated average water demand for the General Plan Amendment Area is 7.7 MGD (see Table 3.5-5). These water demands are based on full build out of the Specific Plan and on water demand factors currently used by DSRSD. It should be noted that these estimated water demands could vary depending on changes in land use and water conservation efforts.

Mitigation Measures of the Specific Plan

MM3.5/26.0 (Program 9A). Water Conservation. Require the following as conditions of project approval in eastern Dublin:

- *Use of water-conserving devices such as low-flow shower heads, faucets, and toilets.*
- *Support implementation of the DSRSD Water Use Reduction Plan where appropriate.*
- *Water efficient irrigation systems within public rights-of-way, median islands, public parks, recreation areas and golf course areas (see Program 9B on Water Recycling).*
- *Drought resistant plant palettes within public rights-of-way, median islands, public parks, recreation areas and golf course areas.*

MM3.5/27.0 (Program 9B). Water Recycling. Require the following as conditions of project approval in eastern Dublin:

- *Implementation of DSRSD and Zone 7 findings and recommendations on uses of recycled water to augment existing water supplies.*
- *Work with DSRSD to explore use of recycled water in eastern Dublin through potential construction of a recycled water distribution system. Construction of such a recycled water system will require approval of the use of recycled water for landscape irrigation by DSRSD, Zone 7 and the San Francisco Bay Regional Water Quality Control Board.*

Mitigation Measures of the EIR

MM3.5/28.0 Zone 7 Improvements. Zone 7 has determined specific needed water supply and water quality improvements to meet future water supply demands as reported in its February 1992 Water Supply Update, its April 1991 Capital Facilities Plan Update and its April 1991 Urban Water Management Plan Update.

MM3.5/29.0 New Zone Turnouts. Zone 7 and DSRSD should construct two additional turnouts from the Zone 7 Cross Valley Pipeline to serve the Eastern Dublin Specific Plan Area.

MM3.5/30.0 Interconnections with Existing Systems. For increased water source reliability, the water system for the Eastern Dublin Specific Plan area should be interconnected with the current DSRSD water system to the

west, the Camp Parks water system to the west, the current Alameda County water system in the Specific Plan area and the City of Pleasanton water system to the south.

MM3.5/31.0 *New DSRSD Groundwater Wells. DSRSD will reimburse City of Pleasanton for construction and operation of new groundwater wells south of the Specific Plan area in the Central Groundwater Basin to provide a backup source of water supply to its Zone 7 source.* Such water will be "wheeled" through the City of Pleasanton water system to the DSRSD water system.

MMs 3.5/26.0 - 3.5/31.0 are applicable to the total Project site. Implementation of these mitigation measures this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: WATER TREATMENT

IM 3.5/R Additional Treatment Plant Capacity.

The increase in water demands through development of the Specific Plan and the Project will require an expansion of existing water treatment facilities in order to deliver safe and potable water. This is a significant impact.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM3.5/32.0 *Zone 7 has established the following phasing for water treatment system improvements to meet increasing demands on its water system:*

Zone 7 Water Treatment System Improvement Phasing

Year	*Improvements*
1991	*New Water Quality Laboratory and Maintenance Shop Upgrade at Del Volley Water Treatment Plant.*
1994	*Ozone installation at Patterson Pass Water Treatment Plant.*
1995	*Ozone installation at Del Volley Water Treatment Plant.*
1996	*New Clarifier at Patterson Pass Water Treatment Plant.*
1997	*1 MGD Reverse Osmosis Treatment Plant at or near Mocho Well Field or Hopyard Well Field.*

MM3.5/33.0 *DSRSD should construct two new chlorination/fluoridation stations at the two proposed Zone 7 turnouts to eastern Dublin. Since development is planned occur in a west to east direction in eastern Dublin, the western Zone 7 turnout would be constructed first, along with a chlorination/fluoridation station at this western turnout. The eastern Zone 7 turnout and chlorination/fluoridation station would not be constructed until the eastern portion of the eastern Dublin Specific Plan is developed, or when development begins in the balance of the eastern Dublin General Plan area.*

MM 3.5/32.0 and 3.5/33.0 are applicable to the total Project site. Implementation of the mitigation measures will result in the water supply meeting applicable water quality requirements and will reduce this impact to the level of insignificance.

IMPACTS AND MITIGATION MEASURES: WATER DISTRIBUTION

IM 3.5/S Lack of a Water Distribution System.

Currently, there is no water service to the Project Area, with the exception of a Zone 7 water supply connection to Alameda County for the old Santa Rita Jail. With the development of the Specific Plan and the Project, a water distribution system and storage system will be required. If a water distribution system is not constructed, this is a significant impact.

Mitigation Measures of the Specific Plan

MM 3.5/34.0 (Policy 9-1). Provide an adequate water supply system and related improvements and storage facilities for all new development in the Eastern Dublin Specific Plan area.

MM 3.5/35.0 (Program 9C). Water System Master Plan. Request DSRSD to update its water system master plan computer model reflecting the proposed Specific Plan land uses and verifying the conceptual backbone water distribution system presented on Figure 3.5-D.

MM 3.5/36.0 (Program 9D). Combining of Water Systems. Encourage Camp Parks and Alameda County to combine their respective Zone 7 turnouts and water systems into the DSRSD system.

MM 3.5/37.0 (Program 9E). DSRSD Standards. Require that design and construction of all water system facility improvements be in accordance with DSRSD standards.

MM 3.5/38.0 (Program 9G). DSRSD Service. Require a "will-serve" letter from DSRSD prior to grading permit approval.

Mitigation Measures of the EIR

None

MMs 3.5/34.0 - 3.5/38.0 are applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.5/T Inducement of Substantial Growth and Concentration of Population.

The development of a water distribution system will induce substantial growth and concentrate population within the Project site. Also, the proposed water distribution system as shown on Figure 3.5-D has been sized to potentially accommodate the Dougherty Valley Development to the north. This is a significant impact.

This impact is also a potentially significant growth-inducing impact as discussed in *Chapter 5*.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/39.0 The proposed water distribution system has been sized to accommodate only the estimated water demands from approved land uses within the Specific Plan and Project site, with the exception of potentially accommodating the Dougherty Valley Development.

MM 3.5/39.0 is applicable to the total Project site. Implementation of this mitigation measure will partially mitigate this impact, but the impact will remain significant.

IM 3.5/U Increase in Energy Usage Through Operation of the Water Distribution System.

Development of the Project will result in increased water demands requiring a water distribution system which will require additional energy, primarily for pumping of a water to the system and to storage. This is a potentially significant impact.

This impact is also a potentially significant irreversible change as discussed in *Chapter 5*.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/40.0 The water distribution system should be planned, designed and constructed for energy-efficient operation. In particular, the pump station should be designed to take advantage of off-peak energy, with pumping to storage during these periods.

MM 3.5/40.0 is applicable to the total Project site. Implementation of this mitigation measure will partially mitigate this impact; however, energy consumption will still increase and the impact will still be potentially significant.

IM 3.5/V Potential Water Storage Reservoir Failure.

Loss of storage in proposed water distribution reservoirs from landslides, earthquakes, and/or undermining of the reservoir through inadequate drainage would impact the ability of the water supply system to maintain water pressures and to meet fire flows. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/41.0 Require reservoir construction meet all the applicable standards of DSRSD and include adequate soils/geotechnical investigation of the proposed site to determine potential impacts to site from landslides and earthquakes. Reservoir must be designed to meet all current seismic building codes. The reservoir site must be designed to provide for adequate site drainage.

MM 3.5/41.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.5/W Potential Loss of System Pressure.

Loss of pressure in the proposed water distribution systems could result in contamination of the distribution system and would not allow adequate flows and pressures that are essential for fire flow conditions. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/42.0 Require the proposed new water pump stations meet all the applicable standards of DSRSD and include emergency power generation at each pump station with an automatic transfer switch to run the pumps in the event of a power failure.

MM 3.5/42.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.5/X Potential Pump Station Noise.

Proposed water system pump stations would generate noise during their operation that could impact the surrounding community. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

None.

Mitigation Measures of the EIR

MM 3.5/43.0 Include provisions in the design of the pump station to reduce sound levels from operating pump motors and emergency generators.

MM 3.5/43.0 is applicable to the total Project site. Implementation of the mitigation measure will reduce this impact to insignificant.

SETTING

STORM DRAINAGE

EXISTING SERVICE PROVISION

Project Site and Vicinity

The Specific Plan area and Project are located within the Alameda Creek watershed, which drains to the San Francisco Bay. The Specific Plan and project are located within the jurisdiction of Zone 7 of the Alameda County Flood Control and Water Conservation District (Zone 7).

Zone 7 of the Alameda County Flood Control and Water Conservation District

Zone 7 is the responsible agency for channel and culvert storm drainage in the Eastern Dublin Specific Plan area. Zone 7's responsibilities include: 1) establishment of design standards; 2) design and construction of certain major channels and culverts; 3) maintenance of channels and culverts and 4) assisting is establishing policies on joint use of channel facilities.

City of Dublin

City of Dublin is the responsible agency for local storm drains that drain to Zone 7 channels and culverts . City of Dublin responsibilities include: 1) establishment of design standards for storm drains; 2) design and construction of certain major storm drainage facilities; and 3) maintenance of storm drains.

Federal Emergency Management Agency

Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps that indicate that flooding during a 100-year storm will occur primarily along Tassajara Creek. The flooded areas are: 1) an approximately 200-foot width along over half the length of Tassajara Creek through the Specific Plan area; and 2) a wide area just north of where Tassajara Creek flows under I-580, covering portions of the old Santa Rita jail facilities. The main reason for flooding along Tassajara Creek is inadequate culvert flow capacity where the creek crosses I-580. Currently, Alameda County is studying the flooding problems at these culverts.

EXISTING STORM DRAINAGE SYSTEM

The watershed of the Livermore-Amador Valley, in which the Specific Plan area and Project are located, is drained by Alameda Creek and its tributaries. The two principal tributaries in the Valley are Arroyo Del Volley and Arroyo Mocho, which drain the area from east to west. These streams, along with other smaller streams, drain into Arroyo de la Laguna which in turn drains into Alameda Creek at the community of Sunol. Upstream of the confluence with Arroyo de la Laguna, Alameda Creek receives the flows of Calaveras and San Antonio Creeks. Alameda Creek flows in a westerly direction through Niles Canyon, until it ultimately discharges to the San Francisco Bay. None of the tributaries to Alameda Creek have natural year-round flow. The two main drainage courses out of the Specific Plan area are Tassajara Creek (Zone 7 designated Line K) and Zone 7 designated Line G-3, which is a culvert under I-580 about 200 feet east of Tassajara Road.

There are currently no major storm drainage facilities in the Specific Plan area, with the exception of storm drainage facilities at the County of Alameda's old Santa Rita Jail facilities and the storm drainage culverts under I-580.

PLANNED STORM DRAINAGE IMPROVEMENTS

Zone 7 has determined the major channels in the Specific Plan area and Project it wants to see improved. These improvements will probably be funded and constructed by individual developers. Zone 7 has designated certain channels as Specific Drainage Area (SDA) 7-1 channels and other channels as Project 1 Channels. SDA 7-1 channels are part of a program where drainage fees are paid to Zone 7 by developers for residential and non-residential development within SDA 7-1 areas, and the developer becomes eligible for SDA 7-1 reimbursements from Zone 7 provided the developer enters into an agreement with Zone 7 before any work is done. Project 1 Channels are non-SDA 7-1 channels, and thus do not have any reimbursement programs. In the Specific Plan area designated SDA 7-1 channels include: 1) approximately 4,000 feet of the southern portion of Tassajara Creek (Line K); and approximately 1,500 feet of the G-3 Line.

Storm Water Flow

As development occurs in the Specific Plan area, more impervious surfaces will be created due to paved streets and building development. This will increase runoff to the creeks in the area. Improvement to creek channels in the Specific Plan area will be required by Zone 7. Basically, Zone 7 requires that the hydraulic capacity of the channel be sufficient to carry the 100-year design flow with one-foot of freeboard at the ultimate upstream development. Already flooding occurs along Tassajara Creek during conditions that are less severe than 100-year flood due to an undersized culvert. Thus with development, it is inevitable that significant channel improvements will be required along Tassajara Creek as well as other creeks.

Storm Water Quality

A potential impact to storm water quality is non-point sources of water pollution. Non-point sources of water pollution are defined as sources which are diffuse and/or not subject to regulation under the Federal National Pollution Discharge Elimination System (NPDES) Program. Non-point sources are a significant cause of water quality impairment in California. Types of non-point sources in California include: natural runoff, urban runoff, irrigation return flows, mining activities, subsurface drainage, confined animals, industrial activities, vessel discharges, construction site runoff, silviculture, and hydrologic modification.

The potential non-point sources in the Specific Plan area which could cause degradation of receiving water quality are: 1) urban runoff; 2) non-stormwater discharges to storm drains; 3) subsurface drainage; and 4) construction site runoff (erosion and sedimentation).

Water quality constituents in urban runoff that can cause impairment to beneficial uses of receiving waters include: pesticides, petroleum distillates, nutrients, sediments, synthetic organics, coliform bacteria, trace elements, and metals. Non-stormwater discharges to storm drains can occur from industrial and commercial sites with improper plumbing and house keeping practices and also from public dumping of household chemicals and waste automotive oils and fluids. Construction site runoff primarily contributes sediments and turbidity to receiving waters.

In 1987, Congress passed the Water Quality Act (WQA), which amended the Clean Water Act (CWA) and created new programs within the Environmental Protection Agency (EPA) to control non-point source (NPS) pollution in both surface and groundwaters. Section 319 of the WQA requires States to conduct assessments of their waters and to develop state programs for non-point source management. The State Water Resources Control Board (SWRCB) has completed draft non-point source assessment and program documents in accordance with Section 319 requirements. The major focus of the State NPS program is controlling urban runoff in large cities. Other specific non-point source control programs are being developed by some of the Regional Boards in accordance with requirements of Basin Plans and Pollutant Policy Documents. The Eastern Dublin Specific Plan area is located within the jurisdiction of the Regional Water Quality Control Board (RWQCB) -- San Francisco Bay Basin.

The San Francisco Bay Basin Plan is driving the development of RWQCB non-point source programs. The 1986 Basin Plan Update identifies urban runoff control as one of the region's highest priorities. Alameda County is currently involved in studies of specific non-point source problems and effectiveness of control measures with the region, as directed by the RWQCB. The results of these studies will likely influence Regional Board strategies for non-point source regulation in the future.

IMPACTS AND MITIGATION MEASURES

STORM DRAINAGE

SIGNIFICANCE CRITERIA

CEQA Guidelines: Appendix G defines significant effects of a project on the environment. The following significant effects ar related to storm drainage.

- Substantially degrade water quality.
- Contaminate a public water supply.
- Substantially degrade or deplete groundwater resources.
- Interfere substantially with groundwater recharge.
- Induce substantial growth or concentration of population.
- Cause substantial flooding, erosion or siltation.

Not all the above significant effects are applicable to storm drainage for Eastern Dublin. The applicable significant effects are discussed in the following specific sections on impacts and mitigation measures.

IMPACTS AND MITIGATION MEASURES: STORM DRAINAGE IMPROVEMENTS

IM 3.5/Y Potential Flooding.

Development of the Project will result in an increase in runoff to creeks and will result in an increased potential for flooding. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.5/44.0 (Policy 9-7). Require drainage facilities that will minimize any increased potential for erosion or flooding.

MM 3.5/45.0 (Policy 9-8). Require channel improvements consisting of natural creek bottoms and side slopes with natural vegetation where possible to meet Policy 9-7 above. (See also Policy 7-11.)

MM 3.5/46.0 (Program 9R). Storm Drainage Master Plan. Require a Master Drainage Plan be prepared for each development application prior to development approval. The plan shall include:

- *Hydrologic studies of entire related upstream watersheds.*
- *Phase approaches and system modeling.*
- *Documentation of existing conditions.*
- *Design-level analysis of the impacts of proposed development on the existing creek channels and watershed areas.*
- *Detailed analysis of effects of development on water quality of surface runoff.*
- *Detailed drainage design plans for each phase of the proposed project.*
- *Design features to minimize runoff flows within existing creeks/channels in order to alleviate potential erosion impacts and maintain riparian vegetation.*

MM 3.5/47.0 (Program 9S). Flood Control. Require development in the Planning Area to provide facilities to alleviate potential downstream flooding due to project development. These facilities shall include:

- *Retention/detention facilities as appropriate to control peak runoff discharge rates.*
- *Energy dissipators at discharge locations to prevent channel erosion, as per Zone 7 guidelines. Energy dissipators should be designed to minimize adverse effects on biological resources and the visual environment; in particular, widespread use of rip-rap should be avoided.*

Mitigation Measures of the EIR

MM 3.5/48.0 Based on the results of Storm Drainage Master Plan construct conceptual backbone storm drainage facilities similar to that shown in Figure 3.5-E.

MM 3.5/44.0 - 3.5/48.0 are applicable to the total Project site. Implementation of all of these mitigation measures will reduce the impact to a level of insignificance.

IM 3.5/Z Reduced Groundwater Recharge.

The Project is located in area of minimal groundwater recharge and groundwater reserves and the majority of the Tri-Valley's groundwater resources are in the Central Basin, south of the Project. Nevertheless, development of the Project could have an impact on local ground water resources groundwater recharge due to an increase in impervious surfaces within the Project site. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.5/49.0 (Policy 9-9). Plan facilities and select management practices in the Eastern Dublin Specific Plan area that protect and enhance water quality.

Mitigation Measures of the EIR

MM 3.5/50.0 Zone 7 supports ongoing groundwater recharge program for the Central Basin.

MM 3.5/49.0 - 3.5/50.0 are applicable to the total Project site. Implementation of these mitigation measures will reduce the impact to a level of insignificance.

IM 3.5/AA Non-Point Sources of Pollution.

Development of the Project could result in a deterioration of the quality of stormwater due to an increase in non-point sources of pollution including 1) urban runoff; 2) non-stormwater discharges to storm drains; 3) subsurface drainage; and 4) construction site runoff (erosion and sedimentation). This is a potentially significant impact.

This impact is also a potentially significant cumulative impact as discussed in *Chapter 5.0*.

Mitigation Measures of the Specific Plan

MM 3.5/51.0 (Program 9T). Water Quality Investigation. Require a specific water quality investigation be submitted with each development application to demonstrate existing water quality and impacts that urban runoff would have. The water quality investigation should address the quantity of runoff and the effects from discharged pollutants from surface runoff into creeks and detention facilities.

Mitigation Measures of the EIR

MM 3.5/52.0 Develop community-based programs to educate local residents and businesses on methods to reduce non-point sources of pollution. Coordinate such programs with current Alameda County programs. Such programs should include:

- *Increased availability of liquid recycling centers (i.e.: oil, greases, etc.), to reduce potential for dumping into storm drains.*
- *Programs that educate the public that catch basins and storm drains flow to creeks, to potable groundwater basins, and to the San Francisco Bay, including a potential program to paint labels at each catch basin and storm drain to alert people to these facts.*

MM 3.5/51.0 - 3.5/52.0 are applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TABLE 3.5-1
EAST DUBLIN SPECIFIC PLAN AREA
ESTIMATED WASTEWATER FLOWS

	Gross Acres	Estimated Wastewater Flow (MGD-ADWF)
Residential Projected Population = 27,774 @ 80 gpcd[1]		2.2
Commercial/Industrial		
General Commercial	293.3	
Neighborhood Commercial	69.7	
Campus Office	216.9	
Industrial Park	132.5	
Public/Semi-Public	98.6	
Total	811	
Total Net Acres @ 85% of Gross Acres = 689 Net Acres @2,500 gpad[1]		1.7
Schools		
Elementary School	69.1	
Junior High School	35.9	
High School	55.3	
Total	160.3	
Total Net Acres @ 85% of Gross Acres = 136 Net Acres @ 2,000 gpad[1]		0.3
Total		4.2

Notes:

[1] Current wastewater flow factors used by DSRSD staff.

MGD: Million gallons per day
ADWF: Average dry weather flow
gpcd: Gallons per capita per day
gpad: Gallons per acre per day

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TABLE 3.5-2
EASTERN DUBLIN GENERAL PLAN AMENDEMENT AREA
ESTIMATED WASTEWATER FLOWS

	Gross Acres	Estimated Wastewater Flow (MGD-ADWF)
Residential Projected Population = 42,669 @ 80 gpcd[1]		3.4
Commercial/Industrial		
General Commercial	293.3	
Neighborhood Commercial	76.5	
Campus Office	216.9	
Industrial Park	190.5	
Public/Semi-Public	98.6	
Total	876	
Total Net Acres @ 85% of Gross Acres = 745 Net Acres @2,500 gpad[1]		1.9
Schools		
Elementary School	97.1	
Junior High School	40	
High School	55.3	
Total	192.4	
Total Net Acres @ 85% of Gross Acres = 164 Net Acres @ 2,000 gpad[1]		0.3
Total		5.6

Notes:

[1] Current wastewater flow factors used by DSRSD staff.

MGD: Million gallons per day
ADWF: Average dry weather flow
gpcd: Gallons per capita per day
gpad: Gallons per acre per day

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN
TABLE 3.5-3
SUMMARY OF ZONE 7's EXISTING WATER SUPPLIES AVAILABLE TO MEET MUNICIPAL & INDUSTRIAL (M&I) NEEDS[1]
(acre-feet per year)

Source	Local Pumpers[2]	Independent Quotas[3]	Zone 7	Valley Totals	Water Available to Meet Existing M&I Demand
Safe Groundwater Yield	6,000	7,200	---	13,200	7,200
Del Valle Reservoir Storage			7,000	7,000	7,000
State Water Project (SWP)			31,700	31,700	31,700
Less the Water Reserved for Small Systems and Agriculture					-5,000
Totals	6,000	7,200	39,700	51,900	40,900

Notes:

1 Source: Zone 7 Water Supply Update, Zone 7, Alameda County Flood Control and Water Conservation District, February 1992.

2 Local pumpers consist of agricultural users and gravel mining users.

3 IQ is the amount of groundwater the Zone's 4 major purveyors are permitted by contract to pump from the groundwater basin.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN
TABLE 3.5-4
EASTERN DUBLIN SPECIFIC PLAN AREA
ESTIMATED WATER DEMANDS

			Average Day Demand	
Land Use	Amount	Units	Water Use Factor[1] (gpd/unit)	Total MGD
Residential	27,774	Persons	125	3.5
Commercial/Industrial				
General Commercial	293.3			
Neighborhood Commercial	69.7			
Campus Office	216.9			
Industrial Park	132.5			
Public/Semi-Public	98.6			
Total	811.0	Gross Acres	1970	1.6
Schools				
Elementary School	69.1			
Junior High School	35.9			
High School	55.3			
Total	160.3	Gross Acres	2150	0.4
Parks				
City	56.3			
Community	126.7			
Neighborhood	45.2			
Neighborhood Square	13.3			
Total	241.5	Gross Acres	1130	0.3
			Grand Total	5.8

Note:

[1] Current water use factors used by DSRSD staff.
gpd: Gallons per day
MGD: Million gallons per day

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
TABLE 3.5-5
EASTERN DUBLIN GENERAL PLAN AMENDMENT AREA
ESTIMATED WATER DEMANDS

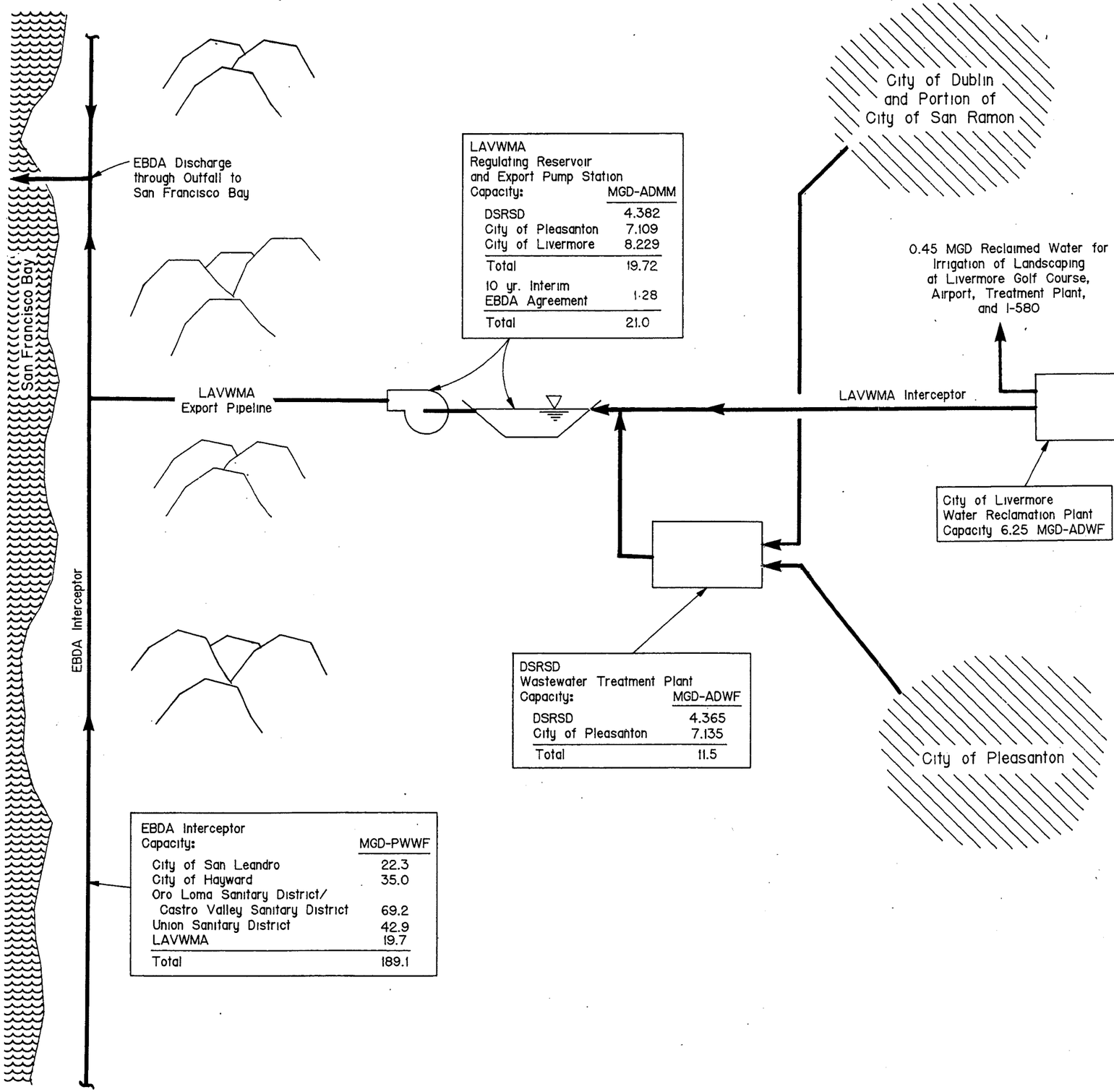
			Average Day Demand	
Land Use	Amount	Units	Water Use Factor[1] (gpd/unit)	Total MGD
Residential	42,669	Persons	125	5.3
Commercial/Industrial				
General Commercial	293.3			
Neighborhood Commercial	76.5			
Campus Office	216.9			
Industrial Park	190.5			
Public/Semi-Public	98.6			
Total	876	Gross Acres	1970	1.7
Schools				
Elementary School	97.1			
Junior High School	40			
High School	55.3			
Total	192.4	Gross Acres	2150	0.4
Parks				
City	56.3			
Community	126.7			
Neighborhood	88.4			
Neighborhood Square	15.8			
Total	287.2	Gross Acres	1130	0.3
			Grand Total	7.7

Note:

[1] Current water use factors used by DSRSD staff.
gpd: Gallons per day
MGD: Million gallons per day

Wastewater Treatment and Disposal

Figure A-1



Legend:

DSRSD	Dublin San Ramon Services District
LAVWMA	Livermore Amador Valley Water Management Agency
EBDA	East Bay Dischargers Authority
MGD	Millions of Gallons per Day
ADWF	Average Dry Weather Flow
ADMM	Average Day Maximum Month
PWWF	Peak Wet Weather Flow

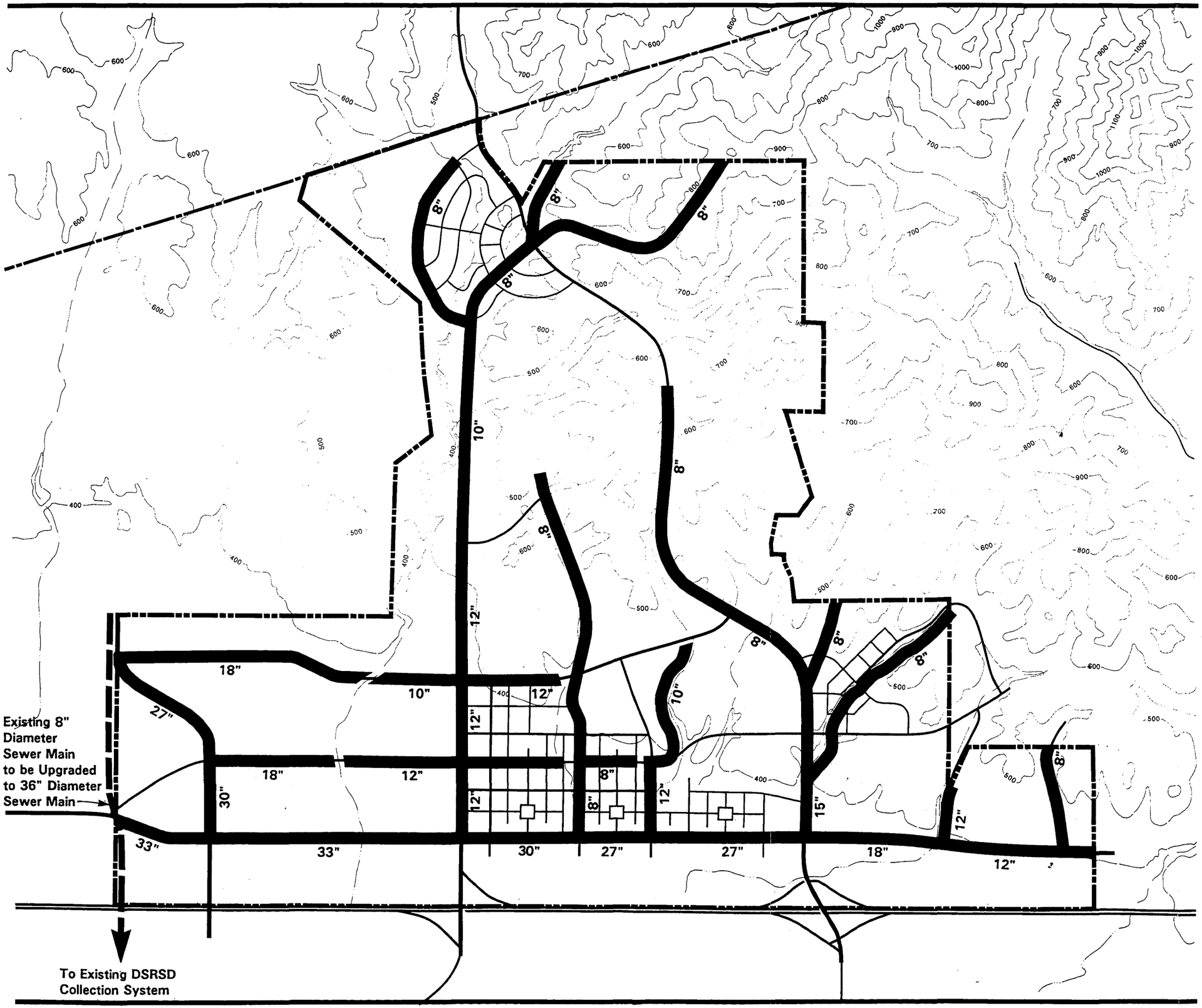
Source: Staff at LAVWMA, DSRSD, EBDA, and City of Livermore

Kennedy/Jenks Consultants, August 1992

EASTERN DUBLIN
GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.5-A**

Conceptual Backbone Wastewater Collection System



Legend:

10" — Sewer Line with Diameter

Specific Plan Boundary

Note:

This conceptual wastewater collection system is based upon a recent DSRSD proposed wastewater collection system, with modifications to reflect current proposed Eastern Dublin specified plan land uses. It does not include future TWA storage basins. It should be emphasized that the modifications made herein to DSRSD's recent proposed wastewater collection system have been made using "Engineering Judgement", and have not been analyzed using a computer model. It is recommended that a computer model analysis be performed prior to design and construction of this conceptual system.

Source: Kennedy/Jenks Consultants, August 1992

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.5-B**

Acres 10

0 600 1200 Feet

0 1/4 1/2 Mile

Conceptual Backbone Recycled Water Distribution System

Legend:

12" Recycled Water Line with Diameter

Specific Plan Boundary

Note:

This conceptual reclaimed water distribution system is based upon a recent DSRSD proposed reclaimed water distribution system, with modifications to reflect current Eastern Dublin specific plan land uses. It should be emphasized that the modifications made herein to DSRSD's recent proposed reclaimed water distribution system have been made using "Engineering Judgement", and have not been analyzed using a computer model. It is recommended that a computer model analysis be performed prior to design and construction of the conceptual system.

Storage Reservoir

Reclaimed Water Supply from New Advanced Wastewater Treatment System at DSRSD Wastewater Treatment Plant

Source: Kennedy/Jenks Consultants, August 1992

EASTERN DUBLIN GPA • SP • EIR

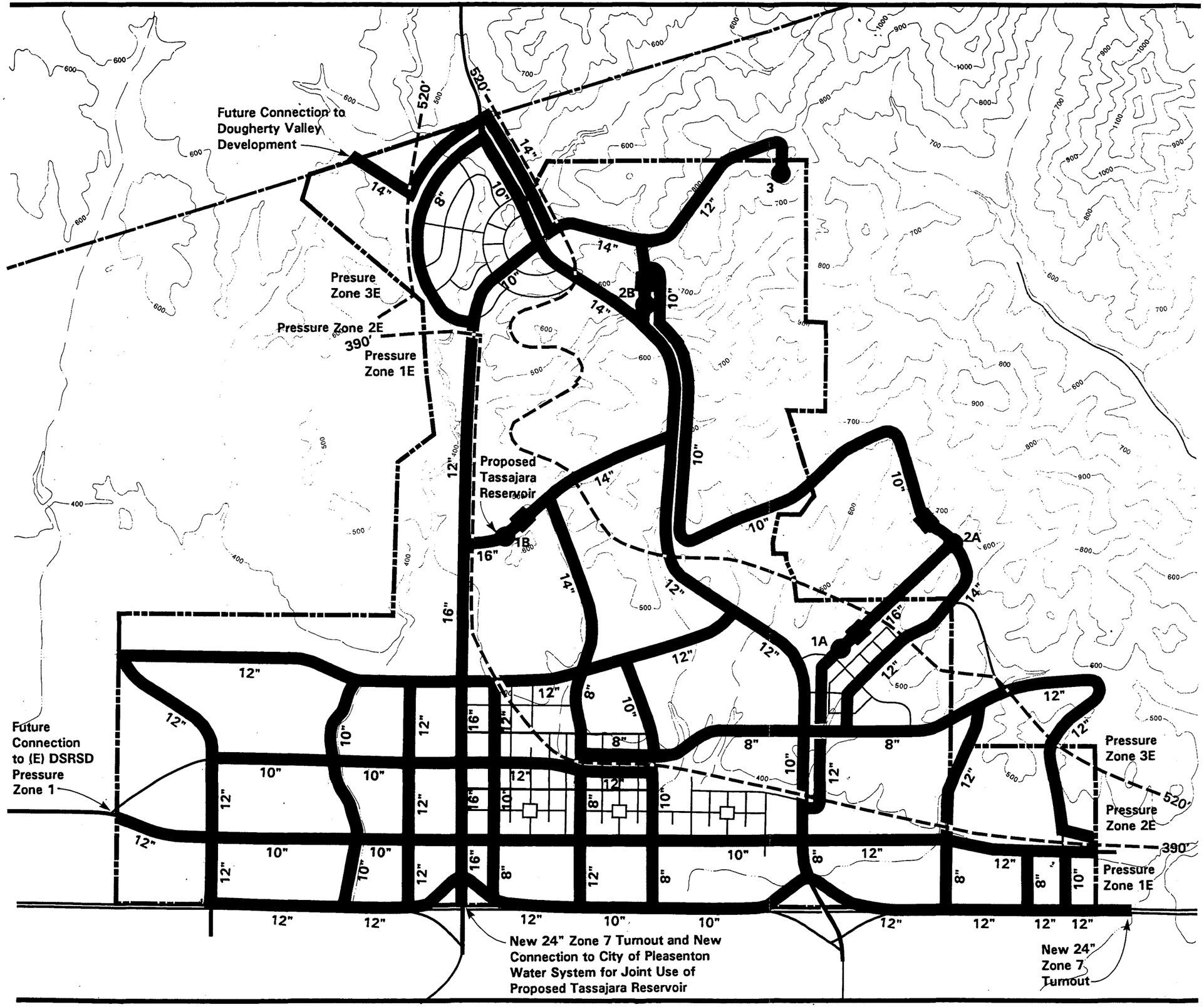
Wallace Roberts & Todd Figure 3.5-C

Acres 10

0 600 1200 Feet

0 1/4 1/2 Mile

Conceptual Backbone Water Distribution System



Legend:

- 16" — Waterline with Diameter
- 1A — Reservoir with Number
- Pump Station
- Approximate Pressure Zone Boundary
- Specific Plan Boundary

Note:

This conceptual water distribution system is based upon a recent DSRSD proposed water distribution system, with modifications to reflect current proposed Eastern Dublin specific plan land uses. It should be emphasized that the modifications made herein to DSRSD's recent proposed water distribution system have been made using "Engineering Judgement", and have not been analyzed using a computer model. It is recommended that a computer model analysis be performed prior to design and construction of this conceptual system.

Source: Kennedy/Jenks Consultants, August 1992

EASTERN DUBLIN GPA • SP • EIR

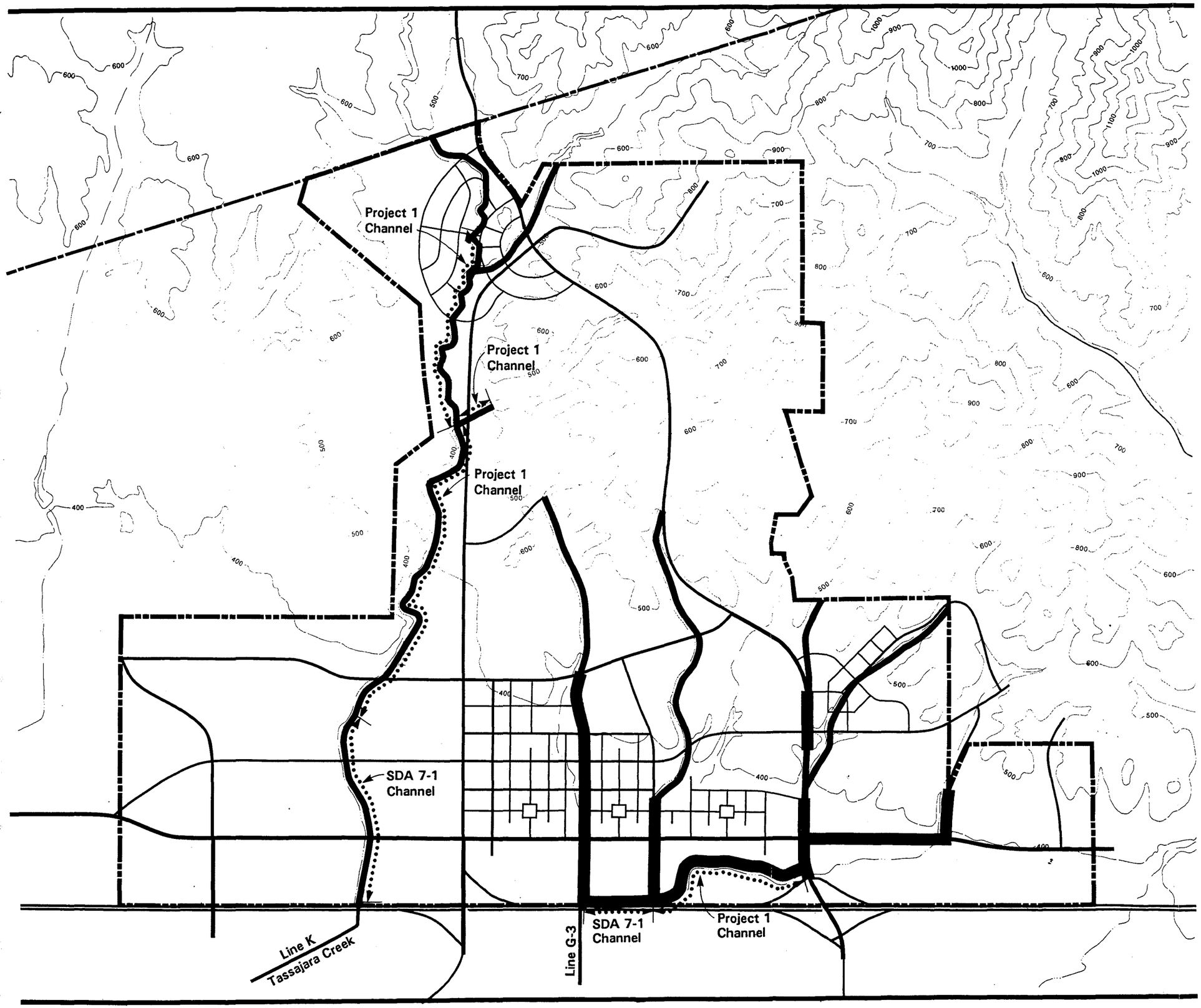
Wallace Roberts & Todd **Figure 3.5-D**

Acres 10

0 600 1200 Feet

0 1/4 1/2 Mile

Conceptual Backbone Storm Drainage Facilities



Legend:

- Open Channel
- Pipeline
- SDA 7-1 Channel
- Project 1 Channel
- Existing Channel
- Specific Plan Boundary

Note:

These conceptual storm drainage facilities are preliminary concepts and have not been hydraulically analyzed using a computer model. As planning proceeds, it is recommended that a hydraulic computer analysis be prepared to establish channel and pipe sizing.

Source: Kennedy/Jenks Consultants, August 1992

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd Figure 3.5-E

Acres 10

0 600 1200 Feet

0 1/4 1/2 Mile

Section 3.6

SOILS, GEOLOGY AND SEISMICITY

3.6 SOILS, GEOLOGY AND SEISMICITY

SETTING

INTRODUCTION

This section was prepared based on: (1) a reconnaissance of the Project site; (2) a review of pertinent published and unpublished maps and reports covering the Project site and immediate vicinity; (3) interpretation of stereo pairs of black and white aerial photographs covering the Project site; (4) independent mapping of landslides and surficial deposits on the Project site; and (5) previous experience in hillside planning and development in the area. Pertinent maps and reports are listed in *Section 6.3: Bibliography.*

REGIONAL GEOLOGIC CONDITIONS

The Project site is located on the north side of the Livermore Valley, in the north central part of Alameda County, California. Much of the Project site consists of hills which are part of the Coast Ranges of California. The structure of the Coast Ranges of northern California in this region consists of northwest-trending folds and faults resulting from the collision of the Farallon and North American plates and subsequent translational shear along the San Andreas fault system. Most of the uplift in the Coast Ranges occurred by Middle Miocene time (about 16 million years ago), with some uplift continuing through the Quaternary (the last 2 million years). The hills in the Project site are part of a block of folded and faulted Upper Cretaceous age (about 62 to 98 million years ago) marine sedimentary rocks of the Great Valley Sequence and overlying younger rocks which flank the Mt. Diablo serpentinite diapiric mass, uplifted between the Calaveras fault zone on the west and the Greenville fault zone on the east *(Figure 3.6-A: Regional Geology and Fault Map).* The southern portion of the Project site consists of a broad plain underlain by Quaternary alluvium along the southern margin and ridges and hilltops with intervening valleys in the central and northern portions, which are underlain by Cenozoic (the last 62 million years ago) non-marine sedimentary rocks.

REGIONAL SEISMIC CONDITIONS

The Project site is located in a seismically active region of northern California (*Figure 6.3-B: Regional Fault and Epicenter Map*). The potentially active Pleasanton fault zone is located approximately 450 feet west of the Project site's southwestern corner. The active, northwest-trending Calaveras and Greenville fault zones are located approximately 2.5 miles west and 3.7 miles northeast of the Project site, respectively. The Calaveras and Greenville fault zones are part of the San Andreas fault system, which forms the boundary between the North American and Pacific plates and is the principal source of earthquakes in California. The active Hayward, Concord, and San Andreas fault zones, also part of the San Andreas fault system, are located approximately 9 miles southwest, 12 miles northwest, and 28 miles southwest of the Project site, respectively. In 1966, based on geomorphology and ground water relationships, the California Department of Water Resources (CDWR) postulated that two faults, the Parks and the Mocho, were located along the east-northeast and west-northwest trending hill fronts, respectively, in the southern part of the Project site. The existence of these faults has not been confirmed by

subsequent work, including an investigation of the Mocho fault by Berlogar Geotechnical Consultants (BGC, 1988a), who found no evidence for the existence of this fault. These faults are not shown on a more recent CDWR map (CDMG, 1979). No active faults are known to traverse the Project site, and no Alquist-Priolo Special Studies Zones determined by the California Division of Mines and Geology (CDMG) occur on the Project site (CDMG 1982a,b,c; Hart, 1990).

The closest large-magnitude historic earthquake occurred July 4, 1861, along the Calaveras fault zone, probably in the San Ramon Valley area. This earthquake, with an estimated Richter magnitude (M) of 6.5, produced ground shaking of Intensity VIII on the Modified Mercalli Intensity Scale (*Appendix B*) near Dublin, and probably produced ground surface rupture on about 8 miles of the fault zone along the west side of the San Ramon Valley. More recently, the Danville earthquake swarm of 1970 and the Alamo earthquake swarm of April, 1990 both occurred along northeast trends, in the gap between the Concord and Calaveras faults. The largest earthquakes of the Alamo earthquake swarm were M 4.3 to 4.6, and caused some damage to homes in the developed area south of Alamo, although they did not produce surface rupture. The most recent large earthquake in the San Francisco Bay region was the October 17, 1989, M 7.1 Loma Prieta earthquake, which was centered on the southern portion of the San Francisco Peninsula segment of the San Andreas fault zone, about 42 miles southwest of the Project site. The Loma Prieta earthquake is significant in that it partially reactivated large, Quaternary age bedrock landslides in the epicentral area of the Santa Cruz Mountains. Severe ground shaking in the Project site area has accompanied numerous other large-magnitude historic earthquakes in the region. Most recorded earthquake epicenters in the surrounding region are concentrated along the Calaveras, Greenville, Hayward, and San Andreas fault zones, and between the Calaveras and Concord faults (see *Figure 6.3-B: Regional Fault and Epicenter Map*)

It is likely that a similar pattern of seismicity will persist into the foreseeable future. The probability of a large (M7 or greater) earthquake along the San Francisco Peninsula segment of the San Andreas fault zone is about 23 percent over a thirty year period (USGS, 1990). The probability of a large earthquake on the northern East Bay segment of the Hayward fault zone is about 28 percent for the same period. (USGS, 1990; Lindh and Oppenheimer, 1992). The probability of an M6 earthquake along the northern Calaveras is estimated to be approximately 50 percent in the next 30 years, and 10 percent for an M7 event (Lindh and Oppenheimer, 1992). The total probability that one or more large earthquakes will occur in the 30-year period in the San Francisco Bay region is estimated to be 67 percent (USGS, 1990).

Ground motion characteristics at the Project site resulting from a particular earthquake will depend on the characteristics of the generating fault, distance to the energy source (hypocenter), the magnitude of the event and site specific geologic conditions. The controlling fault with respect to site seismicity is the northern Calaveras fault. The MCE along this fault segment could result in horizontal ground accelerations exceeding 0.6g (Seed and Idriss, 1982), with duration of intense shaking on the order of 30 seconds. The maximum probable earthquake (MPE) for the northern East Bay segment of the Hayward fault zone is considered to be 7.0, essentially corresponding to the M6.8 1868 event. Anticipated earthquake parameters for the Project site are summarized in Table 3.6-1. For development purposes, the estimated maximum credible (MCE) earthquake expected along the Calaveras, Greenville, Hayward, and San Andreas faults is 7.25, 6.5, 7.5, and 8.3, respectively.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
SOILS, GEOLOGY AND SEISMICITY
TABLE 3.6-1
EARTHQUAKE PARAMETERS

Source	MCE(a)	MPE(b)	Distance to Site (Miles)	Peak Bedrock Acceleration (Gravity)	Duration (Seconds)	30-Year Probability (Percent)
Calaveras Fault	M 7.25	M 6.5	2.5	0.6	30+	10
Greenville Fault	M 6.5	M 6.0	3.7	0.5	10-30	-
Hayward Fault	M 7.5	M 7.0	9	0.4	30+	28
San Francisco Segment of San Andreas Fault	M 8.3	M 7.5	28	0.3	30+	23
North Coast Segment of San Andreas Fault Zone	M 8.3	M 8.3	43	0.2	30-60	2

FOOTNOTES

(a) MCE: maximum credible earthquake
(b) MPE: maximum probable earthquake

Source: USGS; Harlan Tait Associates
Date: August 1992

PROJECT SITE CONDITIONS

Topography and Landforms

The Project site generally consists of two geomorphic areas. The majority of the site is dominated by generally linear ridges and spurs and intervening valleys and swales. The southern margin of the site is generally a broad plain. Elevations range from approximately 330 feet at the southwestern corner of the site to just over 1220 feet at Doolan Peak in the northeastern portion of the site.

The main ridge crests, which are above about 800 feet, generally trend to the northwest. Secondary ridge crests, which are lower than about 800 feet, splay off of the main ridge crests and generally trend north to northeast. The ridge crests are generally narrow and rounded to sharp, and their flanks are divided into spur ridges and intervening swales. The intervening valleys generally have steep side slopes. The major drainages are generally broad, and the tributary drainages are broad to narrow. Elevations in the intervening valleys range from about 400 to 600 feet. Both elevation and relief decrease to the south toward the Amador Valley.

The broad plain in the southern portion of the Project site is part of the northern edge of the Livermore-Amador Valley. The plain ranges in elevation from about 350 to 400 feet. This area

generally slopes gently downward to the southwest. The majority of this plain is within the Specific Plan area.

The ridges and peaks are underlain predominantly by sandstone and siltstone. The orientations of the main ridges are controlled by the strikes of these beds. Sandstone bedrock crops out locally on the ridge crests. The major drainages are generally underlain by alluvium. The tributary drainages are generally underlain by colluvium or landslide deposits.

Most of the Project site is covered with grasslands, and either is or has been used for grazing. Two quarry sites are located within the planning area (see Figure 3.6-C.) Dirt roads constructed across the site have resulted in numerous small un-engineered cut slopes and fill berms.

Drainage

All of the streams in the Project site are intermittent. The overall drainage network is branching, or dendritic. Two large streams, Cottonwood and Tassajara Creeks, traverse the Project site in a roughly north-south direction. They originate north of the site and drain to the south into the Amador Valley. The northwestern portion of the site, including much of the Specific Plan area, drains into Tassajara Creek by way of two small streams. The northeastern portion of the site, including much of the General Plan Amendment area, drains into Cottonwood Creek by way of several small streams. Several small streams with a similar orientation occur in the southern portion of the site. They originate within the site and drain to the south into the Amador Valley. Many of the smaller streams begin at the toes of large landslides.

Many drainages are locally deeply incised, particularly Tassajara Creek. Active gullying is occurring in many areas, including in valley alluvium, landslide deposits, and stock pond spillways. The gullying in the valley alluvium and landslide deposits is frequently discontinuous and may be related to past land management activities including grazing, road grading, and drainage diversions. The side slopes of these gullies are failing locally by bank slumping (e.g., Tassajara Creek).

Areas with at least seasonally saturated to wet surficial soils occur on the Project site. In general, swales tend to be areas of seasonal saturation, with the ground water table frequently extending to the ground surface during winter months. This occurs because the bedrock is usually less pervious than the overlying colluvium and acts as a barrier to the downward migration of water. Consequently, areas of colluvium retain moisture longer than areas of bedrock at or close to the surface. Localized springs and wet areas other than swales are also present on the site. In addition, stock ponds have been constructed locally to intercept and hold runoff in several locations on the site, and major drainages have been filled locally for construction and road building purposes.

Geologic Structure

The bedrock in the Project site generally strikes northwest-southeast. Dips range from 40 degrees south to southwest to 67 degrees north to northeast. Where the beds dip to the north, they are generally overturned. In the northwestern portion of the Project site, a syncline-anticline fold pair has been mapped. The axes of these trend northwest-southeast, and the two folds seem to merge to the southeast.

The geologic units mapped on the Project site include fill, landslides, colluvium, alluvium, and bedrock. The distribution of these units is shown on *Figure 3.6-C: Geology*; units are described below.

Geologic Units

Fill (Qf) - Fill includes primarily stock pond embankments, road fill, and fill associated with existing and previous structures. Significant filling of stream channels has also occurred along some of the major drainages on the site. Only larger areas of fill are mapped on *Figure 3.6-C*.

Landslides (Qls) - Landslides range from active to dormant and include debris slides, mud flows, debris flows, and slump/rotational slides. Landslides occur predominantly in the northern half of the Project site, within the General Plan Amendment Extension area. The majority of the large debris slides and mud flows are dormant and exhibit rounded, subdued topography. However, there are several active, deep mud flows and debris slides located primarily in the northeastern quarter of the Project site. The majority of the shallow mud flows, debris slides, and debris flows are active or have been active recently (within the last few decades). Landslides mapped on the site are classified as shown on *Figure 3.6-C* as to (1) apparent state of activity; (2) certainty of identification; (3) inferred dominant type of movement; and (4) estimated thickness of deposit. Landslides are discussed further in the section on slope stability.

Colluvium (Qc) - Colluvium consists of unconsolidated Quaternary hillslope deposits composed of a heterogeneous mixture of cobbles, gravel, sand, silt, and clay. Colluvium generally occupies swales and some upland topographic lows and blankets lower hillslope, forming fans locally. It is generally massive, moderately to highly permeable, readily excavated, and easily eroded, and is often severely gullied. Colluvial deposits grade downslope into, and interfinger with, alluvium.

Alluvium (Qa) - Alluvium consists of crudely stratified Quaternary stream deposits of sand, silt, clay, and gravel. It is limited to stream channels, stream terraces, and small alluvial fans. Alluvium is easily excavated, forming relatively unstable slopes in exposed cuts. It is also moderately to highly permeable and easily eroded. Alluvial deposits grade upslope into, and interfinger with, colluvium.

Bedrock - Bedrock on the Project site consists of non-marine sedimentary rocks. It has been subdivided into two lithologically similar units distinguished primarily by age.

Tassajara Formation (Qtt) - The Tassajara Formation consists primarily of Pliocene and/or Pleistocene non-marine claystone, siltstone, and conglomerate with a few thin marl beds. The unit as a whole is poorly indurated, weakly cemented, massive to thin bedded, and friable to moderately strong. In the southwestern portion of the Project site, the unit has been differentiated by Berlogar (1988b) into a sandstone-conglomerate member (ss) and a siltstone-claystone member (s). The sandstone-conglomerate member is generally light brown to yellow-gray and friable to weak. The siltstone-claystone member is generally light brown to light gray and weak to strong. The Tassajara Formation naturally crops mainly on ridge crests, but only sparsely, and is exposed in quarry pits and road cuts. The Tassajara Formation underlies the Specific Plan area and much of the General Plan Amendment Extension area.

Orinda Formation (Tps) - The Orinda Formation consists primarily of non-marine mudstone, conglomerate, and sandstone with a few thin marl beds. These rocks are red-brown to greenish-gray in color, poorly to moderately indurated, slightly to highly weathered, weakly to moderately cemented, massive to thin bedded, and moderately fractured, hard, and weak. This unit crops

out naturally primarily on ridge crests and in landslide scarps. It is also locally exposed in cuts for both roads and buildings. The Orinda Formation underlies the northeastern corner of the General Plan Amendment Extension area.

Soils have developed from the underlying materials over the majority of the Project site, as illustrated in *Figure 3.6-D: Soils*. The soils in the southwestern quarter of the site generally have a low to moderate expansion potential. The soils along Cottonwood Creek, including the reach that traverses the southwestern quarter of the site, and the soils in the remainder of the site are generally highly expansive.

Slope Stability

Most of the ridge crests in the Project site are generally underlain by stable, competent material. However, extensive landsliding and gullying, as well as some soil creep, occur on the site. Landslides occur along the flanks of most of the ridges in the northeastern half of the site, within the General Plan Amendment Extension area. Many of the mapped landslides are classified as shallow (less than about 5 feet deep) to moderately deep (between about 5 and 15 feet deep) earth flows, debris slides, or debris flows. These surficial features generally involve the mobilization of soil and colluvium, often out of colluvium-filled swales. Deep-seated (greater than about 15 feet deep) landslides, including debris slides, debris flows, and mud flows, probably involve the movement of bedrock material, often resulting in the thorough disruption of any original geologic structure.

Active gully erosion occurs along most of the steeper lower order drainages and along portions of the two major drainages that traverse the site. Rilling and slumping are eroding the banks of the two major streams where active gullying occurs. Active gully erosion also occurs in landslide deposits and around stock ponds. Gully erosion and rilling generally occur where concentrated surface water flows across steep slopes underlain by unconsolidated surficial materials or shallow deeply weathered bedrock, or across disturbed ground. Diversion and concentration of drainage by road-grading and increased runoff due to grazing and vegetation removal are common causes of localized gullying.

Soil creep, the gradual downslope movement of soil and colluvium by gravity, occurs on steeper hillslope underlain by soil and colluvium, in colluvium-filled swales, and locally in landslide deposits.

For further discussion of the implications of Project site geotechnical conditions for development refer to *Appendix C: Soils, Geology and Seismicity; Summary of Opportunities and Constraints.*

IMPACTS AND MITIGATIONS

SIGNIFICANCE CRITERIA

The *CEQA Guidelines: Section 15382* define a significant impact on the environment as "...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project." Significant effects related to soils, geology and seismicity are those which have the potential to:

- Interfere substantially with groundwater recharge;
- Cause substantial flooding, erosion or siltation; or
- Expose people or structures to major geologic hazards.

All impacts identified for *Soils, Geology, and Seismicity* are considered significant or potentially significant. The mitigation measures given below, reduce, or eliminate the potential adverse effects of identified impacts. All factors considered, it is generally preferable to avoid potentially adverse effects of impacts where possible by proper structure siting during the planning process. From a geotechnical standpoint, the mitigation measures listed, unless otherwise noted, would be sufficient to reduce all impacts to a level of insignificance if appropriately designed, implemented (constructed), and maintained.

For further discussion of geotechnical conditions and mitigation measures for development, refer to *Appendix C: Soils, Geology and Seismicity; Summary of Opportunities and Constraints.*

IMPACTS AND MITIGATION MEASURES: SEISMICITY

IM 3.6/A Fault Ground Rupture

No known active or potentially active faults traverse the Project site, and Alquist-Priolo Special Studies Zones are not located within the site. The potential for fault ground rupture is therefore considered to be nil. The exposure of people or structure to hazards resulting from fault ground rupture is, therefore, an insignificant impact.

No mitigation measures required.

IM 3.6/B Earthquake Ground Shaking: Primary Effects

Earthquake ground shaking resulting from large earthquakes on the active fault zones in the region could be very strong to violent, and could result in damage to structures and infrastructures, and, in extreme cases, loss-of-life. The potential for earthquake groundshaking is common to the San Francisco Bay region and is unavoidable; it will occur whether or not the Project site, or any portion of it, is developed. The primary effects of earthquake groundshaking are, therefore, considered to be potentially significant.

Mitigation Measures of the EIR

MM 3.6/1.0 The primary effects of ground shaking to structures and infrastructures can be reduced to a generally acceptable level below failure/loss-of-life by using modern seismic design for resistance to lateral forces in construction. Building in accordance with Uniform Building Code and applicable County and City code requirements should reduce the potential for structural failure, major structural damage, and loss-of-life. However, some structural damage may occur, and it is possible that some residences/structures and infrastructures will not be safe for occupation/use after a large earthquake.

Implementation of MM 3.6/1.0 will reduce but cannot completely eliminate hazards associated with the primary effects of earthquake ground shaking impacts. This impact remains potentially significant.

IM 3.6/C Earthquake Ground Shaking: Secondary Effects

The secondary effects of earthquake groundshaking include possible seismically-induced landsliding, differential compaction and/or settlement. Secondary effects are considered potentially significant.

Mitigation Measures of the EIR

MM 3.6/2.0 In relatively flat areas which can be developed with minimal grading (the southern portion of the Project site and along Tassajara and Cottonwood Creeks):

- *locate improvements off (setback from) unstable and potentially unstable landforms such as landslides, colluvium-filled swales, creek banks, and steep hill slopes,*
- *remove, stabilize or reconstruct potentially unstable landforms, or*
- *employ modern design, including appropriate foundation design, and applicable codes and policies, in the construction of improvements that must be located on potentially unstable landforms or in areas underlain by alluvium with shallow groundwater levels which could be locally susceptible to liquefaction.*

MM 3.6/3.0 In hillside areas where development may require substantial grading, require appropriate grading and design to completely remove unstable and potentially unstable materials.

MM 3.6/4.0 Engineered retention structures and surface and subsurface drainage improvements should be used as appropriate to improve the stability of sidehill fills and potentially unstable materials, particularly colluvium, not entirely removed by grading.

MM 3.6/5.0 Seismically-induced fill settlement can be substantially reduced if fills are properly designed with keyways and subsurface drainage, and are adequately compacted (i.e. minimum 90% relative compaction as defined by the American Society for Testing and Materials (ASTM) test method D1557).

MM 3.6/6.0 Design roads, structural foundations, and underground utilities to accommodate estimated settlement without failure, especially across transitions between fills and cuts. Potentially unstable stock pond embankments should be removed in development areas, unless they are reconstructed to current earthquake design standards.

MM 3.6/7.0 Final design of improvements in the Project site should be made in conjunction with a design-level geotechnical investigations and the reports should be submitted to the City for review prior to issuing any permits. These investigations should incorporate stability analysis of both natural slopes that could impact planned improvements, and planned engineered (cut and fill) slopes, assuming saturated conditions and earthquake shaking. Significant slopes should achieve a minimum factor of safety against failure of 1.5 for static conditions (where 1.0 is failure) and 1.2 under design pseudo-static earthquake loading. A displacement analysis should be performed for critical slopes to confirm the effectiveness of mitigation measures.

MM 3.6/8.0 Earthquake preparedness plans should be developed by the City, and all Project site residents and employees informed of appropriate measures to take in the event of an earthquake.

Implementation of MMs 3.6/2.0-8.0 should reduce secondary effects related to earthquake ground shaking to a level of **insignificance**.

IMPACTS AND MITIGATION MEASURES: TOPOGRAPHY AND LANDFORMS

IM 3.6/D Substantial Alteration to Project Site Landforms

Development of the Project site could result in permanent changes in existing physical conditions (landforms), particularly in the hillside areas, particularly if substantial grading occurs. This is considered a potentially significant impact.

Mitigation Measures of the EIR

MM 3.6/9.0 While some permanent landform changes are unavoidable with any development, their magnitude can be reduced by developing minimal grading plans that adapt improvements to the natural landforms, thus minimizing required cuts and fills (see MM 3.6/12). Construction of traditional flat building pads in hillside areas requires more grading than construction of partial pads, or developing custom lots. Construction of roads or ridges also minimizes grading in hillside areas. Use of retaining structures and steeper cut and fill slopes, where appropriate and properly designed, also minimizes grading in hillside areas.

MM 3.6/10.0 The magnitude of permanent landform changes can also be reduced by careful siting of individual improvements to avoid adverse conditions and thus the need for remedial grading. There are more opportunities to avoid adverse conditions in areas with lower density zoning, such as in the hillside areas of the Project site (see MM 3.6/10). Specific project lot and infrastructure alignment planning should be based on the identification of geotechnically feasible building areas/alignments by the project geotechnical consultant. In some hillside areas, clustering structures may be the best approach to minimize grading and avoid adverse conditions.

Note: There is inherent conflict, from a geotechnical standpoint, between Specific Plan Policy 7-27 and Specific Plan Policy 7-42, in that ridges on the project site are generally more stable and would require less grading to develop than hillslopes.

Implementation of MMs 3.6/9.0 - 10.0 will reduce this impact to a level of insignificance. Refer to *IM 3.1/A: Substantial Alteration to Existing Land Uses found in Section 3.1: Land Use* for a discussion of related impacts and mitigation measures.

IM 3.6/E Elimination of Future Use of Project Site Aggregate Resources

The Project would result in land uses which would preclude any future recovery of aggregate resources located on the Project site. The alluvium of the Amador Valley portion of the Project site is judged to be inadequate for use as aggregate. Insufficient information is available for the remainder of the site although the presence of aggregate resources of economic value is considered to be unlikely considering the type of bedrock present. The impact of the Project on the future extraction of on-site aggregate resources is, therefore, considered to be insignificant.

No mitigation is required.

IMPACTS AND MITIGATION MEASURES: DRAINAGE

IM 3.6/F Groundwater Impacts

Shallow groundwater conditions can have an adverse impact on the performance of foundation and pavements, particularly in areas of expansive soils and bedrock. In addition, groundwater conditions cause slope instability, including landsliding and settlement of fill, and are a prerequisite for liquefaction to occur. Shallow groundwater occurs, at least seasonally, on the Project site along major drainages, in colluvium-filled swales, and associated with existing stock ponds. The impacts of groundwater are considered to be potentially significant.

IM 3.6/G Groundwater Impacts Associated with Irrigation

Irrigation associated with development are likely to cause local shallow groundwater conditions. These impacts are considered potentially significant.

Mitigation Measures of the EIR

MM 3.6/11.0 Detailed, design-level geotechnical investigations should be performed to locate and characterize groundwater conditions and to formulate appropriate design criteria and measures to mitigate potentially adverse conditions. Piezometers should be installed and monitored for a period to at least one year prior to construction to determine groundwater levels and variations.

MM 3.6/12.0 Groundwater can generally be controlled by construction of subdrain systems including drainage pipe and permeable materials (see MM 3.6/4, MM 3.6/15, MM 3.6/18, MM 3.6/23, MM 3.6/27).

*Implementation of this mitigation measure should reduce groundwater impacts to **insignificant**.*

*MM 3.6/13.0 Stock pond embankments should be removed and reservoirs drained in development areas (see MM 3.6/6.0). Implementation of this mitigation measure should reduce groundwater impacts to **insignificant**.*

Implementation of MM 3.6/11.0 - 13.0 should reduce groundwater impacts to **insignificant**.

IMPACTS AND MITIGATION MEASURES: GEOLOGY

IM 3.6/H Shrinking and Swelling of Expansive Soils and Bedrock

Expansive soils and bedrock are present on the Project site and have the potential to cause damage to foundations, slabs and pavements. Expansive soils and rock tend to shrink upon drying and swell upon wetting. This process can cause distress to overlying structures and infrastructure. In addition, expansive soils on slopes tend to creep and slump, and cause lateral yielding and cracking of slab and pavements. The impacts of expansive soils and/or bedrock are considered to be potentially significant.

Mitigation Measures of the EIR

MM 3.6/14.0 The potential impact of expansive soils and rock with respect to Project improvements can be significantly reduced, or in many cases prevented by the recognition and characterization of site-specific conditions, and the formulation of appropriate design criteria and mitigation measures during detailed design-level geotechnical investigation, conducted for each specific proposed project.

MM 3.6/15.0 The potential for shrink and swell of expansive soils and rock can be reduced by controlling moisture and by treatment through measures listed below. Subsurface drainage alone is not generally effective against the effects of regional wet/drought cycles. Required measures for a specific project should be based on the recommendation of the project geotechnical consultant and approved by the City and include:

- *Moisture conditioning prior to construction;*
- *Construction of surface and subsurface drainage to control infiltration after construction;*
- *Lime treatment, which can be used to produce non-expansive fill; and*

MM 3.6/16.0 The potential effects of expansive soil and rock can be reduced by appropriate foundation and pavement design, including those design elements listed below. Adjustable foundation systems are not generally effective against the effects of regional wet/drought cycles and are considered undesirable because the systems require periodic maintenance, and their use should be discouraged.

Appropriate design criteria should be developed by the project geotechnical consultant and approved by the City.

- *Founding structural foundations below the zone of seasonal moisture change;*
- *Use of structurally supported floors; and*
- *Removal and replacement with non-expansive fill beneath structure slabs and asphaltic concrete.*

Implementation of MMs 3.6/14.0 - 16.0 will reduce the potential impacts associated with the shrinking and swelling of expansive soils and/or bedrock to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: SLOPE STABILITY

IM 3.6/I Natural Slope Stability

Active and dormant landslides are mapped (Figure 3.6-C) in the hillside areas of the Project site, and have the potential to cause damage to structures and infrastructure located on or in their path, and in extreme cases, loss-of-life. Steep slopes and colluvium-filled swales also occur in the hillside areas of the Project site and are subject to potential slope instability. The impacts of slope instability are considered to be potentially significant.

Mitigation Measures of the EIR

MM 3.6/17.0 The potential impacts of slope instability with respect to structures and infrastructure can be reduced, or in many cases prevented, by the recognition and characterization of site-specific conditions, and the formulation of appropriate design criteria and mitigation measures, during detailed design-level geotechnical investigations conducted for each specific proposed project.

MM 3.6/18.0 Where possible, improvements should not be sited on immediately down slope of unstable and potentially unstable landforms, nor on slopes greater than about 30 percent. Lower density development in steep hillside areas with existing landslides and colluvium-filled swales, provides more opportunity for siting to avoid potential slope instability impacts that higher density development.

MM 3.6/19.0 Where improvements must be located on, below, or immediately adjacent to existing landslides or potentially unstable slopes, the following design mitigation measures can be utilized as appropriate, based on detailed site- and project-specific, design-level geotechnical investigations.

- *Removal of the unstable or potentially unstable material;*
- *Reconstruction (repair) of the unstable or potentially unstable material;*
- *Construction of engineered containment structures;*
- *Construction of impact and deflection structures;*
- *Use of appropriate foundation design; and/or*

- *Construction of surface and subsurface drainage improvements. Current research on the landslide hazard potential of colluvium-filled swales, for example, indicates that surface and subsurface drainage is effective in preventing failures, and drainage mitigation requires significantly less grading and is generally less costly than removal or reconstruction-type mitigations. (See also MM 3.6/26.0).*

Implementation of these mitigation measures, as appropriate, should reduce natural slope instability impacts to ***a level of insignificance****.*

IM 3.6-J Cut-and-Fill Slope Stability

Development of the Project site could result in potentially unstable cut and fill (engineered) slopes. Failure of cut and fill slopes, as well as settlement of fill, could result in significant damage to structures and infrastructure. The impacts of cut and fill slope instability are considered to be potentially significant.

Mitigation Measures of the EIR

MM 3.6/20.0 The potential for cut and fill slope instability and fill settlement can be reduced by developing grading plans for hillside areas that minimize grading, thus minimizing required cuts and fills by adopting roads to the natural landforms, and stepping structures on steeper slopes.

MM 3.6/21.0 Grading plans and mitigation measures should conform to the minimum requirements of Chapters 70 and 22 of the Uniform Building Code and applicable County and City code requirements in force at the time.

MM 3.6/22.0 Unretained cut slopes should not exceed 3:1 unless detailed, site-specific geotechnical investigations indicate that steeper inclinations are appropriate and safe, such as in stronger bedrock materials with favorable (with slope) bedding (structure). Cut slopes steeper than 3:1 can also be achieved by using retaining structures to reduce the amount of grading. Benches and subsurface drainage should be provided on cut slopes, as appropriate, as determined by applicable code requirements, and site- and Project-specific, design-level geotechnical investigations.

MM 3.6/23.0 Fill slopes steeper than 5:1 should be keyed and benched into competent material and provided with subdrainage, prior to placement of engineered fill.

MM 3.6/24.0 Unreinforced fill slopes should be no steeper than 2:1 and provided with benches and surface drainage, as appropriate, as determined by applicable code requirements, and site- and project-specific, design-level geotechnical investigations. Steeper fill slopes, up to 1:1, may be achieved by the use of reinforcement (geogrid), to reduce the amount of grading.

MM 3.6/25.0 Fill should be engineered (compacted) to at least 90 percent relative compaction (as determined by ASTM test method D1557-78).

MM 3.6/26.0 Plans for the periodic inspection and maintenance of subsurface drainage and the periodic inspection and removal and disposal of material deposited in surface drains and in the catch basins (see also MM 3.6/280.0) should be prepared and submitted to the appropriate permitting agency(ies) for review and approval prior to development. The plans should include inspection and disposal procedures, schedule and reporting requirements, and the responsible party (authority and cost). These plans should be part of overall, long-term project monitoring and maintenance.

Implementation of MMs 20.0 - 26.0 should reduce cut-and-fill slope instability impacts to insignificant.

IMPACTS AND MITIGATION MEASURES: EROSION AND SEDIMENTATION

IM 3.6/K Erosion and Sedimentation: Construction-Related

Development of the Project site will modify the existing ground surface and protective vegetative cover, and alter patterns of surface runoff and infiltration, and could result in short-term erosion and sedimentation impacts during the construction phase of the Project. These are considered to be potentially significant.

Mitigation Measures of the EIR

MM 3.6/27.0 The potential impacts of short-term construction-related erosion and sedimentation can be reduced by timing grading activities to avoid the rainy season as much as possible, and by implementing one or more of the following interim control measures, which are designed to prevent concentration of runoff, control runoff velocity, and trap silt. Required measures for a specific project will be determined by the City and be a requirement of the grading permit.

- *Water bars;*
- *Mulch-and-net blankets on exposed slopes;*
- *Straw bale dikes;*
- *Temporary culverts and swales;*
- *Sediment traps; and/or*
- *Silt fences.*

Implementation of MM 27.0 should reduce short-term construction-related erosion and sedimentation impacts to a level of insignificance.

IM 3.6/L Erosion and Sedimentation: Long-Term

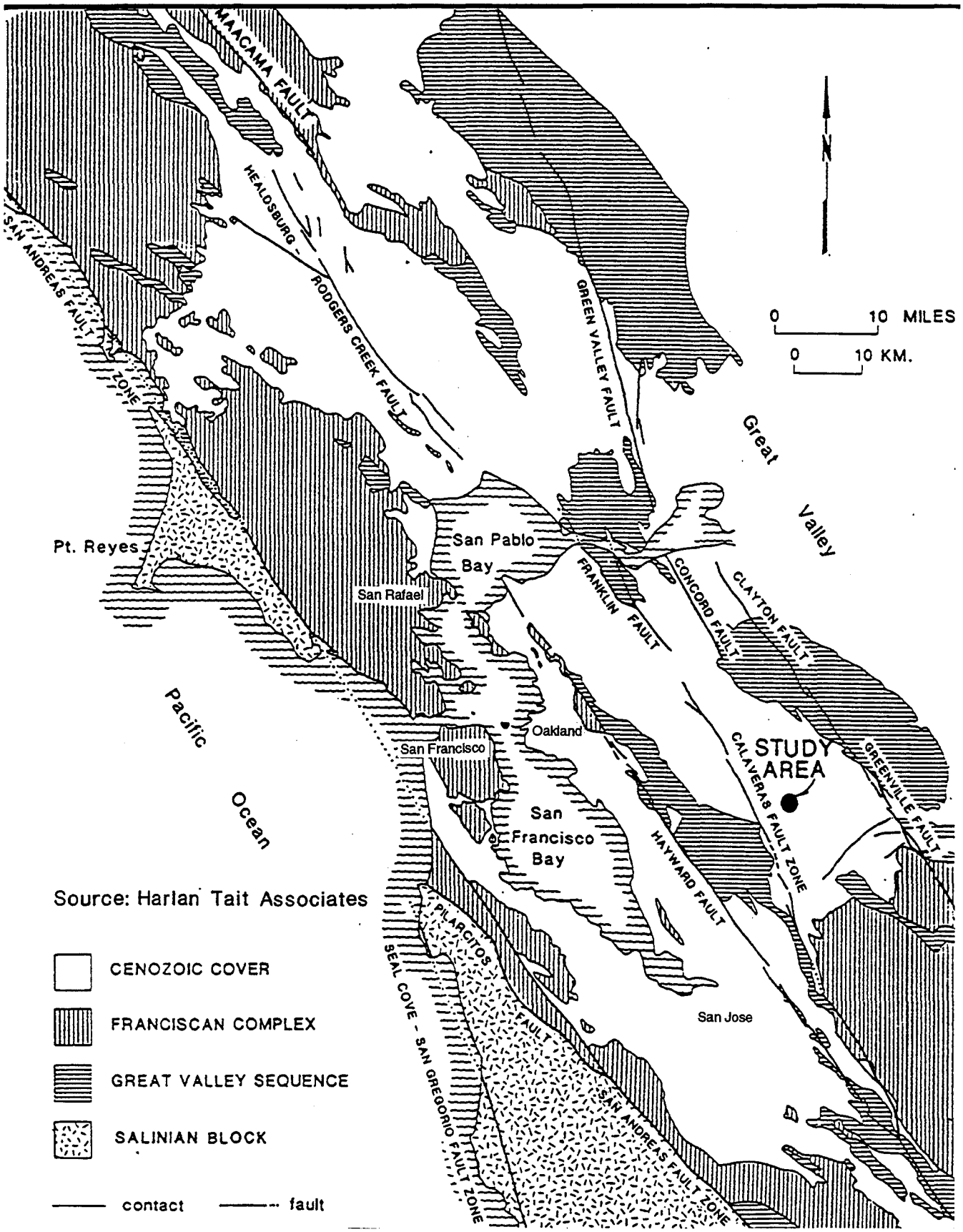
Long-term increases in erosion and sedimentation on the Project site could result from modification of the existing ground surface and removal of the existing protective vegetative cover. These impacts are considered to be potentially significant.

Mitigation Measures of the EIR

MM 3.6/28.0 The potential impacts of long-term erosion and sedimentation can be reduced by the appropriate design, construction, and continued maintenance of surface and subsurface drainage of one or more of the following long-term control measures. Required measures for a specific project should be based on the recommendations of the project geotechnical consultants, and approved by the City.

- *Construction of sediment catch basins at strategic locations to prevent offsite sedimentation from existing and/or potential onsite sources;*
- *Design and construction of storm sewer systems that incorporate the cumulative effects of project buildout;*
- *Creek bank stabilization and repair of existing gullies;*
- *Revegetation and continued maintenance of graded slopes;*
- *Construction of drainage ditches or cut and fill slopes and/or natural slopes above developed areas;*
- *Closed downspout collection systems for individual structures;*
- *Design of cut and fill slopes to minimize, as much as possible, natural low velocity sheet flow runoff; and*
- *Periodic homeowner/landowner maintenance (see MM 3.6/18)*

Implementation of these mitigation measures, as appropriate, should reduce long-term erosion and sedimentation impacts to a level of insignificance.



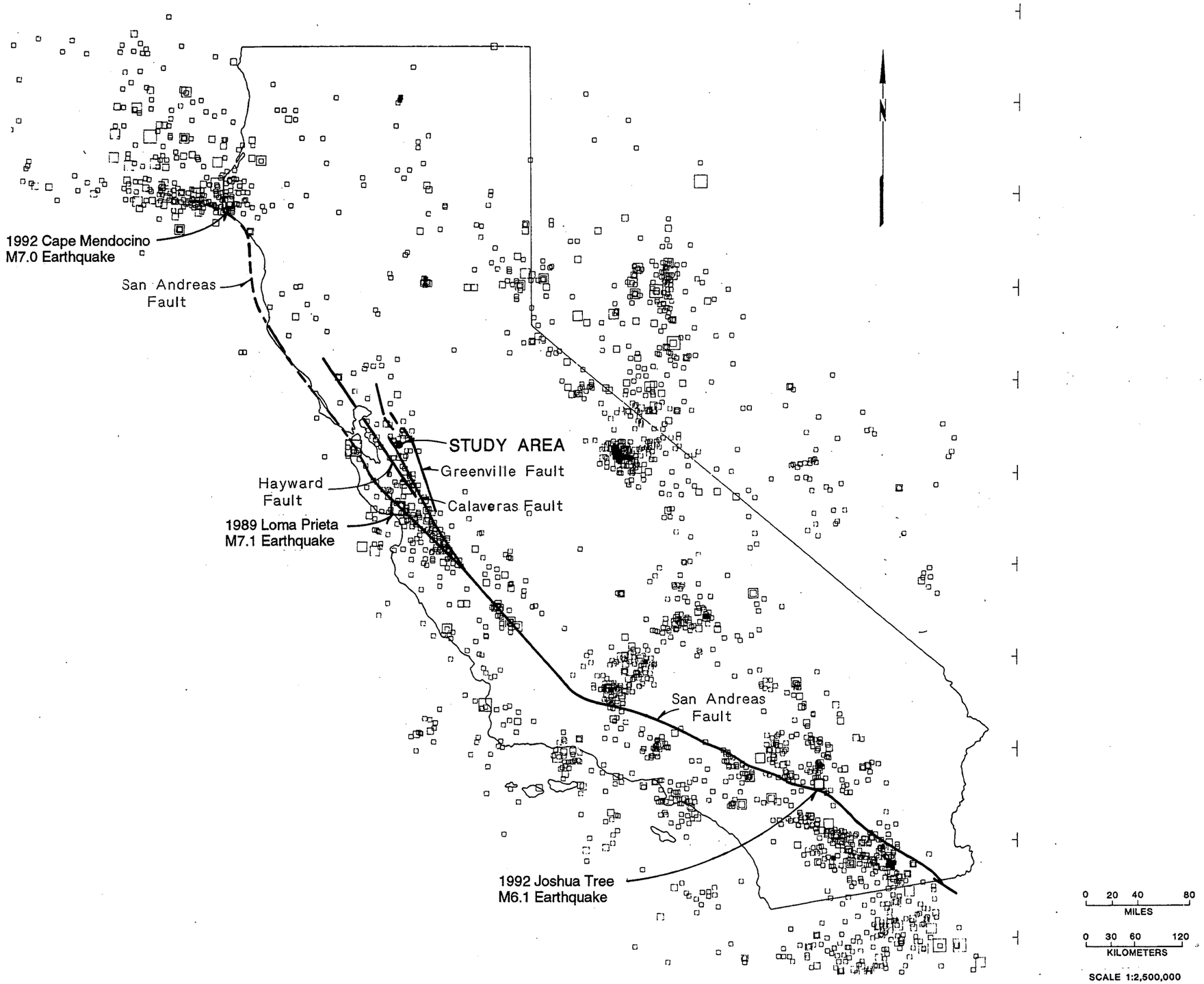
EASTERN DUBLIN GPA • SP • EIR

Regional Geology and Fault Map

Wallace Roberts & Todd

Figure 3.6 - A

Regional Fault and Epicenter Map



Legend

Magnitude

- 4.0 to 4.9
- 5.0 to 5.9
- 6.0 to 6.9
- 7.0 to 7.9
- 8.0 or greater

Sources of Data:

1900 through 1974 data reduced from 1:100,000 scale Earthquake Epicenter Map of California (CDMG, 1978); 1975 through January 8, 1983 from 1: 2,500,000 scale compilation of preliminary Earthquakes provided by Charles R. Real, CDMG, November, 1983; 1989 through 1992 data provided by Harlan Tait Associates.

Source: Harlan Tait Associates

EASTERN DUBLIN
GPA • SP • EIR

Wallace Roberts & Todd Figure 3.6 - B

Geology

Legend

- General Plan Amendment Area
- Specific Plan Area

Geologic Units

- Qf — Fill
- Qal — Alluvial deposits: Undifferentiated
- Qc — Colluvial deposits
- Qls — Landslide deposits
- QTt — Tassajara Formation: Undifferentiated claystone, siltstone and claystone; locally undifferentiated into sandstone-conglomerate (ss) and siltstone-claystone (s) members.
- Tps — Orinda Formation: Undifferentiated mudstone, sandstone and conglomerate.

Map Symbols

- Contact: Approximately located
- 50 inclined / 80 overturned — Strike and dip of bedding
- Cut — Cut pad
- P — Pond
- Quarry

Slope Stability

- Landslide: Hachures indicate scarp area/ anomalous break-in-slope; arrow indicates direction of downslope movement
- Gully/Incised drained
- Soil creep

Qls 2153

- Activity: 1=Active, 2=Dormant
- Identification: 1=Definite, 2=Probable, 3=Questionable
- Type: 1=Soil slip/earth flow, 2=Debris slide, 3=Debris flow, 4=Slump/rotational, 5=Translation
- Depth: 1=<5 feet, 2=5-15 feet, 3=>15 feet

Source: Harlan Tait Associates, 1989

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.6 - C**

Acres 10 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4

Soil Types

Legend

General Plan Amendment Area

Specific Plan Area

See Table 3.6-2 in Appendix B for classification and physical properties

Source: Soil Conservation Service (USDA, 1966)

EASTERN DUBLIN
GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.6 - D**

Acres 10 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4

Section 3.7

BIOLOGICAL RESOURCES

3.7 BIOLOGICAL RESOURCES

SETTING

REGIONAL OVERVIEW

From a regional perspective, the Project site is in a transitional area with respect to topography, habitat, and land use practices. Topographic relief generally decreases from north to south and, to a lesser extent, from east to west. Habitats in the GPA area are, for the most part, contiguous with relatively undisturbed areas in the north and east. To the east of the Project area, habitat is predominantly annual grasslands interspersed with small inclusions of woodland and chaparral. To the north and northeast, oak savannah, mixed woodlands, and chaparral increase with increases in elevation. Development (urban, industrial, and cultivation) is greatest in the south. Thus, the Project site contains undeveloped habitat influenced increasingly by adjacent agricultural and urban development.

HABITAT TYPES

Nine habitat types were identified within the 6,920-acre GPA area (*Figure 3.7-A: Habitat*). Survey and classification information for vegetation/habitat types is discussed in *Appendix D: Biological Assessment (Draft: BioSystems Analysis 1989)*. The vegetation of the Project Site area is largely non-native grassland. In the southern half of the Project site, non-native grassland on the lower hills and bottom land has been plowed and converted to hay crops and dryland wheat and barley. Alkaline clay soils and seep areas produce alkali grassland habitat along the upper reaches of Doolan Canyon and the eastern tributary of Tassajara Creek near Tassajara Road. Several alkali springs occur within the alkali grassland habitat. Northern riparian forest vegetation is well developed along Tassajara Creek and its upper tributaries. There are some scattered stands of arroyo willow riparian woodland along an intermittent drainage on Fallon Road. Tassajara Creek and the lower reach of Doolan Canyon contain some small patches of freshwater marsh. The remaining lands in the GPA area have been developed or contain ruderal fields, in which native vegetation has been replaced by exotic plants and weeds.

Figure 3.7-A shows the distribution of habitat types in the Eastern Dublin GPA area. A list of the vascular plant species observed within the GPA and SP area during 1989 field surveys is provided in *Appendix D: Draft Biological Assessment (BioSystems Analysis 1989.)*

Non-native Grassland. This habitat occupies most of the Project site area throughout its northern half and along its eastern edge. Non-native grassland habitat has been displaced by rotational cropland and ruderal fields in the lower elevations and flat plain areas. The non-native grassland habitat is best developed on rolling hillsides and ridgetops on finer textured soils. Introduced annual weedy species have replaced native grasses and herbs in the grassland habitat. The grassland in the GPA area is heavily grazed and nearly barren by the end of the summer.

Non-native grassland supports a wide array of native and non-native grasses and herbs. Characteristic introduced grass species include slender wild oat (*Avena barbata*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus mollis*), farmer's foxtail (*Hordeum leporinum*), and rattail fescue (*Vulpia myuros*). Occasional stands of the native bunchgrass, nodding stipa (*Stipa pulchra*), were observed on the north-facing slopes of some of the rolling hills.

Alkali Grassland. This habitat is similar to non-native grassland, but is found only in areas of alkaline-rich clay soils with moderate to saturated soil water content. Alkali grassland occurs

primarily along the lower slopes and bottomland areas of Doolan Canyon and an azonal area on the southeastern terrace above an eastern tributary to Tassajara Creek. Similar to non-native grassland, alkali grassland is highly impacted by grazing and housing development in Doolan Canyon. Alkali grassland supports a similar array of introduced grasses to that found in the non-native grassland throughout the GPA area. Several additional species are indicative of alkaline conditions. These include salt grass (*Distichlis spicata* var. *nana*), alkali rye grass (*Elymus triticoides*), Mediterranean barley (*Hordeum hystrix*), brass buttons (*Cotula coronopifolia*), and alkali mallow (*Sida hederacea*). This habitat type was considered potential habitat for two species of rare plants: palmate bird's beak (*Cordylanthus palmatus*) and caper-fruited tropidocarpum (*Tropidocarpum capparideum*).

Northern Riparian Forest. There is a narrow band of mixed riparian forest, 3.8 miles long, along the upper reaches of Tassajara Creek. Large trees are scattered along this section of the creek up to Tassajara Road. The overstory is moderately closed with a dense understory of shrubs and vines. The dominant tree species along this section of the creek is coast live oak (*Quercus agrifolia*). Other tree associates include California buckeye (*Aesculus californica*), California bay (*Umbellularia californica*), sycamore (*Platanus racemosa*), valley oak (*Quercus lobata*), Fremont's cottonwood (*Populus fremontii*), red willow (*Salix laevigata*), and arroyo willow (*Salix lasiolepis*). Understory species in the less-disturbed sections of the channel support dense, closed stands of poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), and wild cucumber (*Marah fabaceus*). The disturbed sections of Tassajara Creek support scattered sycamores and coast live oaks. These open channel sections contain stands of coyote brush (*Baccharis pilularis* var. *consanguinea*), fennel (*Foeniculum vulgare*), and poison hemlock (*Conium maculatum*). In portions of the stream reach where water becomes slack, there are stands of broad-leaved cat-tail (*Typha latifolia*).

Riparian woodland is the most valuable habitat type for wildlife in the GPA area because it provides food, cover, and water resources. Regionally, riparian habitat is important due to its scarcity and contrast with surrounding dry habitats.

Arroyo Willow Riparian Woodland. This habitat is characterized by a dense thicket of arroyo willow (*Salix lasiolepis*) along a narrow intermittent drainage which crosses lower Fallon Road. Associated with the 5 to 10 meter tall stand of arroyo willows are an open understory of ruderal herbs, predominantly poison hemlock. The understory of the arroyo willows northeast of Fallon Road has been heavily grazed and is badly damaged. This drainage culminates in a small impoundment west of the road.

Freshwater Marsh. Several small freshwater marsh areas are adjacent to drainages in Tassajara Creek, Fallon Road, and Doolan Canyon. The best developed of these is in the broad valley at the bottom of Doolan Canyon. At this point the intermittent stream draining Doolan Canyon crosses under Doolan Road from the north and floods the low relief plain. Saturated and flooded soils support a dense, green growth of Baltic rush (*Juncus balticus*), curly dock (*Rumex crispus*), common monkey flower (*Mimulus guttatus*), and tule (*Scirpus* spp.).

Springs, Seeps and Impoundments. In addition to riparian and intermittent stream courses, the GPA area includes several natural springs and seeps that support herbaceous vegetation late into the summer months. Most of these areas support species characteristic of freshwater marsh habitat or alkali grassland habitat. Impoundments are typically small reservoirs created for livestock, adjacent to perennial springs or intermittent drainages. Larger artificial ponds support perennial, emergent vegetation around their banks. Most ponds are dry by summer, and therefore, support vegetation indicative of progressively drying, disturbed habitats.

There are at least 13 miles of intermittent (periodic flows) and ephemeral (temporary flows) streams and more than 40 springs, seeps, impoundments, stock tanks, and ponds within the GPA area (*Figure 3.7-B: Riparian Habitat and Springs*).

Dry-Farming Rotational Cropland. Farming on the Project site primarily consists of grain crops of wheat and barley. These croplands occur on the lower elevation hillsides and bottomlands in the southern half of the GPA area. These fields are typically cropped at various seasonal and annual rotations followed by fallow years at a rate of one in every five. Grain crops are not irrigated. In fallow years, vegetation is characterized by introduced weedy herbs and grasses along with remnant individuals of the previous grain crop species.

Ruderal Field. This habitat type occurs on parcels of land surrounding developed properties located on the County Property (refer to *Section 3.1: Land Use; Alameda County Property* for a full description of existing land uses on this site.) As a result of continued disturbance and compaction, fallow fields support dense stands of ruderal species (defined by Frenkel, 1977, "as a broad category of plant life closely related to man and consisting of native and alien elements which occupy disturbed habitats and waste places"). In the GPA area, these species are predominantly introduced weeds such as thistles, mustards, and grasses. Plant diversity is generally low although cover may be high.

Developed. These habitat types in the GPA area occur around homes, barns, and existing facilities. These areas are typically characterized by ruderal or horticultural plant cover with little or no native vegetation. Isolated stands of blue gum (*Eucalyptus globulus*) are typically found associated with developed sites in the GPA area.

SPECIAL STATUS SPECIES

Special Status Species is a term applied to botanical and wildlife species which are: listed as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) or the California Department of Fish and Game (CDFG); federal candidates for listing; and California Species of Special Concern. In addition, the California Native Plant Society (CNPS) maintains a separate listing of sensitive plants. Under Section 15380(d) of *CEQA*, a species not included in any formal listing identified by the state "shall nevertheless be considered rare or endangered if the species can be shown to meet the criteria" for listing. Therefore, California Species of Special Concern (Remsen 1978, Williams 1986) are included in this list. The CDFG has compiled a list of natural communities considered rare or declining in California. Special status plants and wildlife with potential to occur in the GPA area are listed in Tables 3.7-1 and 3.7-2 (included at the end of this section.) Habitat for sensitive species is illustrated on *Figure 3.7-C: Sensitive Species*.

SPECIAL STATUS SPECIES: BOTANICAL

Rare or Endangered Plants

No rare or endangered plants were found during field surveys in the GPA area (*Appendix D: Draft Biological Assessment; BioSystems Analysis 1989)*. Marginal potential habitat for palmate bird's beak (*Cordylanthus palmatus)* and caper-fruited tropidocarpum (*Tropidocarpum capparideum)* was observed in the upper reaches of Doolan Canyon. However, due to intensive grazing and trampling of alkali springs, specific habitat requirements (i.e., alkali hardpans) were lacking.

Botanically Sensitive Habitats

There are three botanically sensitive habitats within the GPA area: northern riparian forest, arroyo willow riparian woodland, and freshwater marsh. These habitats are recognized as rare and declining in the state by the CDFG Natural Diversity Database (CNDDB 1991). They are of great biotic significance because they provide potential habitat for special status species.

SPECIAL STATUS SPECIES: WILDLIFE

Threatened and Endangered Species

San Joaquin Kit Fox. Kit fox inhabit grassland habitats in the low foothills surrounding the San Joaquin Valley, portions of the San Joaquin Valley floor, and interior coast range valleys. Present populations are concentrated in western Kern and eastern San Luis Obispo counties. In the western portions of their range, kit fox are found as far north as Byron in Contra Costa County, south of Mt. Diablo, and west almost to Highway 680. San Joaquin kit fox populations are declining because of habitat loss. In the early 1900s, urban development and conversion of uncultivated land to irrigated cropland in the San Joaquin Valley caused major losses of kit fox habitat. In the last half century, San Joaquin kit fox populations are estimated to have declined 20 to 43 percent.

Usually, kit fox make their dens in relatively flat terrain or the lower slopes of hills. Common locations for dens include washes, drainages, and road berms. As they are reputedly poor diggers, kit fox tend to den in loose-textured, friable soils. Kit fox often use ground squirrel (*Spermophilus beecheyi*) burrows for dens, particularly in northern portions of their range; they will also den in man-made structures, such as culverts. The availability of suitable dens is a critical habitat requirement for kit fox; an individual fox may use over 20 dens during a year.

The GPA area is in the northwest portion of the San Joaquin kit fox range (O'Farrell 1983) and appears to be ecologically suitable for kit fox due to the vegetative conditions (i.e. grasslands) and availability of suitable prey species. In the Camp Parks area just west of Tassajara Creek, surveys have failed to document the presence of kit fox (Balestreri 1981, Jones and Stokes 1983, U.S. Corps of Engineers 1986). CDFG records include one documented occurrence of kit fox and den within the northeastern part of the GPA area (Morrel 1975). Surveys conducted by BioSystems in 1989 (*Appendix D: Draft Biological Assessment; BioSystems Analysis 1989)* resulted in one potential kit fox track and 41 potential dens in the GPA and SP area. See *Appendix E: Eastern Dublin San Joaquin Kit Fox Protection Plan* for survey methods and den locations, definitions of "potential" and "known" dens, and description of habitat conditions for kit fox.

There are some indications that kit fox may be expanding their range in Contra Costa County (Sue Orloff: pers. comm.). These data coupled with appropriate terrain and vegetation cover, historic evidence of kit fox occurrence in the GPA area, and the fact that the GPA area is contiguous with known populations to the northeast (Los Vaqueros) (Westlar 1987, Orloff et. al 1986), suggests that kit fox could potentially inhabit the GPA area. CDFG reviewed the status of the kit fox in the GPA area; based on results of surveys conducted by BioSystems (1989) and others, the agency could not determine that development in the GPA and SP area would not negatively affect the kit fox by eliminating suitable habitat. CDFG did state their "...initial determination that the majority of the planning area, with the exception of the developed Santa Rita area of Tassajara Road, is potential kit fox habitat" (CDFG 1992).

Bald Eagle. The historic breeding range of the bald eagle in California extended from southern coastal areas through much of the central and northern portions of the state. Population declines, seen throughout the lower 48 states, is attributed to pesticide (DDT) contamination, loss of habitat due to logging and urban development, human disturbance, shooting, and degradation of waterways.

The GPA area is not suitable nesting habitat for bald eagles because there are no appropriate cliffs or trees for nesting and no foraging habitat. Several birds are known to winter in the Altamont area and may occasionally pass through the GPA area.

Peregrine Falcon. In California, peregrine falcons breed on cliffs along the central coast and in mountains of the coast range and Sierra Nevada. Wintering peregrine falcons are found throughout the state, primarily near wetlands. California peregrine falcon populations declined sharply in recent decades, mostly due to DDT-related egg shell thinning. Once down to two known pairs in the

mid-1970s, the present population in California is more than 80 breeding pairs.

Historic nesting locations are known from the region north of Project site, but these sites have not been used for over 20 years (Thelander pers. comm.). Peregrine falcons have been reintroduced to these historic sites on Mt. Diablo. The GPA area does not contain suitable cliffs for nesting and does not represent important foraging habitat for the peregrine falcon.

Alameda Whipsnake. The Alameda whipsnake (formerly known as the Alameda striped racer) occurs in valleys, foothills, and low mountains in portions of Alameda and Contra Costra Counties. It inhabits chaparral, grassland, open woodlands, and rocky slopes. Urban development and large water impoundment projects ("dams") represent the greatest threat to this species.

Appropriate habitat (i.e., chaparral and rocky slopes with surrounding grassland and open woodlands) for the Alameda whipsnake does not occur in the GPA area and the species was not observed during field surveys (*Appendix D: Draft Biological Assessment; BioSystems Analysis 1989).*

Federal Candidates for Listing

Red-legged Frog. The red-legged frog occurs within California's coastal counties and the northern Sierra foothills. Agriculture, urban development, and intensive grazing have degraded or eliminated critical freshwater habitat for this frog over much of its former range in California. Additionally, predation and competition from introduced fish and bullfrogs has also significantly contributed to the decline of this subspecies. Preferred habitat consists of slow-moving freshwater streams, ponds and marshes, and coastal estuaries containing abundant aquatic or edge vegetation. They are also found in ephemeral pools if water remains until larval development is complete (late spring or early summer).

Red-legged frogs (adults and larvae) were detected at 11 sites in the GPA area, including springs, impoundments, windmill cisterns, pools and small runs in Cottonwood Creek and two tributaries of Tassajara Creek (*Figure 3.7-C*). No frogs were found in the main channel of Tassajara Creek or the lower portion of Cottonwood Creek. Potential breeding and year-long habitat for red-legged frogs is probably greater than these 11 locations indicate. Specific locations of frogs, especially along linear waterways, vary from year to year, and season to season, as habitat quality and availability fluctuate.

California Tiger Salamander. This subspecies ranges from Sonoma County south to Santa Barbara County and east to the foothills of the Sierra Nevada. Agriculture, urban development, and intensive grazing have degraded or eliminated critical freshwater habitat for this salamander over much of its former range in California. In addition, predation and competition from introduced fish and amphibians have contributed to the decline of this subspecies. Tiger salamanders breed in ponds, slow-moving streams and temporary pools in winter and early spring. During the non-breeding season, salamanders inhabit rodent burrows up to a mile from breeding sites. Breeding populations of California tiger salamanders tend to be concentrated in regional centers and the Livermore-Amador Valley appears to be one of these core areas (Brode pers. comm.).

A search of the CDFG Data Base indicated several documented occurrences of the salamander in the area surrounding the GPA area (CNDDB 1991). The two closest locations are just outside the southeastern boundary of the GPA area. No California tiger salamanders were located during 1989 field studies (*Appendix D: Draft Biological Assessment; BioSystems Analysis 1989).* These results may have been influenced by drought conditions during the past several years. High quality habitat for the California tiger salamander occurs at many of the water sites throughout the GPA area.

Western Pond Turtle. This species occurs west of the Cascade-Sierran crest in California. A thoroughly aquatic turtle, it inhabits ponds, marshes, rivers, reservoirs, and irrigation ditches in grassland, woodland, or open forest habitats. It prefers quiet, year-round water with rocky or muddy

bottoms, and deep pools bordered by aquatic vegetation. Populations have declined during the past century due to degradation of watersheds caused by agricultural practices, overgrazing, and urban development. Collecting for the pet trade has also contributed to its decline.

Western pond turtles were found at two locations along Cottonwood Creek (*Figure 3.7-C*). A total of eight individuals was observed basking in the sun near small pools. Several adult turtles were observed with young. Tassajara Creek and larger permanent water impoundments in the GPA also represent suitable habitat for the western pond turtle.

Tricolored Blackbird. Tricolored blackbirds occur in the Central Valley and coastal counties of California. Populations are declining throughout its range. Tricolored blackbirds nest in large groups in marsh habitat with dense cattails. Degradation or loss of riparian and wetland habitat is the primary factor in population declines.

Breeding habitat occurs in the GPA area although it appears to be only marginally suitable. No tricolored blackbirds were observed during field studies *Appendix D: Draft Biological Assessment: BioSystems Analysis 1989).*

California Species of Special Concern

Golden Eagle. Throughout most of California, golden eagles are an uncommon resident or migrant species. Golden eagle populations have declined since the 1940s, especially near human population centers, but are generally stable, with an estimated 500 pairs nesting in California. Electrocution by power lines, shooting, human disturbance at nest sites, and conversion of grasslands to intensive agriculture are the major threats to golden eagles.

Golden eagles prefer open, sloping landscapes such as foothills and canyons, with cliffs and trees for nesting and cover. Their hunting grounds are extensive tracts of open terrain adjacent to nesting habitat; although they may travel 10 to 20 miles from nesting sites to forage. Golden eagle pairs often return to the same nest territory each year.

Eagles were routinely observed soaring over the Project site and several birds were observed feeding on ground squirrels. One active eagle nest was located in a eucalyptus tree along a northeast tributary of Tassajara Creek (T. 2S R. 1E, NW ¼ of Section 27 [*Figure 3.7-C*]). Because several people mentioned the nest site during interviews, the general location of this eagle nest is considered common knowledge to local residents and workers in the area and indicates that this nest site is probably a historic location.

Stands of eucalyptus and riparian woodland represent the only suitable nesting habitat for golden eagles in the GPA area. Annual grasslands in the GPA area provides high-quality foraging habitat for the golden eagle in this region of California (Thelander pers. comm.).

Burrowing Owl. Burrowing owls occur in grasslands, deserts, agricultural margins, bare open areas, and rolling hills at low elevations throughout California. Burrowing owls use ground squirrel or other holes as nesting sites. Good visibility from burrows is important; shrubs, fence posts or any high ground are used as hunting perches. Populations are declining throughout California. Habitat loss and ground squirrel populations which have been reduced by rodent control measures have, in turn, reduced the number of available burrows.

Burrowing owl pellets were found along fence lines, apparently used as perches, in the northeastern portion of the GPA area. One owl was seen during night spotlighting surveys. Annual grasslands in the GPA area provide good nesting and foraging habitat for burrowing owls.

Prairie Falcon. Prairie falcons were once common throughout California, but populations around the perimeter of the Central Valley showed low reproductive rates during the 1960s and 1970s. Desert area populations are still very high, and recent surveys indicate improvements in the Central Valley perimeter population. Prairie falcons often nest in crevices or potholes in cliffs or rock outcrops (30 to over 400 feet high) with a view of open country for hunting. Reasons for decline include nest robbing by falconers, shooting, human disturbance, changes in land use, rodent control programs, and possible pesticide contamination.

Historically, prairie falcons were known to nest several miles north of the GPA area, but these sites have not been used for several years (Thelander pers. comm.). No suitable nesting habitat occurs in the GPA area; however, most of the planning area is high quality potential foraging habitat. No prairie falcons were observed in the GPA area during field studies (*Appendix D: Draft Biological Assessment: BioSystems Analysis 1989).*

Sharp-shinned Hawk. This woodland hawk is found throughout northern California, breeding in riparian areas or moderate to dense forest habitat. During winter, the hawks are found in all habitats, occasionally foraging in annual grasslands. Sharp-shinned hawks feed mainly on small birds, often at forest edges. Breeding populations appear to be declining from former levels, although data are lacking.

The Project area contains marginal nesting and low quality foraging habitat, primarily along Tassajara Creek. No sharp-shinned hawks were observed during three surveys of Tassajara Creek.

Cooper's Hawk. Cooper's hawks are found throughout northern California and are typically associated with riparian areas and woodland habitats. Interspersion of open grassland with mixed hardwood forest create suitable foraging habitat for Cooper's hawks. Breeding populations of Cooper's hawks have declined sharply throughout the state and this is attributed to habitat destruction (especially lowland riparian areas), human disturbance, and possibly contamination by persistent pesticides (DDT).

Marginal nesting habitat occurs in the GPA area, mainly along Tassajara Creek. No Cooper's hawks were observed during three surveys of Tassajara Creek.

Northern Harrier. Northern harriers inhabit marshlands and grasslands throughout California. Breeding populations are concentrated in the Central Valley, the central and north coasts, northeastern California, and scattered other locations. Breeding and wintering populations of harriers have declined from former levels throughout California. This population decline is attributed to destruction of marsh habitat and grazing impacts on grassland.

Northern harriers were consistently observed during field work. The rolling annual grasslands with abundant prey species throughout the Project site provides potential foraging habitat for this species. The short vegetation cover and lack of wet meadow habitat in the GPA area greatly reduces the suitability for harrier nesting habitat.

Short-eared Owl. Short-eared owls were once common throughout California in most open habitats, including marshlands, wet meadows, grasslands, and cultivated fields. They are most frequently observed in California during winter months, primarily along the California coast, the Central Valley, and in northeastern California at low elevations. Short-eared owls have experienced loss of nesting habitat in lowland marsh and grassland habitat due to overgrazing, water diversion projects and recreational development.

Short-eared owls were not observed during field work (*Appendix D: Draft Biological Assessment: BioSystems Analysis 1989).* The study site provides potential foraging habitat, but no nesting habitat for this species.

American Badger. Badgers occur throughout most of the state in grassland, oak savannah, and open scrub habitats. They are highly specialized, burrowing mammals that prey primarily on rodents such as gophers, ground squirrels, and kangaroo rats. Badger populations in California have declined greatly in the last century, particularly in coastal areas and in southern California. Rodent control programs and habitat loss due to agricultural and urban development are the primary causes for the decline and extirpation of badger populations.

Badgers were observed during spotlighting surveys and badger diggings were found during den surveys in the northeastern portion of the GPA area. All of the grassland habitat in the GPA area provides suitable foraging and denning habitat for badgers.

California Horned Lizard. This subspecies occurs throughout much of California west of the deserts, ranging throughout all of the coastal counties south of Sonoma County, and in the Central Valley. The California horned lizard inhabits a variety of habitats, including scrubland, grassland, riparian, woodland, and open coniferous forests with loose, sandy soils. Little is known about its distribution and abundance in California.

California horned lizards were not found in the GPA area. Moderately suitable habitat for the lizard probably occurs throughout most of the undeveloped portion of the GPA area.

Invertebrates

Surveys for special status invertebrates were not conducted during other wildlife fieldwork. The list of invertebrates in Table 3.7-2 was compiled from the literature. Most of these species depend on strict habitat requirements such as microclimate conditions or host plants and their potential to occur on the Project site has not been evaluated in detail. Species-specific surveys may be required on a project-by-project basis.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The *CEQA Guidelines*: Section 15065(a) provides that a project may have a significant effect on the environment if:

> *The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of fish and or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.*

In addition *CEQA*: Appendix G states that:

> *A project will normally have a significant effect on the environment if it will:... (c) Substantially affect a rare or endangered species of animal or plant or the habitat of the species;*

The *CEQA Guidelines*: Section 15380 state that the definition of "Rare and Endangered Species" will be extended to species not included in any formal listing identified in Section 15380(c) if the species can be shown to meet the criteria for listing.

All pre-mitigation and post-mitigation effects are designated as either significant, potentially significant, or insignificant. Findings of environmental effects are based to the extent possible on substantial evidence and careful professional judgement. Evidence includes knowledge of the affected biological resources, and historic and existing conditions of the affected environment *(Appendix D: Draft Biological Assessment: BioSystems Analysis 1989).*

IMPACTS AND MITIGATION MEASURES: HABITAT

IM 3.7/A Direct Habitat Loss

The Project will result in the loss, degradation, or disturbance of as much as 3,700 acres of existing vegetation. Although no unique or rare plant species are found on the Project site, urbanization will substantially reduce the habitat and range for botanical and wildlife species which are either resident or migratory users of the planning area. This substantial reduction of habitat and range is a potentially significant impact of the Project.

This impact is also a potentially significant cumulative impact and a significant irreversible change as discussed in *Chapter 5.*

Mitigation Measures of the Specific Plan

MM 3.7/1.0 *(Policy 6-21). Direct disturbance or removal of trees or native vegetation cover should be minimized and be restricted to those areas actually designated for the construction of improvements.*

MM 3.7/2.0 *(Policy 6-23). Vegetation enhancement/management plans should be prepared for all open space areas (whether held publicly or privately) with the intent to enhance the biologic potential of the area as wildlife habitat. The focus of such plans will be to reintroduce native species in order to increase the vegetative cover and plant diversity.*

MM 3.7/3.0 *(Action Program 6O). The City will require a detailed revegetation/restoration plan to be developed for all disturbed areas that are to remain undeveloped. The plan will be developed by a qualified revegetation specialist, and should incorporate stockpiling of native topsoils as appropriate, for later reapplication to cut slopes, shoulders, and pads.*

Mitigation Measures of the EIR

MM 3.7/4.0 *Grazing management plans shall be developed by the City and implemented soon after approval of the General Plan Amendment and Specific Plan. Management plans shall favor protection of riparian and wetland areas, increased plant diversity, and the recovery of native plants, in particular, perennial grasses.*

MMs 3.7/1.0-3.7/4.0 are applicable to the total Project site. Implementation of all of these mitigation measures will reduce impacts to a level of insignificance.

IM 3.7/B Indirect Impacts of Vegetation Removal

Construction activities on the Project site may cause dust deposition from construction activities, increased soil erosion and sedimentation, increased potential for slope failures, and alteration of

surface and subsurface drainage patterns. These are potentially significant.

Mitigation Measures of the Specific Plan

MM 3.7/5.0 (Policy 6-22). All areas of disturbance should be revegetated as quickly as possible to prevent erosion. Native trees (preferably those species already on site), shrubs, herbs, and grasses should be used for revegetation of areas to remain as natural open space. The introduction of non-native plant species should be avoided.

Additional mitigation measures related to soil erosion, sedimentation and slope stability are given in *Section 3.6: Soils, Geology and Seismicity*. These are: *MM 3.6/18.0*, *MM 3.6/22.0*, and *MM 3.6/23.0*. The mitigation measures related to dust deposition during construction is given in *Section 3.11: Air Quality*. This is: *MM 3.11/8*.

Mitigation measures above are applicable to the total Project site. Implementation of all of these mitigation measures will reduce these impacts to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: RARE OR ENDANGERED PLANTS

No rare and endangered plants were documented in the GPA area; therefore, impacts to rare plant species are not anticipated and no mitigation measures are required.

IMPACTS AND MITIGATION MEASURES: BOTANICALLY SENSITIVE HABITATS

IM 3.7/C Loss or Degradation of Botanically Sensitive Habitat

The following impacts could occur to Northern Riparian Forest, Arroyo Willow Riparian Woodland, and Freshwater Marsh: Direct loss and degradation from grading, road construction, and culvert crossings. Indirect impacts could result from increased sedimentation or spoil deposition affecting stream flow patterns and damaging young seedlings and the roots of woody plants. Given the sensitive and unique nature of these habitats, pre-mitigation effects represent potentially significant impacts.

This impact is also a potentially significant cumulative impact as discussed in *Chapter 5*.

Mitigation Measures of the Specific Plan

MM 3.7/6.0 (Policy 6-9). Natural stream corridors, ponds, springs, seeps, and wetland areas shall be preserved wherever possible. Prior to submittal of development applications, the California Department of Fish and Game and the Army Corps of Engineers (COE) must be consulted to determine whether they have jurisdiction over the watercourse or wetland area.

MM 3.7/7.0 (Policy 6-10). Riparian and wetland areas shall be incorporated into greenbelt and open space areas as a means of preserving and enhancing their hydrologic and habitat value. Unavoidable loss of riparian habitat due to development shall be replaced as requested by CDFG. Loss of wetlands must be mitigated consistent with the COE's "no net loss" policy.

MM 3.7/8.0 (Policy 6-11). All stream corridors should be revegetated with native

plant species to enhance their natural appearance and improve habitat values. Revegetation must be implemented by a professional approved by the California Department of Fish and Game.

MM 3.7/9.0 *(Policy 6-12). Maintain natural open stream channels to carry storm runoff wherever feasible, rather than replacing with underground storm drainage systems. When extra capacity is necessary, retention basins are preferable to channelization, if the channelization would disturb riparian habitat. When channelization is necessary, the channel should be designed and constructed to accommodate both the projected flows and the growth of riparian vegetation, and to have more natural-appearing contours.*

MM 3.7/10.0 *(Policy 6-13). Establish a stream corridor system (see Specific Plan: Figure 6.1) which provides multi-purpose open space corridors capable of accommodating wildlife and pedestrian circulation. In order to facilitate the use of these corridors by both humans and wildlife, human activities (e.g., trails) should be limited to one side of the stream.*

MM 3.7/11.0 *(Program 6E). The City shall require all project applicants to submit a multi-parameter wetlands delineation to the COE for verification and jurisdictional establishment, and submit plans for proposed alteration to any watercourse to the DFG for their review and approval. Applicants will be required to submit these agencies' determinations, any required permits, and approved mitigation plans as part of the final development plan submittal.*

MM 3.7/12.0 *(Program 6F). The City should work with Zone 7 and the Department of Fish and Game to develop a comprehensive stream corridor restoration program that identifies a detailed set of criteria for grading, stabilization and revegetation of planning area stream channels. This program shall be developed soon after approval of the General Plan Amendment and Specific Plan. The program would provide guidelines for plant species, planting densities, and long-term maintenance requirements and responsibilities. Such a program will facilitate development approvals and insure a consistent standard for stream channel improvement throughout the planning area. The program should identify the procedures to be followed by applicants for development, permits to be obtained, and improvement and revegetation practices to be implemented.*

MM 3.7/13.0 *(Program 6G). The City should require dedication of land and improvements (i.e., trails, revegetation, etc.) along both sides of stream corridors as a condition of development project approval. The width of dedicated corridors will be established in consultation with the regulatory authority since these may vary with specific sites (The California Department of Fish and Game typically recommends a minimum buffer of 100 feet on each side).*

MM 3.7/14.0 *(Program 6H). The City should enact and enforce an erosion and sedimentation control ordinance establishing performance standards to ensure maintenance of water quality and protection of stream channels. The ordinance should regulate grading and development activities adjacent to streams and wetland areas, and require revegetation of all*

ground disturbance immediately after construction to reduce erosion potential. Until such an ordinance is in place, the City shall require project applicants to provide a detailed erosion and sedimentation control plan as part of the project submittal.

MM 3.7/15.0 (Program 6K). The City of Dublin shall establish and maintain a liaison with resource management agencies (i.e. California Department of Fish and Game, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers) for the purpose of monitoring compliance with Specific Plan policies. These agencies should be consulted and involved throughout the planning and development process of individual properties in order to avoid violations of state and federal regulations and ensure that specific issues and concerns are recognized and addressed.

Mitigation Measures of the EIR

MM 3.7/16.0 Existing sensitive habitats shall be avoided and protected where feasible.

MM 3.7/17.0 Construction near drainages shall take place during the dry season.

All mitigation measures above are applicable to the total Project site. Implementation of all of these mitigation measures will reduce impacts to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: WILDLIFE RESOURCES

Overview

Potential direct impacts to wildlife due to development of the GPA area include: possible direct mortality or injury to individual animals; removal and modification of native habitat; reduction in the prey base for predators; reduction in the number of denning or nesting sites; disturbance to wildlife from increased human presence, domestic pets and vehicle traffic; degradation of water quality or flow regimes due to run-off, erosion, and pollutants; and the construction of utility transmission lines. Increased vehicular traffic can cause direct mortality to many species and impede wildlife dispersal.

Those species most immediately affected by habitat disturbance or losses are relatively sedentary species, such as small mammals, reptile, amphibians, and invertebrates. More mobile wildlife species, such as most birds and larger mammals, may be able to avoid direct mortality from construction activities by moving to surrounding habitat. However, many of the displaced individuals shall likely perish due to increased competition for limited resources in nearby habitats.

Impacts would be most severe for wildlife species with limited breeding habitat or whose reproductive periods coincide with construction. Dens, breeding ponds, or nesting areas are most vulnerable to disturbance, especially during spring and early summer.

IMPACTS AND MITIGATION MEASURES: THREATENED AND ENDANGERED SPECIES

IM 3.7/D San Joaquin kit fox

Construction of new roads and facilities could adversely impact kit fox by destroying potential dens or burying foxes occupying dens at the time of construction. Modification of natural habitat could

reduce available prey and den sites. Increased vehicle traffic and human presence in the area could lead to direct mortality or disturbance to foxes. Increased numbers of domestic dogs in the area could also adversely affect foxes. Poisons used for rodent control could directly harm kit fox or reduce prey populations. Pre-mitigation impacts are potentially significant.

Mitigation Measure of the EIR

MM 3.7/18.0 Because of the potential impacts to kit foxes or their habitat, a USFWS Section 7 consultation (Endangered Species Act, as amended) may be invoked. Consultation with CDFG, pursuant to the California Endangered Species Act, Section 2053, may also be invoked. Mitigation measures for avoiding, minimizing, and offsetting impacts to kit fox, as provided in the Eastern Dublin San Joaquin Kit Fox Protection Plan (Appendix E), shall be followed.

MM 3.7/19.0 (Program 6N). The use of rodenticides and herbicides within the Project area should be restricted to avoid impacts on wildlife. The City shall require any poisoning programs to be done in cooperation with and under supervision of the Alameda County Department of Agriculture.

Implementation of both these mitigation measures will reduce impacts to an insignificant level.

IM 3.7/E Bald eagle, peregrine falcon, and Alameda whipsnake

Potential impacts to these species are considered insignificant due to the lack of appropriate habitat on the Project site.

No mitigation measures are required.

IMPACTS AND MITIGATION MEASURES: FEDERAL CANDIDATES FOR LISTING

IM 3.7/F Red-legged frog.

The destruction and alteration of small water impoundments and stream courses on the Project site threaten to eliminate habitat for the red-legged frog. Increased sedimentation from run-off into small riparian zones or water impoundments could reduce the water quality and threaten breeding and larval habitat. Removal or modification of the vegetation (already at a minimum) in the stream courses could reduce the suitability of habitat for adult frogs. Additionally, increased vehicle traffic and construction of new roads could increase direct mortality. Harassment and predation by feral dogs and cats is an existing problem and would increase with residential development. These are considered potentially significant impacts to red-legged frog populations.

IM 3.7/G California tiger salamander.

This salamander is vulnerable to many of the same impacts as the red-legged frog. Although the presence of this species was not confirmed during field surveys, the GPA area provides suitable habitat and is contiguous with known occupied range. These impacts are potentially significant.

IM 3.7/H Western pond turtle.

Western pond turtles would be impacted by degradation of water courses and larger permanent water impoundments, similar to those discussed for the red-legged frog. Impacts are potentially significant.

IM 3.7/I Tri-colored blackbird

Potential destruction of riparian and freshwater habitat for this species is a potentially significant impact.

Mitigation Measures of the Specific Plan (applicable to Impacts 3.7/F-I)

MM 3.7/20.0 (Program 6L). The City shall require development applicants to conduct a pre-construction survey within 60 days prior to habitat modification (clearing construction and road site, etc.) to verify the presence of sensitive species, especially the San Joaquin kit fox, nesting raptors, the red-legged frog, the western pond turtle, the California tiger salamander, the tri-colored blackbird and other species of special concern.

MM 3.7/21.0 Sensitive habitat shall be protected and enhanced by implementation of Mitigation Measures 3.7/2.0, 3.7/3.0, 3.7/6.0-3.7/18.0 inclusive.

Mitigation Measures of the EIR (applicable to Impacts 3.7/F, 3.7/G, 3.7/H, 3.7/I)

MM 3.7/22.0 Maintain a minimum buffer (at least 100 feet) around breeding sites of the red-legged frog, California tiger salamander, and the Western pond turtle identified by Program 6L (above)

All mitigation measures given above apply to the total Project site. Implementation of these mitigation measures would reduce potential impacts to red-legged frog, California tiger salamander, Western pond turtle, and tri-colored blackbird to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: CALIFORNIA SPECIES OF SPECIAL CONCERN

IM 3.7/J Golden Eagle: Destruction of Nesting Site

Construction and operation of a proposed road connecting Doolan Road to Tassajara Road could result in the loss of a golden eagle nesting site. This loss would constitute a significant impact to the pair of breeding eagles, and to the potential productivity of the local area.

Mitigation Measures of the Specific Plan

MM 3.7/23.0 (Policy 6-20). Maintain a natural open space zone (Golden Eagle Protection Zone) around the golden eagle nest located in the northeast corner of the planning area (see Specific Plan: Figure 6.3 for the designated setback). Exceptions to this setback will have to be approved by the U.S. Fish and Wildlife Service (USFWS), based on field examinations of the site to determine what constitutes "harassment" of the eagles at this particular location. Construction within this protection zone will not be allowed unless it is determined that the eagles have ceased to use the nest site for two consecutive years as verified by the USFWS.

Note: What contributes an effective buffer from an ecological and management standpoint is complex and poorly defined. To our knowledge, there are no legal requirements stipulating the width of a buffer for protecting the nest of most raptor species including the golden eagle. The distance needed to produce an effective buffer will

vary with the individual pair of eagles in question, the intensity and timing of the disturbance, and position of the nest in relation to the disturbance. The initial spatial buffer zone proposed in Appendix D: Biological Assessment (Draft: BioSystems Analysis 1989) to protect the golden eagle nest can be modified based on specific site characteristics. While the original buffer size appears to be consistent with previously recommended zones, local topography should be used to modify the zone using line-of-site from the nest, to redefine the boundary of the buffer. This primary spatial protection zone should contain at least 200 acres of foraging habitat.

Mitigation Measures of the EIR

MM 3.7/24.0 During the golden eagle reproductive period (July-January), an additional temporal buffer will be established within 250 feet of the Golden Eagle Protection Zone. During this period, construction and development activities will not be allowed within this temporal zone.

Implementation of both these mitigation measures will reduce nesting impacts to the golden eagle to a level of insignificance.

IM 3.7/K Golden Eagle: Elimination of Foraging Habitat

The conversion of grasslands and the consequent reduction of potential prey are expected to reduce the amount and quality of foraging habitat for golden eagles. Possible disruption in foraging activities due to noise and human activity associated with increased development could also occur. Impacts due to the reduction of foraging habitat are expected to be potentially significant.

This impact is also a potentially significant cumulative impact due to its contribution to the overall regional loss of foraging habitat for this species as discussed in *Chapter 5*.

Mitigation Measures of the EIR

MM 3.7/25.0 Partial mitigation for the loss of useable foraging habitat will be provided by MM 3.7/23 which establishes a Golden Eagle Protection Zone. Additional mitigation will be provided by the 571.1 acres of Open Space and 2,672.3 acres of Rural Residential land use of the Project. Combined, the Golden Eagle Protection Zone and the 3,243.4 acres of land projected for open space protection or low intensity development would provide suitable foraging habitat.

Implementation of *MM 3.7/25* will reduce this impact to a level of insignificance.

IM 3.7/L Golden Eagle and Other Raptor Electrocutions

Direct mortality of golden eagles and other raptors which may perch or fly into high-voltage transmission lines is a potentially significant impact of the Project.

Mitigation Measures of the EIR

MM 3.7/26.0 (Program 6M). The City shall require placement of all transmission lines underground to avoid the potential for raptor electrocutions. If

undergrounding is not feasible in all areas, the following design specifications will be implemented:

a) For Main Power Poles (Non-riser): Energized wires should be placed a safe distance apart (60 inches for crossarm configuration/55 inches for armless configuration). For crossarm configuration this can be accomplished by lowering the crossarm (two outer wires) or by placing the center wire on a tag pole extension. Where adequate (safe) separation of conductors and potential conductors can not be attained, an alternative is to install conductor insulation (i.e. PVC tubing) extending a minimum of 3 feet on either side of the pole-top insulator.

b) For Riser Poles: All exposed energized conductors, including jumper wires, lightening arresters, and pot heads should be insulated. Pot heads can be insulated by covering them with wildlife protective boots. In addition, when feasible the use of cut-outs on riser poles should be avoided. If this is not possible, either use non-conductive (fiberglass) crossarms or install perch guards that prevent birds from landing on the crossarms or install perch guards that prevent birds from landing on the crossarm (Olendorf et al. 1981).

c) For Three Wire Configurations (not applicable to common neutral configurations). In order to prevent the circuit to ground being completed by a bird touching the ground wire and an energized wire simultaneously, place 4 inch gaps along the ground wires near energized conductors. Lightening will spark over these gaps, but day to day safety of birds is ensured.

d) The use of grounded steel crossarm braces should be avoided. As a general rule, the less grounded metal that is placed near conductors, the less hazard for electrocution.

Additional mitigation is provided by *MM 3.4/42.0* which calls for place all public utilities below grade where feasible.

Implementation of these mitigation measures will reduce this impact to a level of insignificance.

IM 3.7/M Burrowing owl

The annual grasslands in the GPA area provide suitable habitat for burrowing owls. Although often adaptable to human presence, burrowing owls are sensitive to burrow destruction, harassment, and predation by feral dogs and cats. Because burrowing owls frequently nest in roadside banks, they are especially susceptible to collisions with vehicles and road construction and maintenance operations. Impacts are potentially significant.

IM 3.7/N American badger

Badgers could be directly affected by destruction of burrows by construction activities such as grading, clearing and movement of heavy equipment. Poisons used for rodent control could directly

harm badgers or reduce prey populations. Increased human activities could decrease the potential of this area to support badger populations. Pre-mitigation impacts are potentially significant.

Mitigation Measures of the Specific Plan (applicable to Impacts 3.7/M and 3.7/N)

MM 3.7/20.0 also mitigates impacts to burrowing owl and American badger populations.

Mitigation Measures of the EIR *(applicable to Impacts L-M)*

MM 3.7/27.0 Maintain a minimum buffer (at least 300 feet) around known or those identified by pre-construction surveys (Program 6L) nesting sites of the burrowing owl and breeding sites of the American badger during the breeding season to avoid direct loss of individuals (March - September).

Implementation of these mitigation measures should reduce impacts to burrowing owls (3.7/M) and American badger (3.7/N) to a level of insignificance.

IM 3.7/0 Prairie falcon, northern harrier, and black-shouldered kite

Impacts due to loss of foraging habitat are potentially significant.

Mitigation Measures of the EIR

MM 3.7/25.0 is applicable to mitigate impacts to prairie falcon, northern harier, and black-shouldered kite.

Implementation of this mitigation measure would be reduce impacts to a level of insignificance.

IM 3.7/P Sharp-shinned hawk and Cooper's hawk

Impacts due to loss of foraging habitat are considered potentially significant.

Mitigation Measures of the EIR

Mitigation measures that establish protection and buffer zones for riparian and freshwater marsh habitats (*MMs 3.7/6.0-3.7/17 and 3.7/21.0*) are applicable.

Implementation of all of these mitigation measures should reduce impacts to sharp-shinned hawk and Cooper's hawk to a level of insignificance.

IM 3.7/Q Short-Eared Owl

Impacts to Short-eared owl populations are considered insignificant due to the lack of appropriate habitat.

No mitigation is required.

IM 3.7/R California Horned Lizard

California horned lizard distribution is fairly extensive throughout California and therefore habitat loss anticipated in the planning area is considered to have an insignificant impact on this species.

No mitigation is required.

IMPACTS AND MITIGATION MEASURES: SPECIAL STATUS INVERTEBRATES

IM 3.7/S Special Status Invertebrates

Impacts to special status invertebrates cannot be estimated at this time and are potentially significant.

Mitigation Measures of the EIR

MM 3.7/28.0 Species-specific surveys shall be conducted in appropriate riparian/wetland habitats 60 days prior to development.

Implementation of *MM 3.7/28.0* will reduce this impact to a level of insignificance.

Table 3.7-1. Special status plant species potentially occurring in the East Dublin SP and GPA study area, Alameda County California. None of these plant species were observed in baseline surveys *(Appendix D: Biological Assessment (Draft: BioSystems Analysis 1989).*

Species[1]	CNPS Status[2]	Federal Status[3,4]	Habitat[5,6,1]	Flowering Period[5]
Amsinkia grandiflora Large-flowered fiddleneck	1B	CE/FE	Grassy slopes below 1200 ft.	Apr-May
Cordylanthus mollis ssp. *hispidus* Hispid birds-beak	1B	C2	Alkaline places in grassland	Jun-Jul
Cordylanthus palmatus Palmate birds-beak	1B	CE/FE	Alkaline overflowed lands; grassland	June
Cryptantha hooveri Hoover's cryptantha	4		Coarse sandy areas in grassland	Apr-May
Eriogonum truncatum Mt. Diablo buckwheat	1A	C2	Dry grassy slopes; 1000-1500 ft. chaparral, grassland	Apr-Jun
Eschscholtzia rhombipetala Diamond-petaled California poppy	1B	C2	Dry, gravelly, or grassy slopes	Mar-Apr
Fritillaria agrestis Stinkbells	4	C2	Heavy adobe soils at low elevations; grassland, cismontane woodland	Mar-Apr
Fritillaria liliacea Fragrant fritillary	1B	C2	Heavy soil in open hills and fields near coast; coastal scrub; grassland; often on serpentine	Feb-Apr
Grindelia camporum var. *parviflora* Great Valley gumplant	4		Dry grassy slopes; perhaps alkaline areas	May-Oct
Lasthenia conjugens Contra Costa goldfields	1B	CE/C2	Grassland; vernal pools	Apr-May
Ranunculus lobii Lobb's aquatic buttercup	4		Shallow vernal ponds, mesic sites; redwood or mixed evergreen forests, northern oak woodland	Feb-Apr
Tropidocarpum capparideum Caper-fruited tropidocarpum	1A	C2	Grassy, alkaline hills below 500 ft.	Mar-Apr

1 Species names and nomenclature follow California Native Plant Society (1988)
2 California Native Plant Society (1988):
1A = Presumed Extinct in California
1B = Rare, Threatened or Endangered in California and elsewhere
2 = Rare, Threatened or Endangered in California, but more common elsewhere
3 = Plants for which more information is needed – A Review List
4 = Plants of limited distribution – A Watch List
3 California Department of Fish and Game (1988):
CE = State listed, endangered
CR = State listed, rare
4 U.S. Fish and Wildlife Service (1987):
FE = Federally listed, endangered
C2 = Federal candidate; threat and/or distribution data are insufficient to support federal listing
C3c = Former federal candidate; too widespread and/or not threatened
5 Munz and Keck (1968)
6 Bowerman (1944)

Table 3.7-2. Special status wildlife species potentially occurring in the East Dublin SP and GPA study area, Alameda County, California. *(Appendix D: Biological Assessment (Draft: BioSystems Analysis 1989).*

SPECIES	STATUS*
AMPHIBIANS	
Red-legged frog**	
Rana aurora	SSC2, FC2
California tiger salamander	
Ambystoma tigrinum californiense	SSC2, FC2
REPTILES	
Western pond turtle**	
Clemmys marmorata	SSC, FC2
Alameda whipsnake	
Masticophus lateralis euryxanthus	CT, FC2
California horned lizard	
Phrynosoma coronatum frontale	SSC
BIRDS	
Bald eagle	
Haliaeetus leucocephalus	CE, FE,BEPA
Golden eagle**	
Aquila chrysaetos	SSC3, BEPA
Northern harrier**	
Circus cyaneus	SSC3
Peregrine falcon	
Falco peregrinus anatum	CE, FE
Prairie falcon	
Falco mexicanus	SSC3
Sharp-shinned hawk	
Accipiter striatus	SSC3
Cooper's hawk	
Accipiter cooperii	SSC3
Burrowing owl**	
Athene cunicularia	SSC2
Short-eared owl	
Asio flammeus	SSC2
Tricolored blackbird	
Agelaius tricolor	FC2
MAMMALS	
San Joaquin kit fox	
Vulpus macrotis mutica	CT, FE
American badger**	
Taxidea taxus	SSC3

Table 3.7-2. Special status wildlife species potentially occurring in the East Dublin SP and GPA study area, Alameda County, California (cont.).

SPECIES	STATUS*
INVERTEBRATES	
Ricksecker's water scavenger beetle *Hydrochara rickseckeri*	FC2
Curved-foot hygrotus diving beetle *Hygrotus curvipes*	FC2
Bay checkerspot butterfly *Euphydryas editha bayensis*	FT
Callippe silverspot butterfly *Speyeria callippe*	FC1
No common name *Helminthoglypta nickliniana bridgesi*	FC2
San Francisco forktail damselfly *Ischnura gemina*	FC2
Lum's micro-blind harvestman *Microcina lumi*	FC2
California linderiella *Linderiella occidentalis*	FC1,PE
Longhorn fairy shrimp *Branchinecta longiantenna*	FC1,PE
Vernal pool fairy shrimp *Branchinecta lynchi*	FC1,PE

*The wildlife status definitions and governing agencies follow:

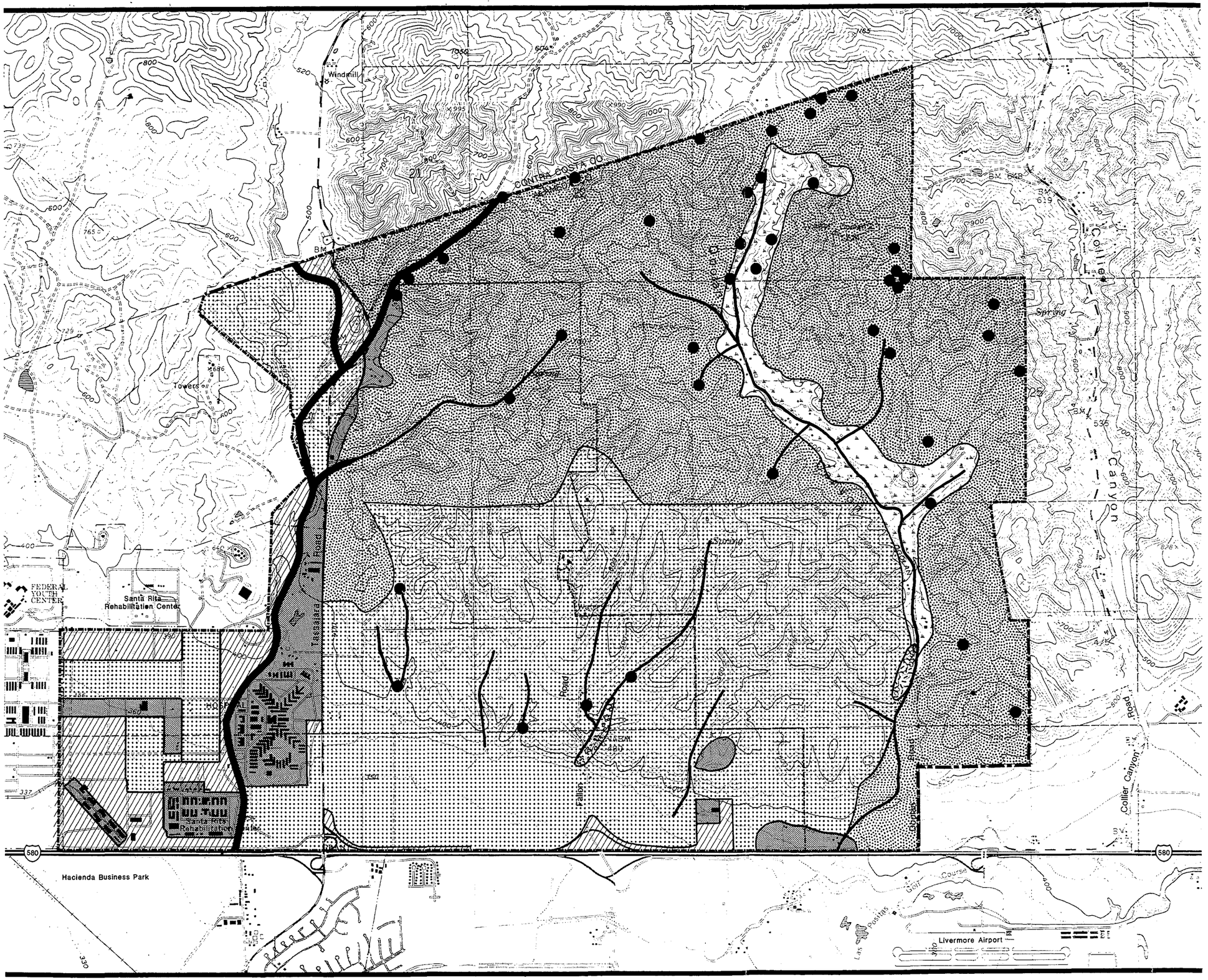
U.S. Fish And Wildlife Service

FE Endangered: Any species which is in danger of extinction throughout all or a significant portion of its range.
FT Threatened: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
FC1 Federal Candidate Species, Category 1: Taxa which are under review, and for which sufficient biological information exists to support a proposal to list as an endangered or threatened species.
FC2 Federal Candidate Species, Category 2: Taxa for which existing information indicates it may warrant listing, but for which substantial biological information to support a proposal is not currently available.
PE Proposed Endangered: Taxa already proposed to be listed as endangered.
BEPA Bald Eagle Protection Act: This act contains numerous protection aspects relating to bald eagles and golden eagles.

California Fish and Game Commission

CE Endangered: A native species or subspecies of animal which is in serious danger of becoming extinct throughout all, or a significant portion of its range, due to loss of habitat, change in habitat, over-exploitation, predation, competition, and/or disease.
CT Threatened: A native species or subspecies that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts.
SSC1 Species of special concern (highest priority): These species face immediate extirpation of their entire California population or their California breeding population if current trends continue.
SSC2 Species of special concern (second priority): These species are on the decline in a large portion of their range in California, but their populations are still sufficiently substantial that danger is not immediate.
SSC3 Species of special concern (third priority): These species are not in any present danger of extirpation and their populations within most of their range do not appear to be declining seriously; however, simply by virtue of their small populations in California, they are vulnerable to extirpation should a threat materialize.
SSC Species of special concern: No priority given.

**Species observed in the SP/GPA study area during baseline surveys (Appendix D: Biological Assessment (Draft: BioSystems Analysis 1989).
Note: Invertebrate species were not considered in the Draft Biological Assessment.



Habitat

Legend

- General Plan Amendment Area
- Specific Plan Area
- Developed
- Northern Riparian forest
- Non-native grassland
- Dry-farming rotational cropland
- Intermittent streams
- Alkalai grassland
- Arroyo willow riparian woodland
- Ruderal field
- Freshwater marsh
- Springs, seeps, Stock tanks and ponds

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.7 - A**

Acres 10 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4

Riparian Habitat and Springs

Legend

- General Plan Amendment Area
- Specific Plan Area
- Springs, seeps, impoundments, stock tanks and ponds
- Riparian woodland
- Intermittent streams

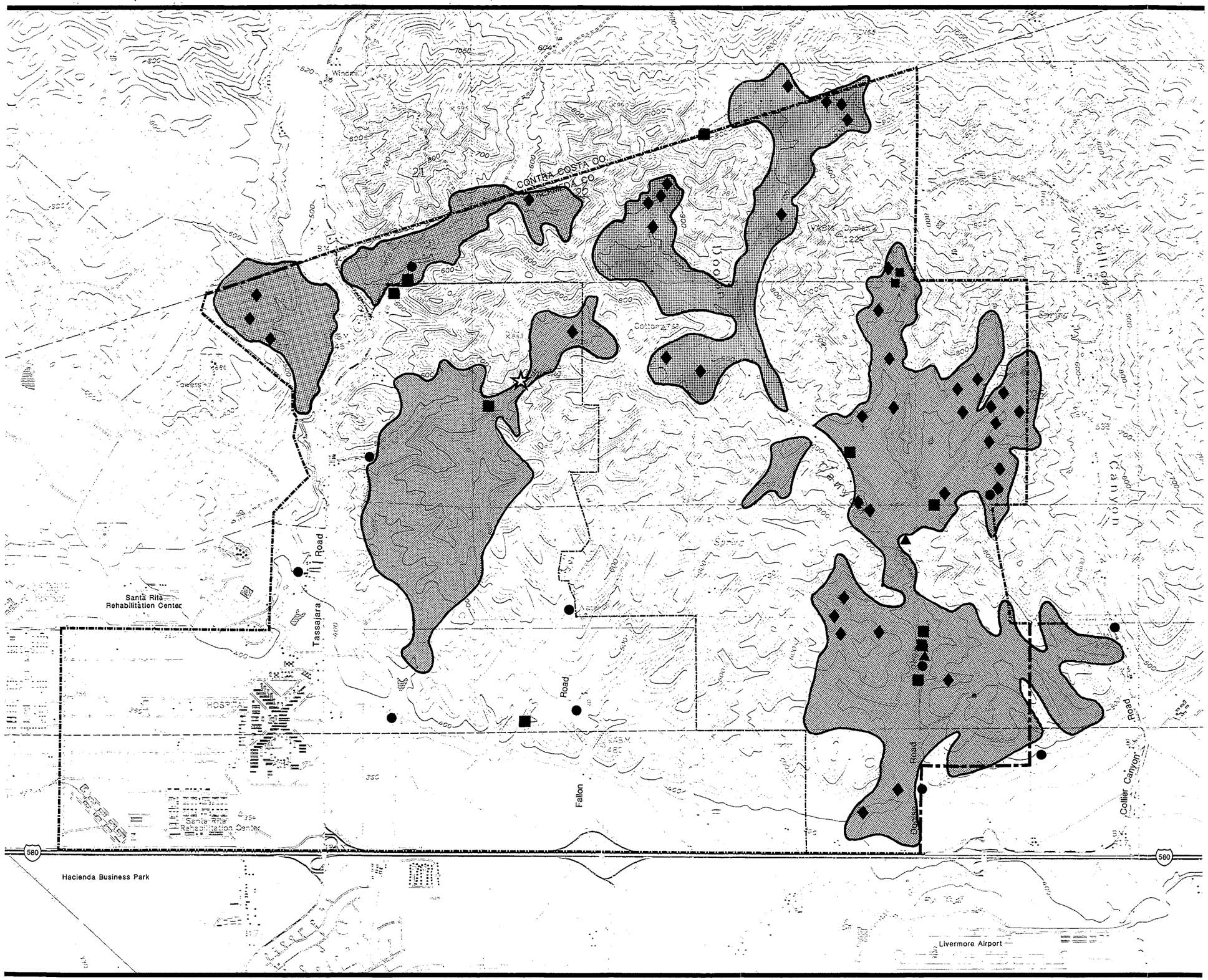
EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.7 - B**

Acres | 10 | 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4



Sensitive Species

Legend

- General Plan Amendment Area
- Specific Plan Area
- Red tailed hawk or other raptor nest
- Golden eagle nest
- Western pond turtle location
- Red legged frog location
- Potential kit fox dens
- Approximate area searched for San Joaquin kit fox dens

EASTERN DUBLIN
GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.7 - C**

Acres | 10 | 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4

Section 3.8

VISUAL RESOURCES

3.8 VISUAL RESOURCES

SETTING

VISUAL RESOURCES AND *CEQA*

The rolling foothills, grasslands and riparian corridors of the Project site convey a distinct "visual image" for Eastern Dublin.

CEQA requires assessment of the potential effects of a development proposal on the visual or aesthetic qualities of a project site, particularly those qualities that most contribute to establishing the visual character of a site, such as distinctive natural and cultural features. Additionally, potential impacts to views and scenic corridors must also be analyzed.

This section discusses the existing aesthetic characteristics of the Project site, potential Project impacts to this character, and mitigation measures that will help protect important visual resources.

VISUAL CHARACTER

General Site Character

The Project site is visually dominated by expanses of grasslands and rolling hills. The southern portion is flat, open, and covered with grasslands and agricultural field crops (refer to Views A and B in Figure 3.8-A). In the northern portions, the steeper foothills frame canyons settled with farms and ranchettes. With the exception of the County property, the planning area is undeveloped at urban levels and conveys a distinct rural atmosphere characteristic of the inland coastal valleys of Northern California (refer to Views C and D in Figure 3.8-B).

Distinctive Natural Features

The three primary natural components of the Project site's visual character are: hillsides and ridges; the valley grasslands; and the creeks and arroyos (watercourses). Cultural features adding to the visual character of the area include barns and rural homes, windmills and livestock grazing facilities (refer to Views E, F, and G in Figures 3.8-C and D). These are discussed extensively in *Section 3.9; Cultural Resources.*

Hillsides and Ridges

The treeless rolling hills are the predominant visual feature of the GPA area. These smooth hills which vary from quite gentle in some areas to quite steep in others are generally rounded at the top and covered with seasonal grasslands whose color varies from lush greens in winter to golden brown in summer. The absence of larger woody vegetation gives the hills a somewhat spare or barren appearance, particularly during the dry summer months.

Figure *3.8-H: Visually-Sensitive Ridgelands* depicts the ridgelands which are considered to be visually-sensitive. The most visually prominent ridgelands of the Project site occur just outside the Specific Plan area. This ridge, which wraps around the north and east sides of the Specific Plan boundary, plays a significant role in creating the visual character of this portion of the Project site. Specifically, the ridge forms an important visual backdrop for the lower foothills and flatlands in the southern portion of the Specific Plan area. With average elevations close to 900 feet, this ridge forms the horizon line from most viewpoints in the south.

Within the boundaries of the Specific Plan area, two parallel ridgelines, with elevations ranging from 600 to 800 feet, extend across the northern portion in an east-west direction. Both of these ridges are spurs of the larger ridge mentioned above. The west- and south-facing slopes of the southernmost ridge are highly visible from I-580 and Tassajara Road. At specific points within the Specific Plan area, this ridge forms the visible northern horizon line. The second parallel ridge located to the north is also highly visible from Tassajara Road but is screened from sight from I-580.

In the southeastern portion of the Specific Plan area, a narrow band of low-lying hills forms a distinct visual feature. Elevations on this ridge are considerably lower than the ridgelands to the north, but the hills still constitute an important backdrop to the flatlands along I-580.

Valley Grasslands

Valley grasslands predominate on the flat valley plain adjacent to I-580 in the south- and south-western portion of the Project site. Where agricultural activity takes place, the visual image of the flatlands is formed by the patterns of soil that has been furrowed and tilled. Wood-stake wire fences stretch to the base of the rolling foothills in straight parallel lines.

Watercourses

In addition to the foothills, the perennial and intermittent streams which flow through the Project site contribute to the visual character of Eastern Dublin. Tassajara Creek, located near the western edge of the Specific Plan area, is the most visually-distinctive watercourse. Along its northern portion, the stream channel is characterized by steeply-eroded bands of riparian vegetation, and stands of woodland oak. Although grazing and agricultural activities have degraded the visual quality of the other streams, the eroded stream channels and occasional stands of vegetation still set them apart as distinct visual landscape elements.

COMMUNITY IDENTITY

A common lament heard regarding many new suburban developments is that they are formulaic, "cookie-cutter" communities which lack a strong sense of identity. Communities with a strong sense of identity tend to respond to their natural setting or context and are often characterized by visual landmarks, clearly-defined urban limit lines and physical separation from neighboring cities.

The hills and ridges located to the north and east of the City are considered an important visual and environmental asset contributing to Dublin's identity. They provide a recognizable open space separator between Dublin and adjacent communities and form a natural backdrop to the Tri-Valley's urban settlements. City of Dublin General Plan land use policy (Guiding Policy E: Parks and Open Space Element) states: "*The present undisturbed natural ridgelines as seen from the primary planning area are an essential component of Dublin's appearance as a freestanding city ringed by open hills.*"

Scenic Vistas

There are three kinds of views or vistas of concern when evaluating the Project site's visual resources: those within the Project site of the site itself; those from the Project site of the surrounding Tri-Valley area; and those of the site from the road. Each type of view contributes to the formation of a visual image of Eastern Dublin.

Views within the Project site are dominated by rolling hills. Winding creeks, ranchettes and grazing livestock are the most common physical elements differentiating distinct landscape areas.

Long scenic vistas from within the site are available from the flatlands near I-580 higher elevations. More commonly, topographical conditions create distinct physical subareas in which scenic vistas are shortened. Views within Doolan Canyon are typical of this type of vista, though many smaller valleys

between spur ridges also form visual subunits of the total Project site.

Panoramic views of the Livermore-Amador Valley as well as framed views of the mountains to the northeast are examples of scenic vistas from the Project site to the surrounding Tri-Valley area. Standing on the Project site's southernmost ridges, expansive views of the entire valley floor are available. Livermore is visible to the southeast, identified by its concentration of trees silhouetted against surrounding fields and open space (View I). The business parks in Pleasanton are in view to the southwest. In the far distance, the Tri-Valley is flanked by hills. Most prominent are Cedar Mountain and Valpe Ridge to the south which are part of the Diablo Range.

North-oriented views of the Tri-Valley from the Project site include framed views of Mt. Diablo to the northwest (Figure 31, View H). Mt. Diablo can be seen from many of the ridges in the planning area as well as from Tassajara Road.

The "View from the Road"

Many people form their image or idea of a community from daily travel through it. Dublin's location at the intersection of two major freeways means that for thousands of travelers, the image of Dublin is formed by the "*view from the road.*"

The two most travelled corridors offering views of the Project site are I-580 and Tassajara Road (Figure 3.8-F; Views M and N). The southern portion is highly visible from I-580, which borders the GPA area for almost five miles. Typical views from I-580 (shown in Figure 3.8-F; View K and Figure 3.8-G; Views M and N.) are of agricultural fields in the foreground with rolling hills in the middleground and more distant ridges in the background. Mt. Diablo can be seen to the northwest. These views of expansive open space create an important visual perception of Dublin and Livermore as two separate communities.

More distant views of the GPA area are available from points south of I-580. Residents east of Santa Rita Road as well as motorists traveling along Stanley Boulevard and El Charro Road can see the ridges on the Project site. Views of the ridgelands can also be seen from many locations in the Livermore-Amador Valley. In the west, residents and workers at Camp Parks have views of the Santa Rita Rehabilitation Center and its related buildings across open vacant land.

Scenic Routes

Within and adjacent to the planning area, several roadways have been designated as scenic routes. The principal features contributing to the scenic character of these corridors are the sweeping panorama of the foothills and the rural landscape.

Scenic Route Element, Alameda County General Plan

Alameda County prepared a *Scenic Route Element* to its *General Plan* in May 1966. The *Scenic Route Element* is intended to facilitate continuing coordination among City and County planning functions within Alameda County and the State Division of Highways for the development of a County-wide system of scenic routes.

The policies of the *Alameda County Scenic Route Element* include requirements to preserve views, conduct architectural and site design review, and to prohibit billboards and "any unsightly development or use of land." General scenic development standards for the entire county require natural "ridge skylines" within the county to be preserved. The *Scenic Route Element* states: "No major ridgeline should be altered to the extent that an artificial ridgeline results."

The *Scenic Route Element* designates Tassajara Road, Doolan Road, Collier Canyon Road and I-580 as scenic routes. Additionally, the *Alameda County General Plan* outlines policies and development

standards to protect scenic views from these routes as well as to maintain the scenic quality along the scenic routes and within the scenic corridor.

Livermore-Amador Valley Planning Unit General Plan (Alameda County General Plan)

The *Livermore-Amador Valley Planning Unit General Plan* (1977) addresses scenic routes and identifies goals and objectives targeted at the overall visual quality of the planning unit. These objectives include the following: Provide and protect recreational, historic, and scenic areas; provide and maintain scenic routes; restrict alteration of streambeds and bodies of water; leave natural ridgelines open; restrict development in hill areas; protect and enhance public views; review location and design of signs and utility lines.

Dublin General Plan

The *Dublin General Plan* (1985) recognizes the scenic routes designated by Alameda County and addresses the need to preserve views from these routes. The *General Plan* includes policies to preserve views and "create a positive image of Dublin by through travelers." The *Dublin General Plan* also requires design review of all projects that are within 500 feet of a scenic route and are visible from that route.

Other Relevant Plans and Policies

The *City of Livermore General Plan* designates I-580, Doolan Road, Collier Canyon Road and North Canyon Parkway as scenic routes.

I-580 is recognized as an "Eligible Scenic Route" by the California Department of Transportation, but is not an officially designated State scenic highway.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The *CEQA Guidelines: Appendix G* broadly define significant impacts to visual conditions as those which will:

- Have a substantial, demonstrable negative aesthetic effect.

A more precise definition can be found in *CEQA Guidelines: Appendix I*: Negative aesthetic effects are those which would a) obstruct any scenic vista or view open to the public, or b) create an aesthetically offensive site open to public view.

IMPACTS AND MITIGATION MEASURES: VISUAL CHARACTER

IM 3.8/A Standardized "Tract" Development

Generic "cookie-cutter" development that inadequately responds to the natural conditions in the Project site could obscure the specific natural features of the Project site (such as its landforms, vegetation and watercourses) that make it a unique place with its own identity. This is a potentially-significant impact.

Mitigation Measures of the Specific Plan

MM 3.8/1.0 *(Section 6.3.4: Goal) Establish a visually distinctive community which preserves the character of the natural landscape by protecting key visual elements and maintaining views from major travel corridors and public spaces.*

As additional mitigation, *Chapter 7: Community Design* of the *Specific Plan* provides extensive design guidelines for development within the ten subareas of the Specific Plan area. The objective of the design guidelines is to "provide a design framework within which developers and designers can express their creativity on their individual projects without compromising the community character as a whole." (*Specific Plan*: p.79)

MM 3.8/1.0 is applicable to the total Project site. If implementation along with the design guidelines in the *Specific Plan*, this impact would be reduced to a level of insignificance.

IM 3.8/B Alteration of Rural/Open Space Visual Character

Urban development of the Project site will substantially alter the existing rural and open space qualities that characterize eastern Dublin. This is a potentially significant impact.

This impact is also a potentially significant cumulative impact and a potentially significant irreversible change as discussed in *Chapter 5*.

Mitigation Measures of the EIR

MM 3.8/2.0 *Implement the land use plan for the Project site which emphasizes retention of the predominant natural features, such as ridgelines and watercourse, and sense of openness that characterize eastern Dublin.*

Implementation of this mitigation measure will reduce this impact but not completely eliminate it. It will remain potentially significant.

IMPACTS AND MITIGATION MEASURES: DISTINCTIVE NATURAL FEATURES

IM 3.8/C Obscuring Distinctive Natural Features

The characteristic unvegetated ("spare") landscape of the Project site heightens the visual importance of existing trees, watercourses, and other salient natural and cultural features. The Project has the potential to obscure or alter these existing features and thereby reduce the visual uniqueness of the site. This impact is potentially significant.

Mitigation Measures of the Specific Plan

MM 3.8/3.0 *(Policy 6-28) Preserve the natural open beauty of the hills and other important visual resources, such as creeks and major stands of vegetation.*

This mitigation measure is applicable to the total Project site. Implementation of this mitigation measure would reduce this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: HILLSIDES AND RIDGES

IM 3.8/D Alteration of Visual Quality of Hillsides

Grading and excavation of building sites in hillside areas will severely compromise the visual quality of the Project site. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.8/4.0 *(Policy 6-32) Visual impacts of extensive grading shall be reduced by sensitive engineering design, by using gradual transitions from graded areas to natural slopes and by revegetation.*

MM 3.8/4.1 *(Policy 6-34) Alterations of existing natural contours shall be minimized. Grading shall maintain the natural topography as much as possible. Grading beyond actual development areas shall be for remedial purposes only.*

MM 3.8/4.2 *(Policy 6-35) Extensive areas of flat pad grading are not appropriate in hillside areas, and should be avoided. Building pads should be graded individually or stepped, wherever possible. Structures and roadways should be designed in response to the topographical and geotechnical conditions. In hillside areas in particular, foundations designed for sloping sites should be used rather than recontouring the site to accommodate flat land construction techniques.*

MM 3.8/4.3 *(Policy 6-36) Building design shall conform to the natural land form as much as possible. Techniques such as multi-level foundations, rooflines which complement the surrounding the surrounding slopes and topography, and variations in vertical massing to avoid a monotonous or linear appearance shall be used. In areas of steep topography, structures should be sited near the street to minimize required grading.*

MM 3.8/4.4 *(Policy 6-37) Graded slopes shall be re-contoured to resemble existing landforms in the immediate area. Cut and graded slopes shall be revegetated with native vegetation suitable to hillside environments.*

MM 3.8/4.5 *(Policy 6-38) The height of cut and fill slopes shall be minimized to the greatest degree possible. Grades for cut and fill slopes should be 3:1 or less whenever feasible.*

All of these mitigation measures are applicable to the total Project site. Implementation of all of these mitigation measures will reduce this impact to a level of insignificance.

IM 3.8/E Alteration of Visual Quality of Ridges

Structures built in proximity to ridges may obscure or fragment the profile of visually-sensitive ridgelines. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.8/5.0 *(Specific Plan Policy 6-29) Development is not permitted on the main ridgeline that borders the planning area (of the Specific Plan) to the north and east, but will be permitted on the foreground hills and ridgelands if a backdrop of natural ridgelines remains visible when viewed from designated scenic routes and appropriate measures are taken to minimize visual impacts.*

MM 3.8/5.1 *(Specific Plan Policy 6-30) Structures shall not be located where they would obstruct scenic views or appear to extend above an identified scenic ridgetop (ie. silhouetted) when viewed from designated scenic routes.*

Mitigation Measures of the General Plan Amendment

MM 3.8/5.2 *(General Plan Amendment Guiding Policy E) Restrict structures on the hillsides that appear to project above major ridgelines.*

MM 3.8/5.0, *MM 3.8/5.1* and *MM 3.8/5.2* are applicable to the total Project site. Implementation of all of these mitigation measures will reduce this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: VALLEY GRASSLANDS

IM 3.8/F Alteration of Visual Character of Flatlands

Commercial and residential development of the Project site's flatlands will completely alter the existing visual character resulting from valley grasses and agricultural fields. This is a potentially significant impact.

This impact is also a potentially significant irreversible change as discussed in *Chapter 5*.

No mitigation measure has been identified which can either fully or partially reduce this impact. Development of the Project site's flatter areas is regarded as a "trade-off" measure designed to preserve slopes, hillsides and ridgelines. This impact remains potentially significant.

IMPACTS AND MITIGATION MEASURES: WATERCOURSES

IM 3.8/G Alteration of the Visual Character of Watercourses

Urban development of the Project site in proximity to watercourses may diminish or eliminate their visibility and function as distinct landscape elements. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.8/6.0 *(Specific Plan Policy 6-39) Tassajara Creek and other stream corridors are visual features that have special scenic value for the planning area. The visual character of these corridors should be protected from unnecessary alteration or disturbance, and adjoining development should be sited to maintain visual access to the stream corridors.*

Additional mitigation is provided by *MM 3.7/8.0* which provides for revegetation of stream corridors to enhance their natural appearance, *MM 3.7/12.0* which calls for a comprehensive stream corridor restoration program, and *MM 3.7/13.0* which establishes dedication of land along both sides of stream corridors. *(Section 3.7: Biological Resources)*

All of these mitigation measures are applicable to the total Project site. Implementation of all of these mitigation measure will reduce this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: COMMUNITY IDENTITY

IM 3.8/H Alteration of Dublin's Visual Identity as a Freestanding City

Urbanization of eastern Dublin will eliminate the clear urban/open space edge that now forms the City's eastern and northeastern boundary. The visual perception of Dublin and Livermore as freestanding cities will be substantially altered. This is a potentially significant impact and a potentially significant irreversible change.

Mitigation Measures of the EIR

As mitigation measures for impacts to the City's visual identity, the land use plan designates areas at the edge of the Project site as Rural Residential. These areas can only be developed at minimal densities in order to preserve their open space and community separator function. Additionally, the Specific Plan prohibits development of the main visually-sensitive ridgeline (see MM 3.8/5.0 above) as a means of maintaining a strong sense of Dublin as a community framed by hills. Finally, the Community Design chapter of the *Specific Plan* includes extensive design guidelines which promote a strong identity for development in the Specific Plan subareas.

Implementation of the land use plan for the Project site, *MM 3.8/5.0*, and the design guidelines in *Chapter 7: Community Design* will reduce this impact to a level of insignificance.

IM 3.8/I Scenic Vistas

Development on the Project site will alter the character of existing scenic vistas and may obscure important sightlines. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.8/7.0 (Policy 6-5) Preserve views of designated open space areas.

Mitigation Measures of the EIR

MM 3.8/7.1 The City will conduct a visual survey of the Project site to identify and map viewsheds of scenic vistas.

These mitigation measures are applicable to the total Project site. Implementation of both of these mitigation measures will reduce this impact to a level of insignificance.

IM 3.8/J Scenic Routes

Urban development of the Project site will significantly alter the visual experience of travelers on scenic routes in eastern Dublin. Formerly quiet rural roads will be transformed into major suburban

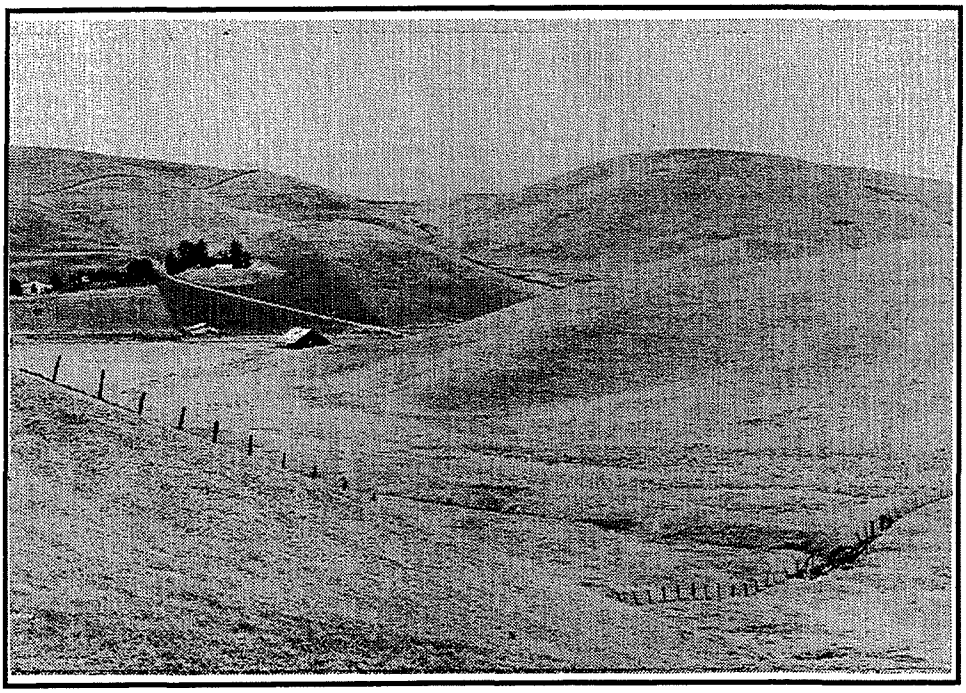
thoroughfares carrying significant traffic loads. Foreground views of the site as well as distant views of the surrounding Tri-Valley may be partially or completely obstructed.
This is a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.8/8.0 *(Action Program 6Q) The City should officially adopt Tassajara Road, I-580, and Fallon Road as designated scenic corridors; adopt a set of scenic corridor policies; and establish review procedures and standards for projects within the scenic corridor viewshed so that scenic vistas can be preserved.*

MM 3.8/8.1 *(Action Program 6R) The City should require that projects with potential impacts on scenic corridors to submit to detailed visual analysis with development project application. Applicants will be required to submit graphic simulations and/or section drawn from affected travel corridors through the parcel in question, representing typical views of the parcel from scenic routes. The graphic depiction of the location and massing of the structure and associated landscaping can then be used to adjust the project design to minimize the visual impacts.*

MM 3.8/8.0 and *MM 3.8/8.1* are applicable to the total Project site. Implementation of both of these mitigation measures will reduce this impact to a level of insignificance.



A. Rolling Hills



B. Valley grass and croplands, from Fallon Road looking Southeast

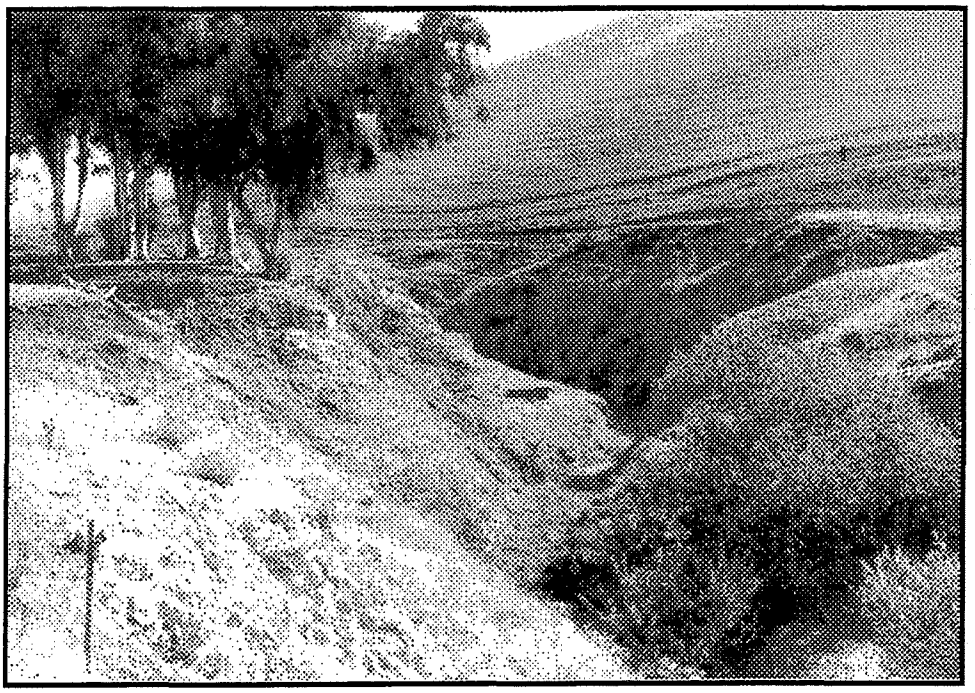
EASTERN DUBLIN
GPA • SP • EIR

Site Photos

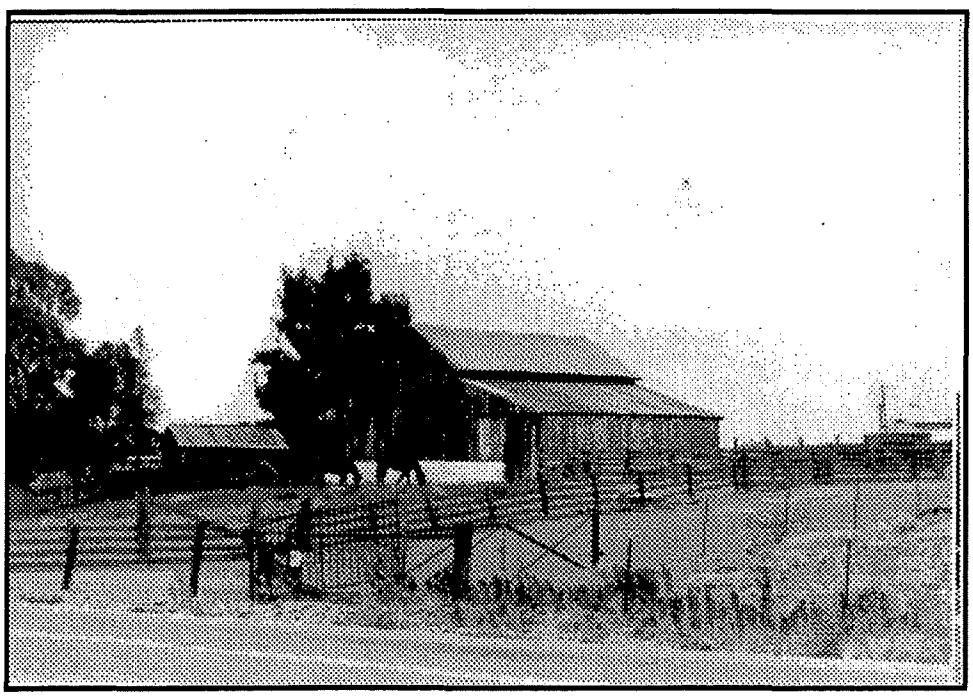
Views A & B

Wallace Roberts & Todd

Figure 3.8 - A



C. Arroyo



D. Cultural Feature - On-site view from Collier Canyon Road

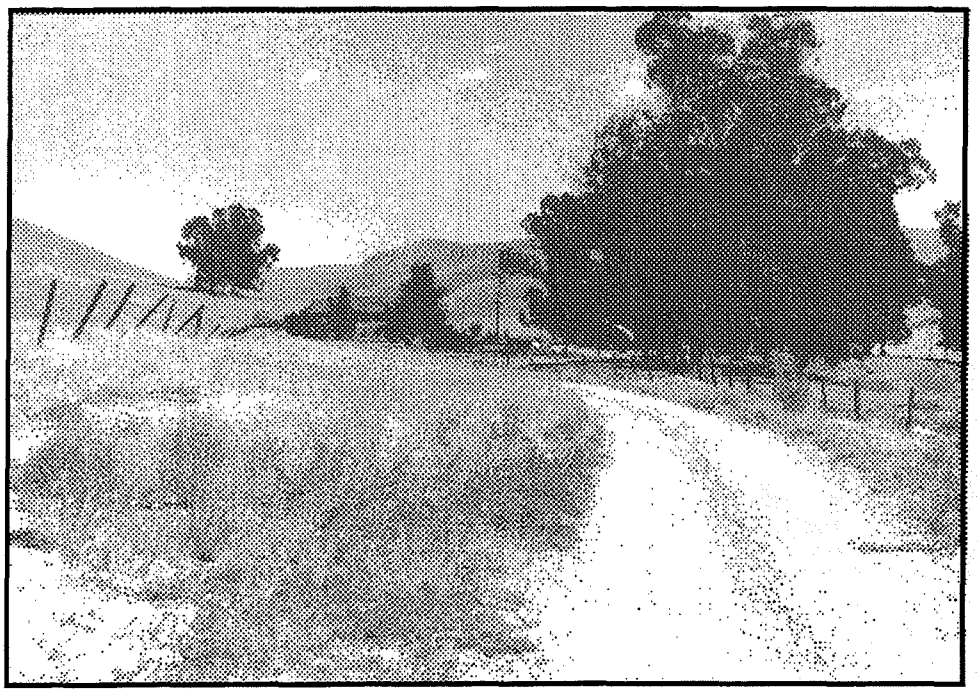
EASTERN DUBLIN
GPA • SP • EIR

Site Photos

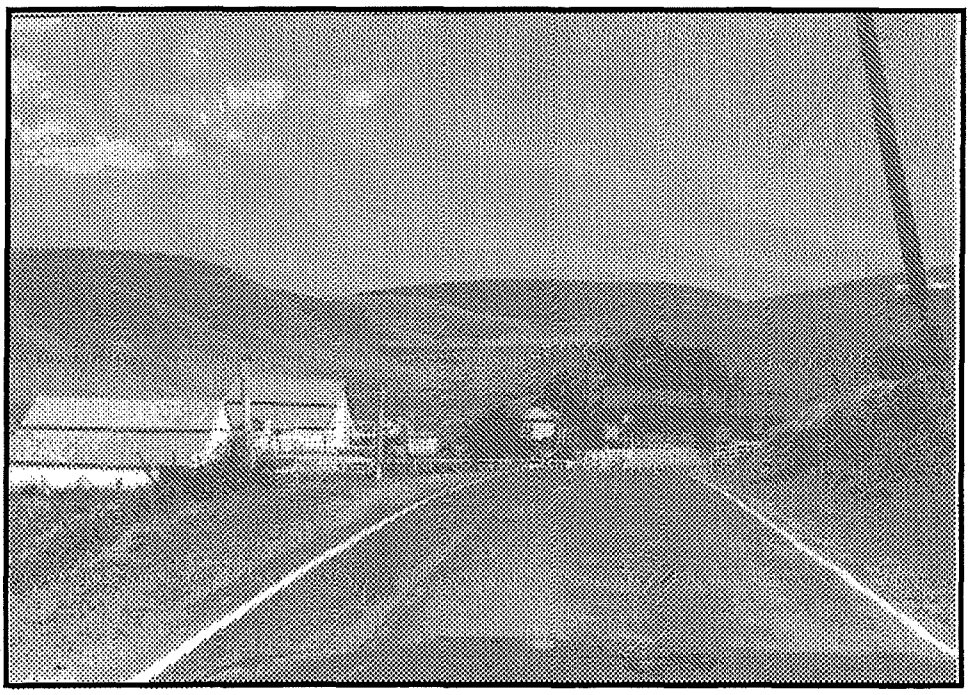
Views C & D

Wallace Roberts & Todd

Figure 3.8 - B



E. Tassajara Road



F. Ranch at the end of Croak Road

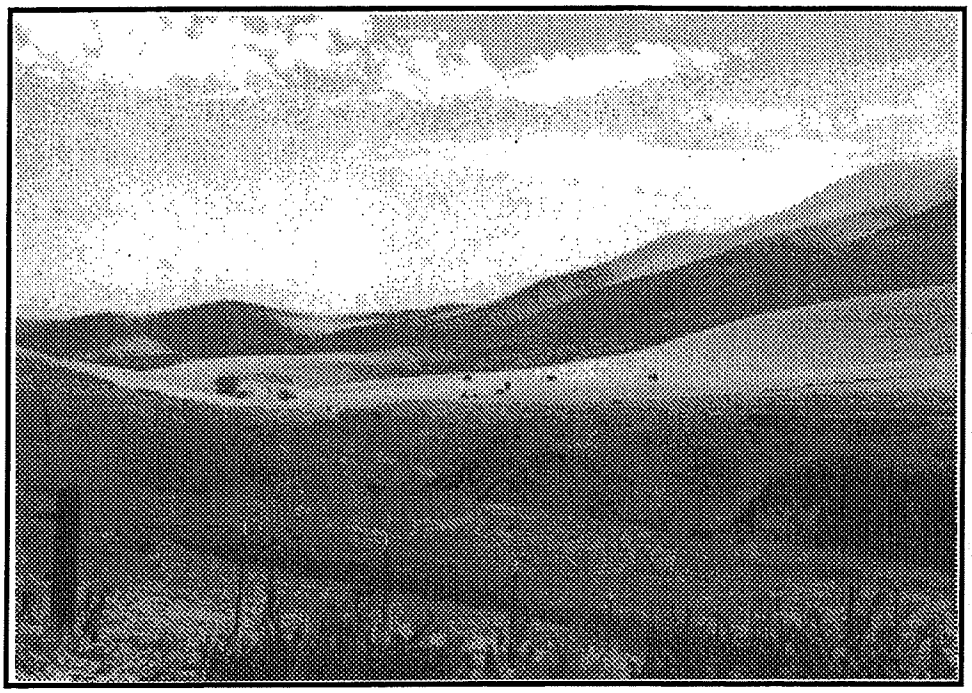
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Site Photos

Views E & F

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Figure 3.8 - C



G. Doolan Canyon - Looking Northeast from the end of Doolan Road



H. Mt Diablo in Background - Looking Northwest from the site

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Site Photos

Views G and H

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Figure 3.8 - D



I. Ridgelines in distance, I-580



J. View from the frontage road to I-580, Mt.. Diablo in distance

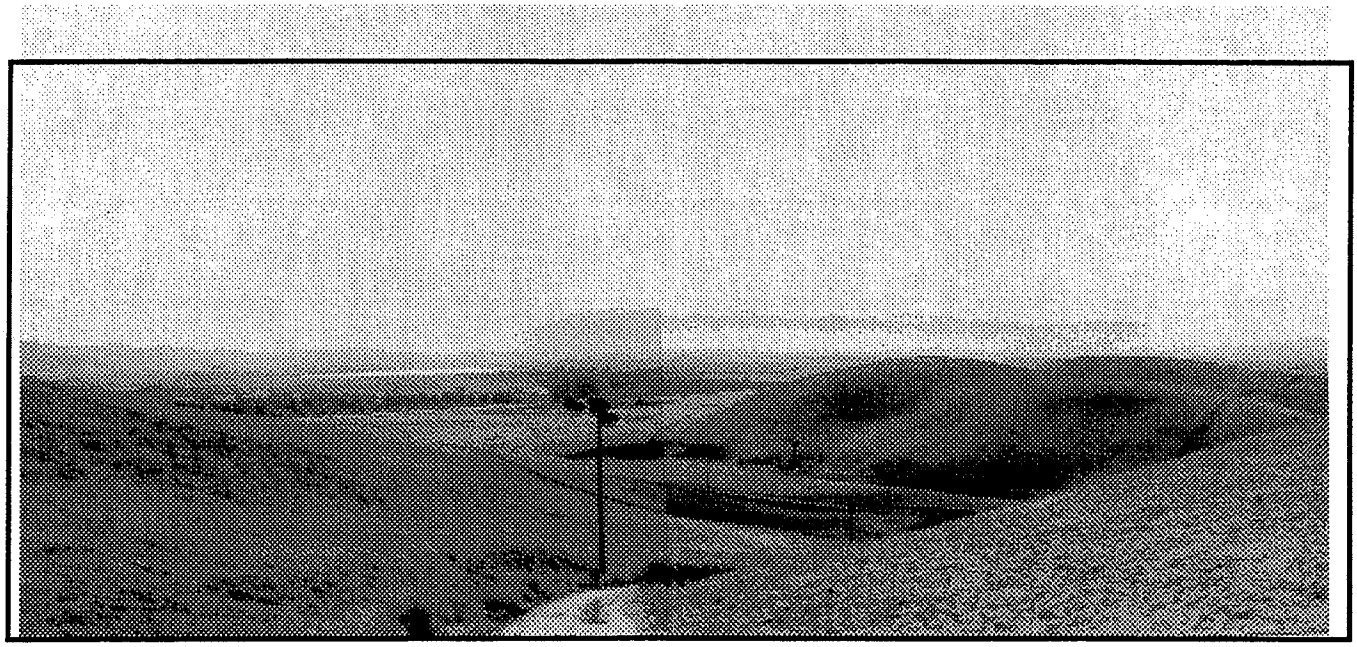
EASTERN DUBLIN
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Site Photos

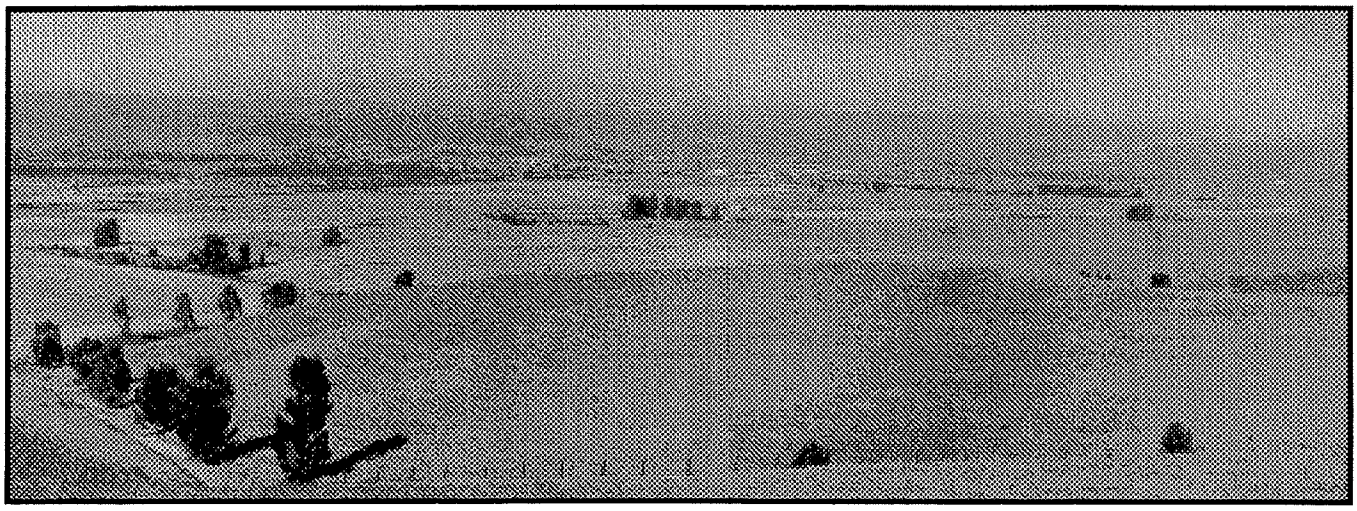
Views I and J

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Figure 3.8 - E



K. View of Livermore - Amador Valley from site



L. View from site - Looking Southwest toward Pleasanton and Dublin

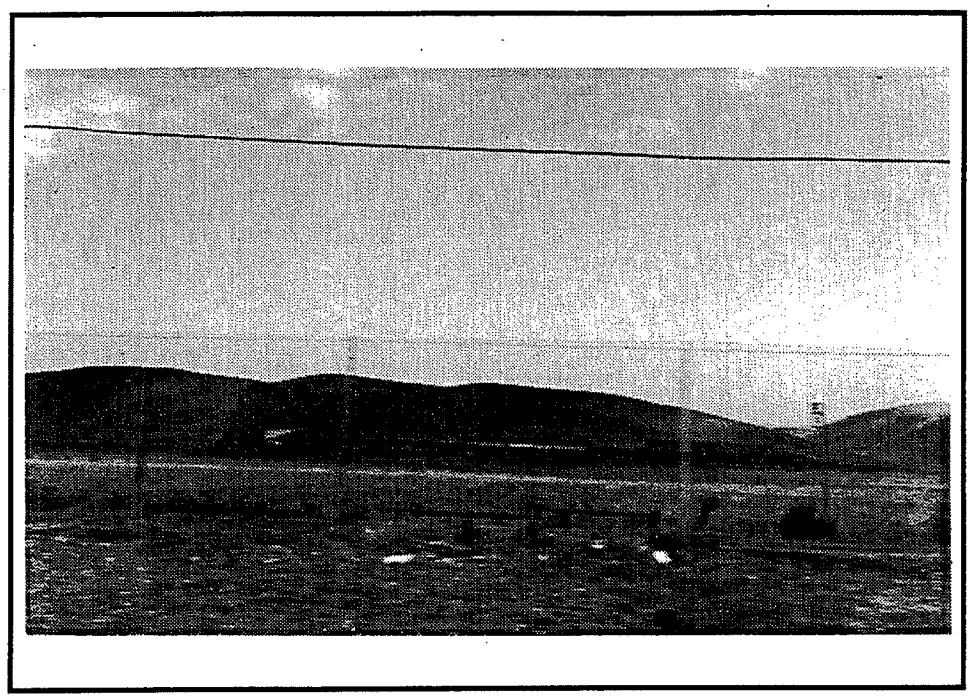
EASTERN DUBLIN GPA • SP • EIR

Site Photos

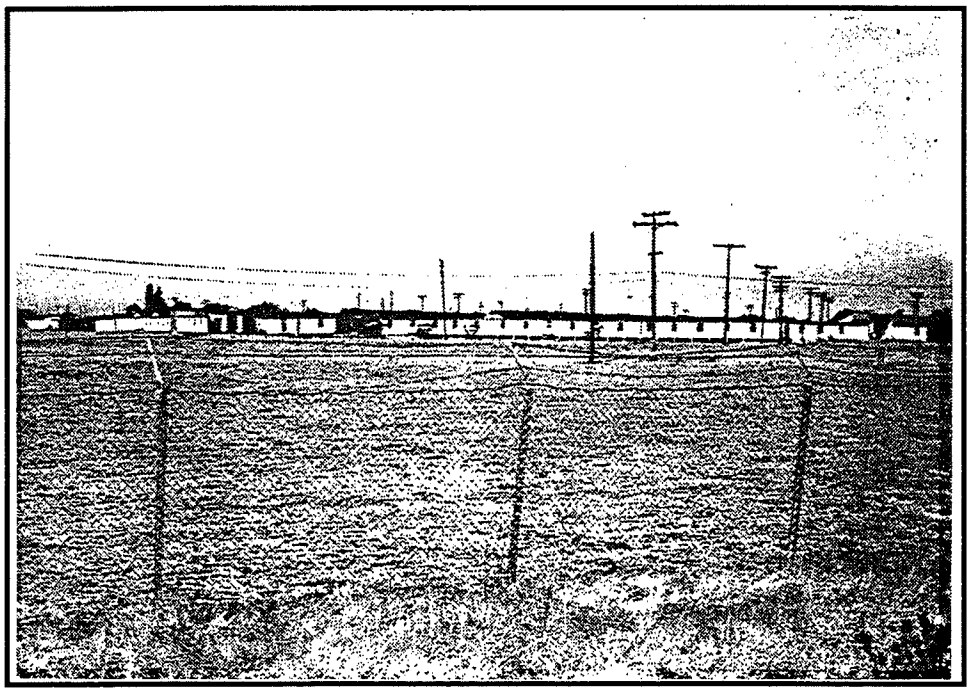
Views K and L

Wallace Roberts & Todd

Figure 3.8 - F



M. View from I-580 - Triad in foreground



N. View from Tassajara Road - Looking West toward the former Santa Rita Rehabilitation Center

EASTERN DUBLIN GPA • SP • EIR

Views from Scenic Routes

Views M and N

Wallace Roberts & Todd

Figure 3.8 - G

Visually Sensitive Ridgelands

Legend

- Visually Sensitive Ridgelands - No Development
- Visually Sensitive Ridgelands - Restricted Development

Gleason Road

Tassajara Road

Fallon Road

Dublin Boulevard

Hacienda Drive

I-580

EASTERN DUBLIN
GPA • SP • EIR

Wallace Roberts & Todd **Figure 3.8 - H**

Acres 10

0 600 1200 Feet

0 1/4 1/2 Mile

Section 3.9

CULTURAL RESOURCES

3.9 CULTURAL RESOURCES

SETTING

PREHISTORIC RESOURCES

Tri-Valley Subregion

Scant records exist of the Project site and vicinity in aboriginal times or during the period of initial settlement by Europeans in the Tri-Valley area. The existing archaeological record derives from excavations related to construction in areas south of I-580 during the past 20 years. These archaeological surveys constitute the primary source of information on prehistoric life in the Livermore-Amador Valley area.

Sites Adjacent to Arroyo Mocho

In 1974, the discovery of a prehistoric site on the north side of the Arroyo Mocho south of I-580 established the first chapter in the archaeological record for the northern end of the Livermore-Amador Valley. Buried under approximately ten feet of silt, the site yielded artifacts and burial remains of a people who had lived in this area as long as 2000 years ago. These people are presumed to have exploited the resources of the arroyo's seasonal marsh, known in historic times as Willow Marsh. Most of the initial information on the site, however, derives from secondary sources due to site vandalizing which destroyed original archeological remains before extensive research could be undertaken.

By 1978, two more buried archaeological sites had been found in the Arroyo Mocho area. Again, these were located on the banks of what was once a meander of the stream at the point where it drained into the marsh. Extensive excavations at the time revealed a large and prosperous population who used the marsh as a food source. Artifacts indicated that this population traded with Native American peoples all over central and northern California, including tribes from the eastern Sierra and Nevada. Four of the richest human burials found to date in the State of California were retrieved from one of these sites (Ala-413). Analysis of materials taken from the village mound revealed that the area was used on a year-round basis. Tule and Roosevelt Elk were hunted as well as bear and deer, waterfowl, fish, and other animals attracted to the marsh.

Abandonment of Valley Sites

A characteristic of the prehistoric sites is that they appear to have been abandoned during certain periods. Regular flooding, caused by the Arroyo de la Laguna which drains the valley to the south, and by San Ramon Creek which drains to the north, is presumed to have caused routine abandonment. Approximately 1500 to 2000 years ago, a period of prolonged flooding is believed to have caused a move from the area. To date, a total of at least seven village sites on the northern and southern borders of Willow Marsh have been found buried under varying amounts of silt material. The precise retreat of the inhabitants remains unclear since similar sites on dry ground (and not covered by silt layers) are rare for the Livermore and Amador valleys and have also not been located in nearby foothills, including the Project site.

As a possible explanation, there is some evidence that the entire valley was abandoned for perhaps several hundred years. During this period, the original population may have migrated south through Sunol and west by the San Pablo drainage to San Francisco Bay. This group, who had either assimilated or eliminated a small population of earlier inhabitants of the marsh area, were subsequently assimilated into the local population on San Francisco Bay. At this point, they disappear

from the archaeological record as a distinct people. Presently named the "Meganos" people (for lack of a more accurate name), these prehistoric inhabitants of the Livermore and Amador Valleys have been traced from an early origin in the Sacramento Valley through the Concord drainage and finally to the Bay margin by their distinctive burial style and some forms of artifacts.

Resettlement

By 500 or 600 A.D., the valley and the hills in the Project vicinity were once again populated by the ancestors of the modern day Ohlones. Archaeological sites from this later period (lasting approximately 1400 years) were originally recorded in areas of high ground near watercourses in the Pleasanton and Livermore areas and along the San Ramon drainage. None has been located in the GPA area itself. Very little archaeological research has been conducted on sites from this later period, since most were destroyed by the first European settlers of the area, particularly in the vicinity of the historic centers of Pleasanton and Livermore.

Prehistoric Use of the Project Site

For the aboriginal population, the General Plan Amendment area was probably used for seed gathering from grasses and acorn harvesting. Native bunchgrass provided cover and protection for game animals, making this a suitable hunting ground. Vegetation along the watercourses was probably denser than the existing riparian corridor and may have been more expansive in the areas where drainages flowed from the hills into Willow Marsh. Main habitation sites remained situated along the marsh edge in the earliest period and then migrated to higher ground south and west of the marsh approximately 1,500 years ago.

HISTORIC RESOURCES

Historic Use of the Project Site

With the exception of historic uses of the Santa Rita area in the southwestern corner of the Project site, most of the GPA area has been used historically for cattle grazing and dry farming from the Mexican period to the present. Winter wheat and hay are still planted along the valley margins of the Project site, however and cultivation of dry crops was probably more widespread in the past.

Historic Alteration of the Native Landscape

The period of Anglo-American farming and ranching, which began after the breakup of the original land grants in the 1850s has caused considerable alteration to the natural landscape. All of the drainages running through the Project site show signs of massive siltation and erosion caused by cattle. Native grasses, namely bunchgrass, no longer exist along the southern portion of the Project site where it merges with the valley, and European grasses have largely replaced native grasses on the Project site hillsides. Massive slumping of the hillsides, much of which may be a recent occurrence, is seen throughout the center and northern portions of the Livermore-Amador Valley. The larger native vegetation, such as trees, have mostly been removed or replaced with eucalyptus along the drainages and at the locations of the ranches and homes found in the canyons. Only vegetation along Tassajara Creek and the southernmost portion of Collier Canyon approximate native tree conditions. Both these areas contain stands of oaks which follow the original creek courses; cottonwood and willows are found sporadically at other locations.

ARCHAEOLOGICAL RESEARCH

Previous Archaeological Research Efforts

Prior to completion of field work for this project, maps and records on file at the California Archaeological Inventory located at Sonoma State University were checked for evidence of recorded historic and prehistoric resources inside the GPA planning area, and to determine which areas had been subject to prior archaeological field inspections.

At least ten reports were found of previous archaeological surveys inside the planning area. Six additional surveys (see references cited) have been conducted within the Project site, concentrating on the Santa Rita Rehabilitation Center complex.

Only one previous survey revealed evidence of aboriginal uses of the planning area. In 1985, Holman & Associates, during a survey of the lands of Chang Su-O-Lin, discovered four suspected areas of archaeological use or habitation. These areas, consisting of surface finds of ground and/or battered stones (possible artifacts), would probably have been overlooked during a general field reconnaissance if not for the findings of archaeologists from ARS (1981) on nearby Camp Parks. Hammers made of volcanic rock or quartzite, pestles and a bi-pitted stone were discovered alone and not associated with archaeological middens (archaeological soils).

The ARS archaeologists speculated that these sites were the result of large populations of Indians who came up into the area of Camp Parks to exploit vegetable resources (seeds, acorns, and other vegetation) associated with the wetlands found directly to the south. These areas of possible artifact discovery were all located within the first 100 feet of elevation above the valley floor, in an area which either represented a distinct ecological zone in aboriginal times, or which was simply high enough to be out of the marsh and adjacent wetlands.

The four areas on the Chang property discovered in 1985 were also located within the hypothetical zone of utilization by aboriginal peoples. These locations were not registered at the time because little of the material could be ascribed definite artifact status, and because no midden was visible at any location. A recommendation was made, however, to test these four areas with a backhoe to locate any associated midden deposits. To date, this work has not been done.

1988 Field Survey: Technique

The field inspection of the Project site for this EIR was conducted during July 1988. The survey strategy employed was a mixed general and intuitive field reconnaissance. Lands previously surveyed by Holman & Associates were not re-inspected for either prehistoric or historic materials. All other areas surveyed by Chavez, Cartier and Basin Research Associates were re-surveyed for both prehistoric and historic materials.

A general field reconnaissance was employed in those Project site areas considered least likely to contain either prehistoric or historic materials. These consisted of the steeper hillsides found at the center and eastern edges of the site where the degree of slope, exposure to wind and lack of nearby water made prehistoric or historic use highly unlikely. A number of these areas were inspected by walking transects of 200 feet apart whenever slope provided, or were surveyed en route to areas of more sensitivity. All the upper slopes were inspected for evidence of usage of exposed rock, but this effort was abandoned when it was discovered that little to no exposed rock existed.

A mixed general and intensive survey strategy was employed in other areas more likely to reveal historic or prehistoric use. These areas included the drainages throughout the planning area, and all land on the southern slope running from the I-580 corridor past the 500-foot contour. The Santa Rita Rehabilitation Center was also surveyed except for its western portion which had restricted access at the time.

Field Survey Results

Locations for prehistoric and historic sites discovered during the field reconnaissance have been mapped. Due to their sensitivity to possible vandalism, the map has not been included in the EIR. Landowners and affected parties can review the map at the City Planning Department. Brief descriptions of each site and proposed future land use are given below:

Prehistoric Sites

To date, a total of six prehistoric locations have been discovered inside the planning area which contain cultural materials, either associated with what may be midden, or which are not apparently associated with any visible midden deposit. Additionally, there are four locations along the southern and eastern flanks of the Chang Su-O-Lin property where isolated probable ground stone implements were discovered in 1985.

4J Ranch: This site is probably a seasonal task-specific site where seed milling was a major activity. The site consists of fragments of mortars, pestles and nutting/hammerstones. Very little chipped stone was noted, but shell flecks and possible fire-cracked rock indicate that an archaeological deposit midden is probably present. This site is located on the Jordan property in an area proposed for Neighborhood Commercial Development.

Yarra Yarra Site: Also a possible seasonal milling site consisting of a scatter of scant groundstone artifacts and small amounts of chipped stone. Extensive historic grading and other land alterations have obscured the true extent of this site. Midden is also probably present. This site is found on the Koller property either within a proposed Open Space riparian corridor or an area of Medium Density residential development.

Prehistoric Isolate Locations

The following prehistoric isolate locations were found during the field reconnaissance:

Site #1. This location consists of several possibly assayed cobbles of petrified wood. It may represent a small quarry area. Other locations in the vicinity, in particular the 4J site, exhibited chipped stone artifacts of similar material. Midden may or may not be present. This site is located on the Pao-Lin property inside an area proposed for a new elementary school.

Site #2. Isolated artifact consisting of a single find of an exhausted chert core, from which stone artifacts were taken in the past. Midden is probably not present. Located on the TMI property, this site is proposed for Neighborhood Commercial development.

Site #3. This is the location of a complete sandstone mortar recovered from the edge of a graded ranch road, near an historic barn on the Fallon Enterprises property. There are no indications of midden in this area. This site is designated in the GPA as an Open Space corridor.

Site #4. This location consists of two or three possible flakes (including one of petrified wood) and several pieces of burnt bone in a dark friable soil/midden. The area has been badly altered historically. Located on the Koller property, this area is designated for either an Open Space riparian corridor or a new intermediate school.

Site #5. This site consists of several pieces of stone debitage, located across the creek from the Yarra Yarra site. No midden was noted. Located on the Koller property, this area is proposed for Medium Density Residential.

Historic Sites

Although the California Archaeological Inventory located at Sonoma State University does not record any historic resources inside the planning area, numerous structures are listed in the *Thompson and West Historic Atlas of 1878*. One of these structures, for example, is recorded for the year 1878 on the property of a Miss F. Schwerr in the approximate location of the Santa Rita Rehabilitation Center. The *1878 Historic Atlas* lists an additional 16 structures within the General Plan Amendment area.

The twelve historic sites identified to date on the Project site are considered either in-use structures or farming complexes, or present the remains of structures used historically. These sites represent only a portion of the historic resources which potentially might be located inside the planning area. Many structures, such as those noted above from the *1878 Historic Atlas*, have been burned, removed, altered or simply abandoned. Such locations often contain valuable information about the original inhabitants of an area. Old cellars, privy pits and wells used to dispose of daily refuse are important archaeological repositories which, in many cases, have as much value as visible architectural remains.

The following historic sites were located during the field reconnaissance:

Site A. Historic School Site: This is a school or possibly a church which has been moved recently to the current location; it sits on a concrete slab. Probably built before the turn of the century, the structure lacks a complete roof and otherwise is in need of repair. This site is located inside the Chang Su-O-Lin property and is the future site of an elementary school.

Site B. Historic Dairy Farm Complex: Also located on the Chang Su-O-Lin property, this site consists of two barns and several outbuildings in varying states of preservation. Exact age is unknown. Future uses for this area are either Open Space or Medium Density Residential.

Site C. Large Victorian Era House: Possibly late nineteenth century, this house is presently occupied by the operators of the Yarra Yarra Equestrian Center. The house is in an excellent state of preservation. Future proposed use for this site is Medium Density Residential.

Site D. Victorian Era House: Also occupied and in an excellent state of preservation, this house is located at 5020 Tassajara Road (Casterson property). Future proposed use for this site is Medium Density Residential.

Site E. Barn: Possibly from no earlier than the 1940s, the barn is associated with a scatter of glass from that period; this is also the location of the discovery of the isolated stone mortar. This area (Fallon Enterprises property) is designated for Low Density Residential.

Site F. Ranch/Homestead Complex: This complex consists of a house, barn, tack house, privy and several out-buildings belonging to F. Croak. The complex, dating to the early 20th century, is in varying states of preservation. This site is proposed as a site for a new intermediate school.

Site G. Small Ranch/Homestead Complex: Also probably dating to the early 20th century, this small complex is centered around a small house and numerous exotic fruit trees. Located on the Doolan Ranch property west of Doolan Road, the area is designated for Low Density Residential.

Site H. Large Ranch/Dairy Farm Complex: Consisting of a barn, house and other structures at 5000 Doolan Canyon Road (Doolan Ranch property). Construction was probably begun at this location during the early 20th century and modifications have been made over the years. The area is designated for Low Density Residential.

Site I. Barn: Late 19th or early 20th century in construction, barn shows square nails in its

construction. Located along the east side of Doolan Road. The area is designated for Medium Density Residential.

Site J. Barn: This barn shows the same construction and design as the one described above, but was constructed with round nails, making it more recent in construction. Located along the east side of Doolan Road, the area is designated for a neighborhood park.

Site K. House and Barn: This complex was probably built before the depression. It is presently being occupied. Located along the east side of Doolan Road, the area is designated for Low Density Residential.

Site L. Fallen and Burnt Remains of Structures: Two or more structures are seen at this location within the Moller property. The 1878 *Thompson and West Historic Atlas* lists one structure on the Doolan property probably south of this location. Located in an area designated for Medium Density Residential.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The actual significance of archaeological materials under both federal and state guidelines is partially based on their ability to contribute to an understanding of local historic events and people. *CEQA* calls for the evaluation of impacts to archaeological materials in terms of this contribution to the local "cultural heritage" and provides guidelines *(CEQA Guidelines: Appendix K)* for assessing impacts to archaeological resources.

CEQA Guidelines: Appendix G provides the following definition of a significant impact to cultural resources:

- *A project will normally have a significant effect on the environment if it will disrupt or adversely affect a prehistoric or historic site or a property of historic or cultural significance to a community or ethnic or social group.*

This definition has been used to identify significant impacts to cultural resources on the Project site.

IMPACTS AND MITIGATION MEASURES: PREHISTORIC RESOURCES

IM 3.9/A Disruption or Destruction of Identified Prehistoric Resources

Due to the level of development proposed in the Project, it is assumed that all prehistoric sites identified in the 1988 inventory will be disturbed or altered in some manner. This potential disturbance is identified as a significant impact of the Project.

Mitigation Measures of the EIR

MM 3.9/1.0 *All locations of prehistoric resources will need a program of mechanical and/or hand subsurface testing to determine the presence or absence of midden deposits associated with the surface indicators of aboriginal presence.*

MM 3.9/2.0 *All locations containing either midden components or concentrations of*

cultural materials located on the surface will be recorded on State of California site survey forms. The borders of any midden deposits or concentrations of cultural materials (other than single isolated artifact discoveries) will be staked so that accurate location maps can be produced by professional survey teams.

MM 3.9/3.0 *If it can be demonstrated that these recorded and mapped locations will be impacted in any manner by future construction or indirectly impacted as a result of increased access to the areas, a plan of evaluative testing of each resource will have to be devised in order to prepare responsive mitigation measures. Evaluative testing will consist of the collection and analysis of any surface concentration of cultural materials, and the hand excavation and analysis of the scientific content of any midden components discovered during presence or absence testing.*

MM 3.9/4.0 *The City shall retain the services of a qualified archaeologist to develop a protection program for prehistoric sites which contain either a surface or subsurface deposit of cultural materials or information which qualify under Appendix K of CEQA as "significant", and which are located in areas of the Project site where development will significantly alter the current condition of the prehistoric resource.*

The mitigation measures above are applicable to the total Project site. Implementation of all of these mitigation measures will reduce this impact to a level of insignificance.

IM 3.9/B Disruption or Destruction of Unidentified Pre-Historic Resources

Previously unidentified pre-historic resources may exist on the Project site and would be subject to potential disruption or destruction by construction and development activities associated with the Project. This is a potentially significant impact.

Mitigation Measures of the Specific Plan

MM 3.9/5.0 *(Policy 6-25) The discovery of historic or prehistoric remains during grading and construction will result in the cessation of such activities until the significance and extent of those remains can be ascertained by a certified archaeologist.*

MM 3.9/6.0 *(Action Program 6P) The City of Dublin will require the following series of actions as part of the application process for development in eastern Dublin: Site sensitivity determination; detailed research and field reconnaissance by a certified archaeologist; development of a mitigation plan pursuant to the policies of the Eastern Dublin Specific Plan and current CEQA guidelines.*

MM 3.9/5.0 and *MM 3.9/6.0* are applicable to the total Project site. Implementation of both these mitigation measures will reduce this impact to a level of insignificance.

IMPACTS AND MITIGATION MEASURES: HISTORIC RESOURCES

IM 3.9/C Disruption or Destruction of Identified Historic Resources

Due to the level of development proposed in the Project, it is assumed that all historic sites identified in the 1988 inventory will be disturbed or altered in some manner. Even cultural resources located in areas proposed for Open Space or Rural Residential uses will potentially be disturbed or altered due to the introduction of a large new residential population in the area. This potential disturbance is identified as a significant impact of the Project.

Mitigation Measures of the Specific Plan

MM 3.9/7.0 (Policy 6-26) All properties with historic resources which may be impacted by future development shall be subjected to in-depth archival research to determine the significance of the resource prior to any alteration.

MM 3.9/8.0 (Policy 6-27) Where the disruption of historic resources is unavoidable, encourage the adaptive re-use or restoration of historic structures (such as the old school house, several barns, and Victorian residences currently in the area) whenever feasible.

Mitigation Measures of the EIR

MM 3.9/9.0 All standing structural remains will have to be evaluated by an architectural historian to assess the potential of the structures to qualify as significant under current CEQA guidelines.

MM 3.9/10.0 All standing structure locations and other indicators of historic occupation and/or use of an area noted in the 1988 report will have to be researched through archival resources and by conducting oral interviews to determine the local and regional historical significance of the structures or locations by their association with important persons or events, as defined under Section K of CEQA.

MM 3.9/11.0 All locations noted in the 1988 report should be recorded on official State of California Historical site inventory forms. Additionally efforts should be made by the archaeological survey team to assure that the locations are accurately recorded onto development maps by professional surveyors.

MM 3.9/12.0 The City shall retain the services of a qualified architectural historian to develop a preservation program for historic sites which qualify under CEQA Guidelines: Appendix K as historically significant either through architectural review or historical archival review, or by virtue of visible historic materials and/or information recorded in the field.

All of the mitigation measures above are applicable to the total Project site. Implementation of all of these mitigation measures would reduce this impact to a level of insignificance.

IM 3.9/D Disruption or Destruction of Unidentified Historic Resources

Previously unidentified historic resources may exist on the Project site and would be subject to potential disruption or destruction by construction and development activities associated with the Project. This is a potentially significant impact.

Mitigation Measures of the EIR

> *MM 3.9/5.0* and *3.9/6.0* would be applicable to this impact for the purpose of ascertaining the presence of unidentified historic resources on a development site. If historic resources are identified, then *MM 3.9/7.0*, *MM 3.9/9.0*, *MM 3.9/10.0* and *MM 3.9/12.0* would be required.

Implementation of all of these mitigation measures would reduce this impact to a level of insignificance.

Section 3.10

NOISE

3.10 NOISE

SETTING

EXISTING NOISE CONDITIONS

Noise Services Affecting the Project Site and Its Vicinity

The major noise source is traffic along Interstate 580. Other noise sources are traffic along Tassajara Road and occasional aircraft flyovers from Livermore Municipal Airport. To quantify the existing noise environment, four short-term measurements were made along Interstate 580 and Tassajara Road. Two measurements were made in 1988 and two measurements were made in 1992 at the same location as the 1988 measurements. The purpose of the 1992 measurements was to determine if noise levels had significantly changed over four years. The results indicate that the noise levels have not significantly changed. Measurement locations are shown on Figure 3.10-A. Table 3.10-1 summarizes the results of the measurements. The short-term measurements were compared with existing traffic volume data and with a 24-hour noise measurement along Interstate 580 to determine the Community Noise Equivalent Level (CNEL)[1,2]. Existing CNEL noise contours are shown in Figure 3.10-A. All noise measurements presented in this report are A-weighted (dBA). Those readers who desire more information on the fundamental concepts of environmental noise are referred to *Appendix F*.

Parks Reserve Forces Training Area

Camp Parks RFTA is located west of the site near Tassajara Road. Current activities at Camp Parks RFTA that generate noise are small weapons training and helicopters. The Army has prepared a *Draft Installation Compatible Use Zone Study* (ICUZ). The study provides existing and proposed noise contours for various activities at Camp Parks RFTA.

According to Figure 1 of the *Draft ICUZ*, the existing Zone II and Zone III noise contours do not extend onto the development site. Zone II is a CNEL of 65 to 75 dB, while Zone III is a CNEL of greater than 75 dB. Figure 5 of the *Draft ICUZ*, however, shows the 1986 plan which has Zone II and Zone III noise contours extending onto the development site. According to the *ICUZ*, the main noises would be explosive ordinance disposal, grenades and helicopters. (A copy of the Draft ICUZ and figures is available for consultation at the City of Dublin Planning Department.)

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[1] Community Noise Equivalent Level (CNEL) -- A descriptor for the 24-hour A-weighted average noise level. The CNEL concept accounts for the increased acoustical sensitivity of people to noise during the evening and nighttime hours. Sound levels during the hours from 7:00 pm to 10:00 pm are penalized 5 dB; sound levels during the hours from 10:00 pm to 7:00 am are penalized 10 dB. A 10 dB increase in sound level is perceived by people to be a doubling of loudness.

[2] Noise study for the Compri Hotel in Pleasanton, 1987.

The director of operations at Camp Parks RFTA indicates that the majority of current noise complaints stem from the helicopter flyovers and gunshots.[3] Some of these activities do not occur solely on Camp Parks RFTA land. For example, the Alameda County Sheriff Department has a firing range near the existing jail. Noise from this range has generated complaints. Helicopter flights may originate from places other than Parks RFTA.

The Army is in the midst of preparing an updated 20-year master plan for Camp Parks RFTA and an EIS on its potential impacts. Neither of the documents has been released to the public, and both are currently on hold. The Army is reconsidering the long-term uses of the facility in light of recent Army base closures around the country. There is the possibility that the Army will substantially increase the level of activity on the base. An increase in the use of ordnance and helicopter overflights could increase noise levels in the area.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE/CRITERIA

The City of Dublin uses the CNEL descriptor to assess compatibility of various land uses with noise environments. A CNEL of 60 dB or less is considered "normally acceptable" for residential development. Table 3.10-2, entitled "Land Use Compatibility for Community Noise Environments" is taken directly from the City's *Noise Element* of the *General Plan.*

The City of Dublin also recognizes Title 24, Part 2 of the California Code of Regulations in implementing Measure G of the *Noise Element.* Title 24 requires all multi-family residential dwellings, hotels, and motels exposed to a CNEL of 60 dB or greater have an acoustical study that shows how an interior CNEL of 45 dB will be achieved in habitable rooms. Title 24 is commonly referred to as the State's noise insulation standard. Proposed housing (including hotels) exposed to a CNEL of more than 60 dB will be exposed to a significant impact.

To determine impacts due to increased traffic noise, this document uses criteria established by the U.S. Department of Transportation.[4] An increase of 3 dB or less is insignificant. An increase of 4 to 5 dB is potentially significant, and an increase of 6 dB or more is significant.

IM 3.10/A Exposure of Proposed Housing to Future Roadway Noise

Proposed residential housing along Dublin Boulevard, Tassajara Road, Fallon Road, Hacienda Drive and Doolan Road will be exposed to future noise levels in excess of 60 dB CNEL. This is considered a significant impact.

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[3] Telephone conversation with Mr. Edward Cabezud, Director of Operations, Parks, Reserve Forces Training Area, 25 June 1992.

[4] Guidelines for Preparing Environmental Assessments, U.S. Department of Transportation, Circular UMTA 5620.1.

Future noise contours for the Year 2010 with the Project are shown on Figure 3.10-B. These contours do not take into account acoustical shielding due to existing buildings or topography. Consequently, actual noise levels may be less than that shown on the map. By placing the contours on the land use map, one can easily determine the worst case future noise exposure of a particular development parcel. For example, Medium Density Residential development just north of Gleason Boulevard on both sides of Tassajara Road will be exposed to a CNEL of 60 dB or more. According to the City's land use compatibility guidelines, these land uses would be in the "conditionally acceptable" range for this type of land use. "Conditionally acceptable" means that an acoustical study should be initiated during project development to determine how interior noise levels will be controlled to the City and State goal of CNEL 45 dB.

Mitigation Measure of the EIR

MM 3.10/1.0 Require that an acoustical study be submitted with all residential development projects located within the future CNEL 60 contour. The goal of the acoustical study is to show how the interior noise level will be controlled to a CNEL of 45 dB as required by Title 24, Part II. The Title 24 goal of CNEL 45 should be applied to single-family housing.

MM 3.10/1.0 is applicable to the total Project site. Implementation of this mitigation measure will reduce the impact to a level of insignificance.

IM 3.10/B Exposure of Existing Residences to Future Roadway Noise

Future Project development will also have the potential to impact existing residences due to increased noise on roadways. Table 3.10-3 shows the future noise level along major roadways in the planning area for the Year 2010 With Project and Year 2010 without Project. Along Interstate 580, the noise level increase will be 1 dB or less with or without the Project. A 1-dB change would not be considered significant.

Along Tassajara Road, the future noise level will increase by 3 dB near existing residential development north of Dublin Boulevard without the Project and by an additional 1 dB with the Project for a total increase of 4 dB.

Fallon Road, Doolan Road, and Hacienda Road do not have significant traffic on them currently. In the future, without the Project, noise levels along these roadways would remain similar to the current noise levels. Noise levels along Doolan Road, however, would increase by 7 to 15 dB due to the Project. This would result in future CNELs of 62 to 70 dB approximately 50 feet from the roadway centerline. In conclusion, increased traffic noise on local roads would result in noise level increases of 6 dB or more along Doolan and Fallon Roads. This would be considered a significant impact.

This impact is also a potentially significant adverse impact as discussed in *Chapter 5.*

Mitigation Measure of the EIR

MM 3.10/2.0 Require that development projects provide for noise barriers or berms near existing residences to control noise in outdoor use spaces. One possibility is the construction of solid fences around outdoor use areas. The noise control for existing residences should be evaluated on a case-by-case basis.

MM 3.10/2.0 is applicable to existing residential areas throughout the total Project site. Implementation of this mitigation will reduce the impacts to a level of potentially significant since mitigation may not be feasible at all locations due to site constraints such as driveways or proximity

to roadways.

IM 3.10/C Exposure of Existing and Proposed Development to Airport Noise

The Project is located north and west of the Livermore Municipal Airport. According to the *Airport Land Use Policy Plan* for Alameda County, the future (1995) CNEL 60 contour for the airport would not extend into the Project area. Although the area would be exposed to occasional single-event noise from aircraft flyovers, average noise levels (CNEL) would not exceed Title 24 nor the City's standards. Consequently, aircraft noise would be considered an insignificant impact.

No mitigation required.

IM 3.10/D Exposure of Proposed Residential Development to Noise from Future Military Training Activities at Parks Reserve Forces Training Area (Camp Parks RFTA) and the County Jail

Residential development on the Project site within 6000 feet of Camp Parks RFTA could be exposed to noise impacts from gunshots and helicopter overflights.[5] If development is to proceed in this area, then a detailed study should be made of the noise-generating activities and which mitigation measures should be imposed. Exposure of proposed development to noise from Camp Parks RFTA and the County Jail would therefore be considered a potentially significant impact.

Mitigation Measure of the EIR

MM 3.10/3.0 Require an acoustical study prior to future development in the Tassajara Foothill Residential, Tassajara Village Center, County Center and Hacienda Gateway sub-area to determine if future noise impact from Parks RFTA or the County jail will be within acceptable limits. The goal of the study will be to identify all potential noise-generating operations and determine if future noise levels will exceed the acceptable levels as defined by the City and Army.

MM 3.10/3.0 is applicable to the Foothill Residential, Tassajara Village Center, County Center and Hacienda Gateway subareas (see Eastern Dublin Specific Plan (Draft) Figure 4.2). Implementation of *MM 3.10/3.0* will reduce the impact to a level of potentially significant since mitigation of Camp Parks and jail noise may not be feasible at all locations.

IM 3.10/E Exposure of Existing and Proposed Residences to Construction Noise

Construction would occur over years on the Project site. Major noise associated with construction is truck activity on local roads, heavy equipment used in grading and paving and impact noises from barriers used in framing of structures. Pile driving can also generate substructural noise. Construction impacts will be most severe for the proposed Project when it occurs near existing residential uses along Doolan Road and Tassajara Road and near existing land uses near the southern areas of the site. Construction noise is considered a potentially significant impact.

Mitigation Measure of the EIR

MM 3.10/4.0 Developers shall submit to the City a Construction Noise Management Program that identifies measures to be taken to minimize impacts on existing planning

[5] Noise Element of the General Plan, Contra Costa County, 1990.

area residents. The program will include a schedule for grading and other major noise-generating activities that will limit these activities to the shortest possible number of days. Hours of construction activities shall be limited in keeping with Dublin ordinances. The Program for construction vehicle access to the site shall minimize construction truck traffic through residential areas. If construction traffic must travel through residential areas, then a mitigation plan should be developed. The Program may include barriers, berms or restrictions on hours.

MM 3.10/5.0 In order to minimize the impact of construction noise, all operations should comply with local noise standards relating to construction activities. When construction occurs near residential areas, then it should be limited to normal daytime hours to minimize the impact. Stationary equipment should be adequately muffled and located as far away from sensitive receptors as possible.

MM 3.10/4.0 and *MM 3.10/5.0* are applicable to the total Project site. Implementation of these mitigation measures will reduce impacts to a level of insignificance.

IM 3.10/F Noise Conflicts due to the Adjacency of Diverse Land Uses Permitted by Plan Policies Supporting Mixed-Use Development

The presence of different land use types within the same development creates the possibility of noise impacts between adjoining uses, particularly when commercial and residential land uses abut. This is considered a potentially significant impact.

The Uniform Building Code does not specifically address the sound insulation requirement between business and residential uses. Impact and airborne sound insulation for such demising partitions should be designed on a case by case basis and may need to exceed those required between residences.

According to the State's Model/Noise Ordinance, the exterior noise limit for limited commercial/multiple dwellings is 60 dBA for daytime conditions and 55 dBA is the limit during the nighttime. A 5 dBA penalty is typically added to sources containing pure tones or impulsive components. For sounds of shorter duration, higher noise levels are considered acceptable. For sources with a cumulative duration of between 15 and 30 minutes in any one hour, 5 dB additional noise is allowed; with a duration between 5 and 15 minutes the allowable level is 10 dB higher; with a duration between 1 and 5 minutes per hour, 15 dB allowance is made, and the maximum allowable level at any one time is 20 dB above the base, or constant allowable level. These standards are tyically found in noise ordinances and they are increasingly found in the newer general plan noise elements.

Mitigation Measure of the EIR

MM 3.10/6.0 Noise management plans shall be prepared and reviewed as part of development application for all mixed-use projects in which residential units would be combined with commercial, office, or other urban non-residential uses. The objective of the noise management plan would be to provide a high quality acoustic environment for residents and nonresidential tenants/owners by taking steps to minimize or avoid potential noise problems. The plan would be prepared by a qualified acoustical consultant. The plan would take into account the concerns of residents, nonresidential tenants/owners, and maintenance personnel. The plan should be prepared at an early stage of the design process. Ideally, the acoustical consultant should provide input to the architect at a preliminary site plan stage, to make maximum use of detailed

site planning to avoid noise conflicts.

MM3.10/6.0 is applicable to the "mixed-use areas" of the Project site. Implementation of this mitigation measure will reduce impacts to a level of insignificance. Refer to IM 3.1/B for a related discussion of land use compatibility on the Project site.

Existing Noise Contours

Legend

- General Plan Amendment Area
- Specific Plan Area
- **-60- CNEL (Community Noise Equivalent Level)**
- (1) **Noise Measurement Location**

Source: Charles Salter and Associates Inc.

EASTERN DUBLIN GPA • SP • EIR

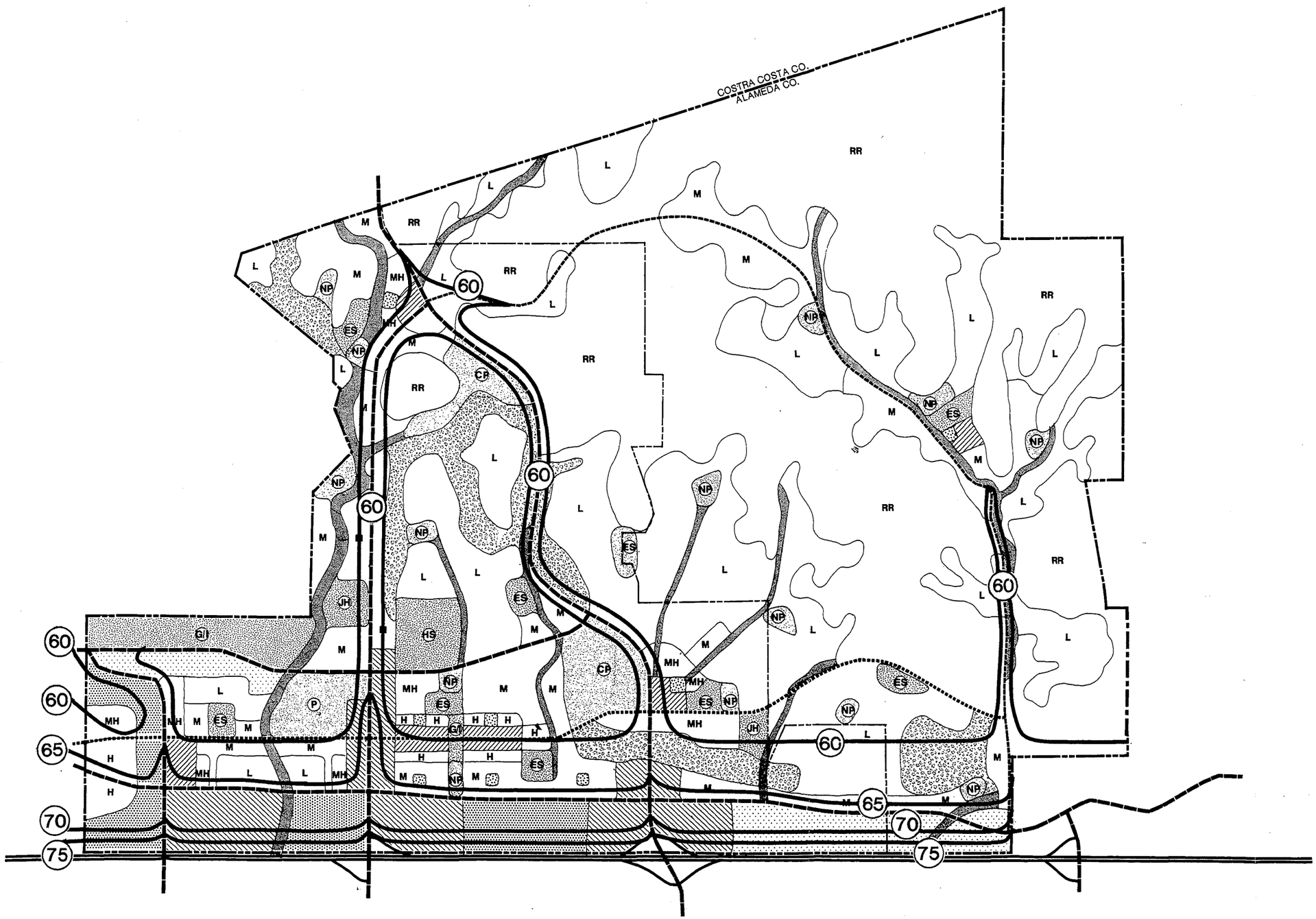
Wallace Roberts & Todd **Figure 3.10 - A**

Acres 10 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4

Future Noise Contours



Legend

60 CNEL (Community Noise Equivalent Level)

COMMERCIAL
- Campus Office
- Neighborhood Commercial
- General Commercial
- Industrial Park

RESIDENTIAL

HD	High Density	25- du/ac
MH	Medium-High Density	14-25 du/ac
M	Medium Density	6-14 du/ac
L	Low Density	0-6 du/ac
RR	Rural Residential	1 du/100 ac

PUBLIC/SEMI-PUBLIC/OPEN
- Public/Semi-Public Facility
  - ES Elementary School
  - JH Junior High School
  - HS High School
  - P/I Public/Semi-Public
- Parks & Recreation
  - P City Park
  - CP Community Park
  - NP Neighborhood Park
- Neighborhood Square
- Open Space

CIRCULATION
- Arterial Street
- Collector Street
- Transit Spine
- General Plan Amendment Study Area
- Specific Plan Study Area

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Wallace Roberts & Todd **Figure 3.10 - B**

Acres 10 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4

Section 3.11

AIR QUALITY

3.11 AIR QUALITY

SETTING

METEOROLOGY/CLIMATE

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

The low frequency of calm winds in the Tri-Valley area and adequate daytime ventilation speed do not allow for any daytime stagnation of air pollutants in the Dublin area. However, daytime airflow across the Project site has spent some time over populated areas of the Bay Area and is therefore moderately polluted on occasions. The moderate onshore breeze carries any locally-generated emissions farther eastward toward Livermore where thermal updrafts and mechanical turbulence ultimately disperse any local emissions sources. Winds at night drifting across Dublin off the nearby hills are much slower, and, therefore, do allow for localized stagnation of pollution. Such drainage flow from unpopulated areas is usually unpolluted when it arrives into lower elevation areas such that nocturnal air quality in Dublin is quite good even if the dispersion potential at night is limited.

AIR QUALITY

Ambient Air Quality Standards (AAQS)

In order to assess the air quality impact of adoption of the Eastern Dublin *General Plan Amendment* and Specific Plan, that impact, together with baseline air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress such as asthmatics, the elderly, the very young, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors."

Baseline Air Quality

Existing and probable future levels of air quality in the Dublin area can be best inferred from ambient air quality measurements conducted by the Bay Area Air Quality Management District (BAAQMD) at its Livermore monitoring station. This station measures both regional pollution levels such as dust and smog (ozone), as well as primary vehicular pollution levels near busy roadways such as carbon monoxide (CO) or nitrogen oxides (NOx). Table 3.11-1 summarizes the last five years of published data from this monitoring station. The following conclusions can be drawn from this data:

- Photochemical smog (ozone) levels continue to exceed standards by a substantial margin. The federal standard is exceeded an average of 3 times per year (once per year is allowed) and the more stringent state standard averaged 14 violations per year in the last five years.

- Annual maximum ozone levels have remained constant within a small range from 0.13 to 0.15 ppm for the highest annual one-hour exposure since 1985. This represents a level of 30 to 50 percent above the allowable California exposure level of 0.10 ppm.

- Measurements of carbon monoxide show very low baseline levels with the hourly maximum at around 50 percent of the allowable California standard. Similarly, maximum hourly nitrogen dioxide levels are also only about one-third of their short-term standard. There are only minor variations from year to year for CO and NOx with little trend toward either higher or lower annual maxima.

- Airborne dust levels on some occasion exceed the State standard, but no measurement in excess of the national PM-10 standard have been recorded in five years of record between 1986-1990.

Air Quality Plan (AQP)

The continued violation of the federal ozone, carbon monoxide and respirable particulate standards requires that regional planning and air pollution control agencies prepare a regional *AQP* as part of the *State Implementation Plan (SIP)*. A regional air quality plan, entitled the *Bay Area '91 Clean Air Plan (CAP)* was adopted by the governing boards of the BAAQMD, ABAG and the MTC on October 31, 1991. A *PM-10 Attainment Plan* is expected to be developed at a later date. In addition to further stationary source controls, the proposed regulations in the *CAP* are designed to reduce automobile use, reduce congestion, improve public transit and encourage "transit-friendly" development patterns.

A project such as the *Eastern Dublin General Plan Amendment/Specific Plan* will impact air quality primarily through transportation-related vehicular exhaust emissions. It thus relates to the regional air quality plan through the growth assumptions made by ABAG for the region. ABAG uses the general plans from cities such as Dublin to predict future patterns of population, housing, employment and land use and their resulting air pollution emissions from transportation sources.

The *Dublin General Plan* (1985) update identified eastern Dublin as a growth area with expectation that the *General Plan* would require amendment after a specific plan for eastern Dublin was completed. ABAG has therefore incorporated future growth for the project area as part of its planning input into the *Bay Area '91 CAP*.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Air quality impacts are considered significant if they cause ambient air quality standards to be exceeded, if they contribute measurably to an existing violation, or if they expose sensitive receptors to levels of toxic air contaminants as to measurably increase their risk of maintaining good health. Impacts such as dust soiling, odor nuisance or other non-health effects are considered adverse, but are generally not considered significant unless they cause the California Health and Safety Code to be violated.

IMPACTS AND MITIGATION MEASURES: AMBIENT AIR QUALITY

IM 3.11/A Dust Deposition Soiling Nuisance from Construction Activity

Project construction will cause around 400 pounds per day of respirable particulate matter (PM-10) to be generated from clearing, grading, excavation, and unpaved roadway travel. Larger particulate matter will settle out near individual construction sites and create a dust deposition soiling nuisance. By the time PM-10 emissions reach off-site receptors, they will be diluted to a small concentration at insignificant levels. Dust deposition soiling nuisance is a potentially significant impact near any individual construction site.

Because of the non-attainment status of the air basin for PM-10, any additional pollution increment will inhibit the attainment of ambient standards. Dust emissions will thus create a potentially significant cumulative impact as discussed in *Chapter 5*.

Mitigation Measures of the EIR

MM 3.11/1.0 The City of Dublin shall:

- *Require watering in late morning and at the end of the day; the frequency of watering should increase if wind speeds exceed 15 mph. Watering should include all excavated and graded areas and material to be transported off-site. Use recycled or other non-potable water resources where feasible.*
- *Require daily cleanup of mud and dust carried onto street surfaces by construction vehicles.*
- *Require excavation haul trucks to use tarpaulins or other effective covers.*
- *Require that, upon completion of construction, measures shall be taken to reduce wind erosion. Replanting and repaving should be completed as soon as possible.*
- *Require that unnecessary idling of construction equipment is avoided.*
- *Require that, after grading is completed, fugitive dust on exposed soil surfaces shall be controlled using the following methods:*
  - *All inactive portions of the construction site should be seeded and watered until grass growth is evident.*
  - *Require that all portions of the site shall be sufficiently watered to prevent excessive amounts of dust.*
  - *Require that, at all times, the following procedures should be followed:*
    - *On-site vehicle speed shall be limited to 15 mph.*
    - *Use of petroleum-based palliative shall meet*

the road oil requirements of the Air Quality District. Non-petroleum-based tackifiers may be required by the Public Works Director.

- *The Public Works Department will handle all dust complaints. The Public Works Director may require the services of an air quality consultant to advise the City on the severity of the dust problem and additional ways to mitigate impacts on residents, including temporarily halting project construction. Dust concerns in adjoining communities as well as the City of Dublin shall be controlled. Control measures shall be related to wind conditions. Air quality monitoring of PM levels shall be provided as directed by the Public Works Director in Dublin.*

Implementation of all action in *MM 3.11/1.0* these mitigation measures will reduce project dust deposition soiling impacts to a level of insignificance.

IM 3.11/B Construction Equipment/Vehicle Emissions

Construction equipment operation (both on-site equipment as well as off-site trucks hauling building materials and contractor employee commuting) will generate daily exhaust pollutants ranging from tens of pounds of minor emissions to over 1,000 pounds per day of NOx from diesel-powered equipment. Although temporary construction activity emissions are typically considered as having an insignificant impact because of their temporary nature, the long-term buildout of the Specific Plan area constitutes a chronic source that is a potentially significant impact.

This impact is also a potentially significant cumulative impact as discussed in *Chapter 5*.

Mitigation Measures of the EIR

MM 3.11/2.0 *Minimize construction interference with regional non-project traffic movement by:*

- *Scheduling receipt of construction materials to non-peak travel periods.*
- *Routing construction traffic through areas of least impact sensitivity.*
- *Limiting lane closures and detours to off-peak travel periods.*
- *Providing ride-share incentives for contractor and subcontractor personnel.*

MM 3.11/3.0 *Require emissions control from on-site equipment through a routine mandatory program of low-emissions tune-ups.*

MM 3.11/4.0 *Require preparation of a construction impact reduction plan that incorporates all proposed air quality mitigation strategies with clearly defined responsibilities for plan implementation and supervision.*

Implementation of all of these mitigation measures will not reduce ozone precursor emissions to less than the 150 pound per day threshold considered as insignificant by the Bay Area AQMD. Individual air quality impacts from equipment exhaust will remain potentially significant.

IM 3.11/C Mobile Source Emissions: ROG or NOx

Project implementation/full buildout will cause 500,000 daily automobile trips to be generated within the air basin. Mobile source emissions for ROG and NOx as precursors to ozone formation are shown in Table 3.11-2. The Bay Area AQMD considers any project whose emissions exceed 150 pounds per day of ROG or NOx as having a potentially significant impact. Specific plan implementation will cause the significance thresholds to be exceeded 50-fold. Therefore, this is a significant impact.

Mobile source emissions may result in regional impacts through emissions of ozone precursor pollutants. This impact is also a potentially significant cumulative impact as discussed in *Chapter 5*.

Mitigation Measures of the EIR

MM 3.11/5.0 *Exercise interagency cooperation within a sub-regional and on a regional basis to integrate air quality planning efforts with transportation, transit, and other infrastructure plans.*

MM 3.11/6.0 *Maintain consistency among specific development plans and regional transportation and growth management plans.*

MM 3.11/7.0 *Implement transportation demand management (TDM) techniques to reduce mobile source emissions.*

MM 3.11/8.0 *Optimize the existing transportation system to reduce congestion and shift travel to non-peak travel periods.*

MM 3.11/9.0 *Coordinate levels of growth with roadway transportation facilities improvements to accommodate travel demand without inducing demand by providing excess system capacity.*

MM 3.11/10.0 *Encourage mixed-use development that provides housing, jobs, goods and services in close proximity.*

MM 3.11/11.0 *Require linkage between growth of housing and job opportunities consistent with a positive sub-regional contribution to jobs/housing ratio balances.*

Implementation of these measures will not achieve the 98% reduction in Project-related traffic needed to reduce emissions below the ozone precursor significance threshold. Residual air quality impacts will remain significant.

IM 3.11/D Mobile Source Emissions: CO

CO emissions substantially exceed the AQMD threshold of potential significance of 550 pounds per day. Significance, however, is determined by whether project traffic creates any new violation of CO standards. Table 3.11-3 shows that microscale CO levels, in conjunction with a 3-5 ppm non-local hourly background in the semi-rural Dublin Ranch will not cause the California hourly standard of 20 ppm to be exceeded. CO impacts are therefore insignificant.

what is this ?

No mitigation is required.

IM 3.11/E Stationary Source Emissions

Specific Plan buildout will create emissions from a variety of miscellaneous sources such as fuel combustion in power plants or water heaters, fuel used in landscape maintenance, evaporative emissions from paints and cleaning products, etc. Solid waste disposal also may lead to long-term air emissions from sub-surface decay of organic materials. Such emissions are extremely small for any individual resident, but become substantial when summed over the entire scope of Project development. Table 3.11-4 shows that Project-related NOx emissions from off- and on-site fuel consumption for energy demand exceed the AQMD significance threshold by a wide margin. NOx emissions are more than eight-fold above the significance threshold, and are therefore a significant impact.

This impact is also a potentially significant cumulative impact as discussed in *Chapter 5*.

Mitigation Measures of the EIR

MM 3.11/12.0 Stationary source emissions associated with Project development should also be minimized where feasible to reduce overall cumulative impacts. Minimum energy conservation standards are established in Title 24 of the California Code of Regulations. Design practice can achieve a slightly greater level of conservation than the minimum standards. A conservation target level for some fraction of Eastern Dublin development of 10 percent above the minimum should be implemented as an appropriate acknowledgement of the desired "environmentally-friendly" community character for this Project.

MM 3.11/13.0 Solid waste recycling should be included in all development planning to insure that recycling criteria specified in AB-939 can be most easily met.

Implementation of these measures cannot achieve the eight-fold reduction in stationary source emissions needed to meet the insignificant threshold. Stationary source emissions air quality impacts remain significant.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
AIR QUALITY
Table 3.11-1
PROJECT AREA AMBIENT AIR QUALITY MONITORING SUMMARY 1986-1990
(Days Standards Were Exceeded and Maxima for Periods Indicated)

Pollutant/Standard	1986	1987	1988	1989	1990
Ozone:					
1-Hour > 0.09 ppm	20	10	21	9	8
1-Hour > 0.12 ppm*	3	3	4	2	1
1-Hour ≥ 0.20 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.14	0.15	0.15	0.14	0.13
Carbon Monoxide:					
1-Hour > 20. ppm	0	0	0	0	0
8-Hour > 9. ppm*	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	10	10	0	0	0
Max. 8-Hour Conc. (ppm)	4.9	3.6	4.4	4.4	4.5
Nitrogen Dioxide:					
Annual Avg. < 0.05 ppm*	Yes	Yes	Yes	Yes	Yes
1-Hour > 0.25 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	.10	.12	.14	0.1	0.09
Total Suspended Particulates:					
24-Hour ≥ 100 $\mu g/m^3$	5/61	4/60	4/61	1/61	2/61
24-Hour > 260 $\mu g/m^3$	0/61	0/60	0/61	0/61	0/61
Max. 24-Hr. Conc. ($\mu g/m^3$)	144	121	111	106	154
Lead Particulate:					
1-Month ≥ 1.5 $\mu g/m^3$	0/12	0/12	0/12	0/12	0/12
Max. 1-Month conc. ($\mu g/m^3$)	.22	.56	.10	0.12	0.08
Sulfate Particulate:					
24-Hour ≥ 25. $\mu g/m^3$	0/61	0/60	0/61	0/61	0/61
Max. 24-Hr. Conc. ($\mu g/m^3$)	11.7	6.9	5.9	6.0	7.9
Respirable Particulates (PM-10):					
24-Hour > 50 $\mu g/m^3$	5/46	5/58	10/60	13/61	10/61
24-Hour > 150 $\mu g/m^{3*}$	0/46	0/58	0/60	0/61	0/61
Max. 24-Hr. Conc. ($\mu g/m^3$)	84	87	74	108	137

Source: California Air Resources Board Summary of Air Quality Data, 1986-1990.
Data from BAAQMD Livermore Air Quality Monitoring Station.

* = Federal clean air standard which determines non-attainment status of region relative to federal guidelines.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
AIR QUALITY
TABLE 3.11-2
EAST DUBLIN SPECIFIC PLAN MOBILE SOURCE BURDEN

Emissions in Tons/Day

Analysis Year	Reactive Organics	Carbon Monoxide	Nitrogen Oxides
1995	3.3	35.6	5.1
2000	2.7	30.5	4.7
2005	2.5	28.7	4.6
2010	2.5	28.2	4.6
Bay Area - Year 2000*	394	2009	415
East Dublin Share of Basin	0.64%	1.40%	1.11%

Source: URBEMIS3 Computer Emissions Model, Output in Appendix

* Table 6, Bay Area 1991 Clean Air Plan, November, 1991.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
AIR QUALITY
TABLE 3.11-3
MICROSCALE IMPACT ANALYSIS
HOURLY CO CONCENTRATIONS (ppm) ABOVE NON-LOCAL BACKGROUND
AT 25 FEET FROM EDGE OF EACH INDICATED ROADWAY
(Standard = 20 ppm, including 3-5 ppm non-local background level)

Location	Exist.	2010-No Project	2010-With Project	Cum. Buildout With Project
Dougherty/Dublin	7.3	6.1	9.2	9.2
Dougherty/WB580 Ramps	ND	4.8	6.0	4.9
Hopyard/EB580 Ramps	ND	5.3	6.3	6.7
Hacienda/Dublin	--	1.9	8.2	10.9
Hacienda/WB 580 Ramps	ND	2.4	5.8	7.0
Hacienda/EB 580 Ramps	ND	3.6	9.0	8.3
Tassajara/Fallon	--	--	1.8	6.0
Tassajara/Gleason	--	1.1	3.8	6.5
Tassajara/Trans. Spine	--	--	3.8	6.2
Tassajara/Dublin	--	1.1	8.8	8.0
Tassajara/WB580 Ramps	2.8	0.9	10.1	6.1
Santa Rita/EB580 Ramps	6.2	2.0	7.4	6.5
Fallon/Dublin	--	--	8.8	7.3
Fallon/WB580 Ramps	0.1	0.7	6.0	5.1
El Charro/EB580 Ramps	0.2	1.8	5.7	5.4
Airway/WB580 Ramps	1.0	1.3	4.2	5.5
Airway/EB580 Ramps	1.8	1.3	2.4	2.4

Source: BAAQMD EIR Handbook, Vehicle Emission Factor Update (1988)

ND = No traffic data
-- = does not exist
"Ramps" does not include I-580 contribution

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
AIR QUALITY
TABLE 3.11-4
EAST DUBLIN STATIONARY SOURCE
(ENERGY CONSUMPTION)
AIR POLLUTANT EMISSIONS (lbs/day)

Pollutant Species	Electrical Generation	Natural Gas Combustion	Daily Total
Carbon Monoxide	160.6	86.3	246.9
Nitrogen Oxide	923.6	346.0	1269.6
Sulfur Oxide	96.4	negl.	96.4
Particulate Matter	32.1	0.8	32.9
Reactive Organics	7.8	22.7	30.5

Daily Energy Consumption:

	Electricity (KWh/day)	(kwh)	Natural Gas (therm/day)	(therms)	
L/M Res.	12,811 DU	30/DU	384,300	2.0/DU	25,620
M/H Res.	5,159 DU	20/DU	103,200	1.4/DU	7,220
Office	3,952 KSF	15/KSF	59.300	0.6/KSF	2,370
Comm'l Retail	4,548 KSF	40/KSF	181,900	1.2/KSF	5,460
Industrial	2,075 KSF	25/KSF	51,900	0.8/KSF	1,660
Serv., Schools	1,500 KSF	15/KSF	22,500	0.6/KSF	900
Daily Total			803,100		43,230

Section 3.12

FISCAL CONSIDERATIONS

3.12 FISCAL CONSIDERATIONS

SETTING

OPERATING COSTS AND REVENUES

The City of Dublin pays for the ongoing costs of normal public services out of ongoing revenues to its general fund and other funds. The City does this for existing residents and would be expected to continue to do so for new development. Revenues will also accrue to the general fund from the new development, primarily in the form of property taxes but also from sales taxes and many state-distributed revenues that are allocated on the basis of population. However, revenues derived from property taxes within the city do not all flow to the City of Dublin. Dublin currently receives approximately 13 to 28 percent of the property taxes collected within its borders depending on the tax rate area. Assuming 28 percent of property tax revenues goes to the City, roughly 31 percent flows to Alameda County, 5 percent to County libraries, 3 percent to the East Bay Regional Park District, 2 percent to the Alameda County Flood Control and Water Conservation District (Zone 7), and most of the remainder (about 30 percent) flows to schools.

On an operating basis, the central fiscal concern of the City of Dublin is whether the ongoing revenues generated by the eastern Dublin project will be sufficient to cover the costs of providing municipal services. Except for the 600-acre parcel owned by the County of Alameda, eastern Dublin is beyond the current city boundaries and the sharing of property tax revenues upon annexation requires an agreement with Alameda County. The City and Alameda County currently are parties to an agreement (the Annexation Agreement), whereby the City and the County agreed to a transfer of 25.4% of the property tax to Dublin upon annexation of the property within the City's sphere of influence with the exception of the 600-acre County parcel. The Annexation Agreement provides that all revenues, including property taxes, generated from that property will go to the County and the County will reimburse the City for the cost of providing routine municipal services up to a certain level. The Annexation Agreement is currently being renegotiated to provide a more comprehensive agreement relating to property tax transfer to the City of 25.4 percent upon annexation of all property within the Project, provision of services upon annexation and sharing of property tax revenues from the 600-acre County of Alameda Surplus Property Authority parcel. As presently drafted, the renegotiated agreement would not be effective unless the Dublin City Council approves a general plan amendment substantially similar to the draft GPA for eastern Dublin.

CAPITAL FACILITIES

Section 3.3: *Traffic and Circulation*, Section 3.4: *Community Services and Facilities*, and Section 3.5: *Sewer, Water and Storm Drainage* describe the capacity and condition of capital facilities serving Project development in this area; that description will not be repeated here. Significant development of new capital facilities will be required by the Project. The central impact consideration is whether or not the financing sources available to the Project will be sufficient to pay for the needed infrastructure improvements.

IMPACTS AND MITIGATIONS

SIGNIFICANCE CRITERIA

Although fiscal considerations are not technically required in the EIR, they have been included to address the City's concern regarding the impact of new development on the City's budget. Thus, any development which creates an on-going drain on the City's budget or requires the City's existing residents to pay for infrastructure which benefits only the new development is considered to be a significant impact.

IMPACTS AND MITIGATION MEASURES: OPERATING COSTS AND REVENUES

IM 3.12/A Fiscal Impacts to the Cost/Revenue Balance of the City of Dublin Budget

Assuming at least a 25 percent share of property taxes, the fiscal analysis prepared for the Project indicates that, after shortfalls in the early years, Project-generated revenues would be more than sufficient to cover Project-generated costs. (See Table III-9 in Appendix 7 of the *Specific Plan* for more details). Therefore, the Project is expected to have an insignificant impact on the cost/revenue balance of the City's budget.

No mitigation is required.

IMPACTS AND MITIGATION MEASURES: CAPITAL FACILITIES

IM 3.12/B Fiscal Impacts related to the Cost and Provision of Project-related Infrastructure Improvements

The Project will require capital facilities improvements which could have potentially significant impacts on the City's budget if these improvements are not fully funded through sources other than City revenues from existing residents.

For the Specific Plan Area, development of eastern Dublin is expected to require approximately $532 million in infrastructure development and in-lieu fees. Of this total, approximately $136 million represents the cost of streets, highway interchanges and mass grading; $235 million will be required for onsite and offsite water and sewage treatment and storage facilities; nearly $160 million will be for public buildings and parks including police and fire stations, schools, other public buildings, park development, and park and school impact fees. Contingency factors are included in the cost estimates.

Mitigation provided by Existing Fees and Programs

Partial mitigation for this impact is provided by existing City of Dublin impact fees which are expected to reduce the impact of the Project on the provision and financing of needed capital facilities. These existing fees are:

Traffic Impact Fees. The City requires traffic impact fees from developments that affect City streets. These fees are set on a project-by-project basis as part of the usual discretionary/CEQA permit review.

Park Impact Fees. The City requires residential subdividers to dedicate park land and/or pay an in-lieu fee for acquiring park land. The Project will include 241.7 acres of public parks. If the City finds the land allocated

for park dedication acceptable, no park in-lieu fee would be required. If not, some or all of the estimated $12 million park in-lieu fees would be payable at the time of Final Map approval for individual subdivisions.

Fire Impact Fees. The Dougherty Rural Fire Authority currently assesses a fire impact fee for new development projects. The current fire impact fee set at $600 per residential development unit and $600 per 2,000 square feet for other types of occupancies. Fire stations must be provided for in advance of most of the residential development.

School Impact Fees. The State legislature authorizes school districts to charge fees to new development to assist the districts in providing sufficient capacity for the students who live in the new houses or who move when their parents take a job at a newly-built place of employment. The State-determined maximum limit for the fee is currently at $1.58 per square foot of habitable residential space and $0.26 per square foot of commercial or industrial space; school districts must charge the maximum rate if they wish to be eligible for additional funds from the State.

By themselves, however, these fees are not sufficient to reduce the costs of infrastructure improvements to a level of insignificance. Given this limitation and the lack of City funding, responsibility to provide other capital improvements falls to the developer. In general, developers provide items like streets, sewers, and parks in order to make habitable the houses that they will build and sell. Developers typically pay for the cost of the infrastructure "up front" and then include these costs in the price of the homes sold. In order to enable developers to construct new projects, the California Legislature has devised several means to assist developers in obtaining financing for public improvements. The most important of these methods include:

(1) Mello-Roos Community Facilities District (CFD)
(2) Marks-Roos Bond Pooling
(3) Special Assessment Districts

Mitigation Measures of the Specific Plan

The Project has been developed with fiscal implications in mind and requires that developers and new residents pay for infrastructure costs. The Project is envisioned as a self-sustaining, financially-viable project for the City. The *Specific Plan* contains a detailed discussion of financing mechanisms for the Project and provides an example of how infrastructure costs could be allocated according to benefits received. (For a more detailed discussion of capital facilities financing options, please refer to Chapter 10 of the Specific Plan). *The following policies and programs are provided in the Specific Plan as mitigation measures for adverse fiscal impacts resulting from the need for infrastructure improvements.*

MM 3.12/1.0 *Development Agreement. For each project in the Planning Area, prepare and adopt a development agreement that spells out the precise financial responsibilities of the developer.*

MM 3.12/2.0 *Area of Benefit Ordinance. Adopt an Area of Benefit Ordinance and form an Area of Benefit for those properties benefiting from construction of public improvements described in the Specific Plan.*

MM 3.12/3.0 *Special Assessment District or Mello-Roos CFD. Create one or more Mello-Roos CFD or Special Assessment Districts to finance construction of the infrastructure to serve the Area of Benefit. Some of the special taxes or special assessments may be due upon application for building permits, and the remainder may be financed with the appropriate bond mechanisms.*

MM 3.12/4.0 *Marks-Roos Bond Pooling. Have bond counsel evaluate whether the City would save money and refrain from incurring undue risk by pooling bonds issued for Eastern and Western Dublin, or for Eastern Dublin alone, under the Marks-Roos Bond Pooling Act.*

MM 3.12/5.0 *City-Wide Developer and Builder Impact Fee Systems. Analyze city-wide infrastructure needs to assess the usefulness of implementing an impact fee program, in compliance with AB 1600, that could draw some funding from new development when final map or building permits are issued. The fees could pay for a pro-rata share of infrastructure of city-wide importance, such as the finishing of interior space in City Hall, downtown infrastructure, or new arterial streets through eastern Dublin.*

Actions Needed by Other Agencies Include:

MM 3.12/6.0 *School Impact Fees. The City and the School District should coordinate efforts to fund necessary school facilities and collect payable fees.*

MM 3.12/7.0 *Highway Interchange Funding. The City and CALTRANS should coordinate efforts to fund necessary freeway improvements and collect developers' share of costs.*

MM 3.12/8.0 *Utilities Impact Fees. The City and Dublin San Ramon Services District should coordinate efforts to fund utilities services and collect developers' share of costs.*

The mitigation measures above apply to the entire Project. Full implementation of these recommendations combined with implementation of existing City of Dublin impact fees and funding mechanisms available to developers would mitigate fiscal impacts related to provision of needed infrastructure to a level of insignificance.

No further mitigation is required.

Chapter 4

ALTERNATIVES ANALYSIS

4.0 ALTERNATIVES ANALYSIS

4.1 INTRODUCTION: REQUIREMENT AND PURPOSE OF ALTERNATIVES

This chapter of the EIR discusses four alternatives to the Project. As required by *CEQA*, these alternatives must present a range of development options that eliminate or reduce some or all of the Project's significant impacts.

4.2 ORGANIZATION OF ALTERNATIVES ANALYSIS

The four alternatives chosen are: the Alternative 1: *"No Project"*; Alternative 2: *Reduced Planning Area*; Alternative 3: *Reduced Land Use Intensities*; and Alternative 4: *No Development*. This chapter includes: a description of each alternative; an evaluation comparing each alternative's characteristics and significant environmental impacts to those of the Project; and a land use table (Table 4.0-1) summarizing the Project and alternatives.

Pursuant to *CEQA*, this chapter also includes a discussion of the rationale used to select or eliminate alternatives for analysis. Sketch diagrams (Figures 4.0-A,B and C) of alternatives 1,2, and 3 are included at the end of this chapter.

4.3 ALTERNATIVE 1: *"NO PROJECT"*

Description and Objectives

CEQA requires that one of the alternatives analyzed be a "no project" alternative. The purpose of the "no project" alternative is to establish a "baseline" from which the Project and other alternatives can be evaluated. In general terms, the "no project" alternative depicts the environmental conditions as they exist today, prior to initiation of the project. Often, the "no project" alternative is also considered to be the "environmentally superior" alternative because it proposes the least amount of change to existing environmental conditions.

The *"No Project"* Alternative for the Eastern Dublin General Plan Amendment/Specific Plan proposes a development scenario for the General Plan Amendment area under current land use policies of the *1985 Dublin General Plan*. The principal features of this alternative are:

- No Specific Plan or General Plan Amendment would be undertaken.
- The City retains its current Sphere-of-Influence boundary. No annexation of either Upper or Lower Doolan Canyon to the City's SOI.
- Buildout of incorporated areas of the City (ie. the County property) according to the land use policies of the existing *City of Dublin General Plan*.
- Unincorporated areas east of Tassajara Road could develop under the land use policies of the *Alameda County General Plan* (in revision as of May 1992) if they remain unincorporated. If Dublin pursues annexation of the planning area, then development would occur according to the existing policies (described in Land Use below) of the current *Dublin General Plan*. The City of Livermore could also pursue annexation of that portion of the Project site falling within the North Livermore

General Plan Amendment area, as discussed in *Section 3.1: Land Use, Other Applicable County, City and Agency Plans.*

The land use development plan for the Alternative 1 is shown in Figure 4.0-A.

EASTERN DUBLIN GENERAL PLAN AMENDMENT/SPECIFIC PLAN EIR
ALTERNATIVES ANALYSIS
Table 4.0-1
LAND USE, POPULATION AND EMPLOYMENT SUMMARY

Land Use Designation	Specific Plan	The Project	"No Project"	RPA	RLUI
COMMERCIAL (a) (Acres)	811.0	876.0	600.0	806.4	591.0
Units (msf)	10.928	11.647	9.234	10.876	7.724
Jobs	28,288	29,540	21,462; 8,995 (b)	28,200	16,741
RESIDENTIAL (Acres)	1,702.6	4,993.4	n.a.	2,498.9	5278.4
Units (mf)	5,159	5,159	0	5,159	1,398
Units (sf)	7,289	12,811	69 (c)	8,772	11,442
Total Units	12,448	17,970	69 (c)	13,931	12,840
Population	27,794	42,669	157 (c)	32,537	36,869
Employed Residents	20,182	29,124	n.a.	22,568	20,800
SCHOOLS (Total)	9.25	12	0	10	10.6
Elementary (K-5)	6.5	9	0	7	7
Junior High (6-8)	1.75	2	0	2	2
Senior High (9-12)	1	1	0	1	1.6
PARKS (Acres)	241.5	287.2	0	258.5	287.2
Units	17.2	25	0	20	25
OPEN SPACE (Acres)	412.4	571.1	0	442.3	571.1
AGRICULTURE/OPEN SPACE (Acres)	0	0	6319.8	2,743.9	0

FOOTNOTES:

(a) Includes Public/Semi-Public
(b) 9,000 Jobs maximum permitted under current General Plan.
(c) Source: 1990 U.S. Census

Evaluation of the "No Project" Alternative

Land Use

Under the existing land use policies of the *Dublin General Plan*, the 600-acre County property would be developed with Business Park uses. The 200-acre portion south of the proposed Dublin Boulevard Extension would develop as Business Park/Industrial: Low Coverage (BP/ILC) and the remaining 400 acres would develop as Business Park/Industrial (BP/I). Based upon the City's existing development standards (FAR: floor area ratio) for these land uses, total development potential for the County property would be between 8.276 and 10.193 million square feet (msf).

Three development scenarios exist for the remaining portion of the General Plan Amendment area (approximately 6319.8 acres) under Alternative 1. One option is that the area would remain unincorporated and subject to the land use designation of the *Alameda County General Plan.* Currently, this area is designated Agriculture/Open Space. The rural character and agricultural land uses of the entire planning area would not change. According to the 1990 U.S. Census, the unincorporated portion of the planning area is currently home to 157 residents occupying 69 dwelling units.

The second option is that the City of Dublin would pursue development of that portion of the Project site that lies within the current (ie. "unamended") boundary of the Eastern Extended Planning Area (see Figure 3.1-F) according to the land use policies of its existing *General Plan.* These policies (policies 2.1.4.A-C) establish an upper limit on development for this area before "refinement studies" (such as the Project) must be undertaken. Existing *General Plan:* Implementing Policy 2.2.4.D sets this limit at 22% of the potential job development for the Business Park area. The City could choose this approach without a specific plan or general plan amendment.

A third option is that a portion of the planning area would be annexed to the City of Livermore as proposed in the *North Livermore General Plan Amendment* (DEIR: January 1992) and developed according to one of four scenarios currently under review (see *Relevant Plans and Policies* below for further discussion.)

Compared to the Project, Alternative 1 significantly reduces land use impacts on the Project site. Disruption of the rural communities on Tassajara and Doolan Canyon Road would not occur and urban infrastructure would not be extended onto unserviced land east of Tassajara Road. The crop- and rangelands of the Project site would remain undeveloped and agricultural activities might continue. Parcels under active Williamson Act contracts would potentially be less subject to pressure to non-renew than under the Project.

If the City of Dublin chooses to pursue development east of Tassajara Road without a refinement study, such as a specific plan, then the environmental advantages of Alternative 1 (discussed above) relative to the Project might be diminished. Whereas the Specific Plan establishes a land use pattern which balances residential and commercial land uses and integrates these with circulation and open space needs, the land use pattern for the Eastern Extended Planning Area, as currently permitted by the *Dublin General Plan*, envisions a greatly simplified development scenario. As shown in Figure 4-A, Business Park/Industrial uses would form a continuous band along the I-580 corridor as far as the eastern boundary of the City's sphere-of-influence. Residential development would be permitted only under *General Plan* refinement studies (Implementing Policy 2.1.4.B). To service these areas, urban infrastructure would need to be extended onto the undeveloped portions of the Project site. This alternative could, therefore, be growth-inducing and create significant impacts to existing agricultural and rural land uses.

Relevant Plans and Policies

Alameda County General Plan Update (1992-)

Two planning efforts concurrent with the Project may have long-term impacts on the rural character and environmental qualities of the unincorporated portion of the General Plan Amendment area even if the City of Dublin chooses not to pursue any form of development in this area. Alameda County is updating its *General Plan* (1977), including the area plan for the Livermore Amador Valley Planning Unit (LAVPU) which has been redesignated the East County Area. As part of its update of land use policies for unincorporated areas, the County is considering changing its land use policies for Agricultural/Open Space lands which limit development to 1 dwellin unit/100 acres. Under a new draft policy, development would be permitted by the County in certain unincorporated areas, "subject to level of service standards and special service districts." (p. 9, *East County Area Plan; Planning Commission Policy Options Report*; December 1991). Consequently, whereas the City of Dublin, under the "No Project" Alternative, might not annex or develop any area outside its current incorporated boundary, the County might, under its updated *General Plan*, propose development in the General Plan Amendment area. As such, the "No Project" Alternative should not be interpreted as a "no development" scenario; development might occur in this area under a different agency. "No development" is discussed as a distinct planning option in Alternative 4.

North Livermore General Plan Amendment (1992)

In like manner, the City of Livermore is considering a general plan amendment for an area designated as the North Livermore General Plan Amendment area. The western boundary of this planning area extends into the Eastern Dublin Specific Plan area (refer to Figure 3.1-8). The *Draft EIR* (January 30, 1992) for the North Livermore General Plan Amendment area states that implementation of "any of the four alternatives would require annexation of a portion or all of the unincorporated project area into the City of Livermore." (p.III-6) Whereas under the 10,000 population alternative (currently recommended by the Livermore Planning Commission to the Livermore City Council as the preferred alternative), Livermore proposes annexing only 4,170 acres of the 15,500-acre site (26%), the *DEIR* states that the "other three alternatives would require annexation of all unincorporated portions of the project area." (p.III-6) Under the "No Project" Alternative, the City of Dublin would not annex or develop any portion of the General Plan Amendment area outside its incorporated boundary; development, however, is possible under one of three proposed scenarios if the City of Livermore annexes a portion of the area.

Population, Housing and Employment

Because the current *General Plan* specifically states that "the location, extent and density of residential development will be determined when municipal services can be provided and through *General Plan* refinement studies", it is assumed that no new housing or residential growth will occur on the Project site under Alternative 1. The existing population of 157 residents (69 dwelling units) is expected to remain. This population resides largely on Tassajara and Doolan Canyon roads.

The 600 acres of Business Park/Industrial land on the County property could create a maximum of 9.234 million square feet of new commercial space. Total buildout here could create an estimated 21,462 jobs. However, under *General Plan* policy 2.2.4.D, only 22% of the potential job development for the Eastern Extended Planning Area (9,000 jobs maximum) can have building permits approved before the City is required to undertake "refinement studies". Thus, the *"No Project"* Alternative would have a total square footage buildout equivalent to 9,000 jobs. Assuming a proportional development of the two business park land uses, 92 acres of BP/ILC would generate 3,853 jobs and 199 acres of BP/I would generate 5,142 jobs (Total: 8,995 jobs).

In terms of a jobs/housing balance, the Project is preferred to Alternative 1. Under the Project, estimated total new jobs are 29,540 and new employed residents are projected at 29,124. The resulting jobs/housing balance produces a surplus of 544 jobs at a 1.02:1.0 (job to resident) ratio. This is considered to be a favorable match. The *"No Project"* Alternative, in contrast, would produce 8,995 jobs with few corresponding housing units (ie. only those permitted under current *Alameda County General Plan* policy limiting development to 1 dwelling unit/100 acres.) This alternative would aggravate local and subregional problems associated with the lack of housing, particularly affordable units, for the many jobs located in the Tri-Valley.

Traffic and Circulation

The *"No Project"* Alternative would generate 47,000 daily and 4,700 P.M. peak hour vehicle trips, representing about 10 percent of the traffic generation of the Project. Eastern Dublin traffic volume impacts on the freeways and other regional routes would be reduced by 90 percent. The *"No Project"* Alternative would not cause any intersections to exceed level of service standards compared to the *2010 Without Project* scenario, and would require no intersection mitigations. Road improvements would only be required to provide access to developable properties, and would include an extension of Hacienda Drive north of the I-580 interchange, extension of Dublin Boulevard as a two to four lane road to Tassajara Road, and improvements to Tassajara Road between I-580 and Gleason Road.

The following Project impacts would be reduced to a level of insignificance by implementation of Alternative 1: **IM 3.3/B**: I-580, I-680/Hacienda; **IM 3.3/C**: I-580, Tassajara/Airway; **IM 3.3/D**: I-680, North of I-580; **IM 3.3/G**: Hacienda Drive and I-580 Eastbound Ramps; **IM 3.3/H**: Tassajara Road and I-580 Westbound Ramps; **IM 3.3/I**: Santa Rita Road and I-580 Eastbound Ramps; **I.M./J**: Airway Boulevard and Dublin Boulevard; **IM 3.3/K**: Airway Boulevard and I-580 Westbound Ramps.

All other Project impacts identified as significant would remain significant under Alternative 1.

Transit service would need to be extended to serve the 9,000 potential employees in the business park development.

Community Services and Facilities

Demand for police and fire protection services is not expected to increase significantly under the "No Project" Alternative over levels as they exist today in the City of Dublin. Because the alternative does not project any new residential growth, the City's schools, and libraries will not be subject to new service demands. The Recreation Department may experience some increase in demand from employees in the business parks although this is not considered to be significant. The local library can adequately serve new business park development in the County property area. From the perspective of increased demand, the *"No Project"* Alternative will have significantly reduced impacts on community services and facilities than the Project.

Sewer, Water and Storm Drainage

Compared to the Project, the *"No Project"* Alternative would require significantly less development of water, sewer, recycled water and storm drainage infrastructure. Table 4.0-2 presents estimated quantitative impacts of the *"No Project"* Alternative to the Specific Plan and the Project for water, sewer and recyled water. These impacts are discussed below:

TABLE 4.0-2

ALTERNATIVE 1: *NO PROJECT*

WATER, SEWER AND RECYCLED WATER IMPACTS
COMPARED TO THE PROJECT AND THE SPECIFIC PLAN

Item	Estimated Average Daily Water Demand (MGD)	Estimated Average Daily Wastewater Flow (MGD)	Estimated Average Daily Recycled Water Irrigation Demand (MGD)
The Project (General Plan Amendment Area)	7.7	5.6	4.5
Specific Plan	5.8	4.2	2.7
Alternative 1: No Project	1.1	1.3	0.4

Domestic Water System: The *"No Project"* Alternative would substantially reduce estimated water demand - approximately 1.1 MGD versus 7.7 MGD for the Project. As a result of the reduced land area developed under the *"No Project"* Alternative, a water distribution system would only have to be constructed for the County property. Only one storage reservoir may be required versus the five recommended for the Specific Plan. The reduction in water demands would mean a reduction in purchasing of water from DSRSD and Zone 7. This would allow DSRSD and Zone 7 to stretch their remaining water supplies, perhaps a few years at the most. However, both DSRSD and Zone 7 will probably have to continue to explore other sources of water supplies, including water marketing, water recycling, additional storage and water conservation.

Sewer System: A considerable reduction in estimated wastewater flows would result from the *"No Project"* Alternative - 1.3 MGD average daily wastewater flow versus 5.6 MGD average daily wastewater flow for the Project. Correspondingly, a smaller wastewater collection system would be required, primarily to serve the County property. Even with the reduced flows of 1.3 MGD, the DSRSD wastewater treatment plant will require expansion, although not to the degree required under the Project. The TWA export project would still be needed since the Tri-Valley is already nearing the limits of its wastewater disposal capacity in the LAVWMA system.

It may not be viable to construct a recycled water distribution system under the *"No Project"* Alternative since estimated recycled water irrigation demand would drop off substantially - 0.4 MGD versus 4.5 MGD for the Project. This reduction in demand results primarily from the lack of parks, schools and open space in the *"No Project"* Alternative. These are all major potential recycled water users under the Project. The only remaining potential recycled water demands under the *"No Project"* Alternative are landscaped areas within the commercial/industrial areas.

Storm Drainage: Under the Alternative 1, channel improvements would still be required where Tassajara Creek crosses under I-580 to reduce flooding in the County property area. Also, some channel improvements would be required where Tassajara Creek crosses the County property.

However, upstream improvement on Tassajara Creek would not be required, nor would there be a need for the other channel improvements proposed in the Specific Plan and ultimately for the Project.

The *"No Project"* Alternative would result in reduced stormwater runoff as compared to the Project, since significantly less area would be paved and developed. The *"No Project"* Alternative would also result in a reduced potential for non-point sources of water pollution, since there would be less urban runoff as compared to the Project. Also there would be a reduced potential for non-stormwater discharges to storm drains, subsurface drainage and construction site runoff as compared to the Project.

Soils, Geology and Seismicity

Under the *"No Project"* Alternative, development would occur only on the 600-acre County property located on gently sloping alluvium in the southwestern portion of the Project site. Without the development in hillside areas proposed in the Project, significant impacts related to natural slope stability, cut and fill slope stability, and changes to physical conditions, would not be encountered, and therefore associated mitigation measures will be unnecessary. Development in the southwestern portion of the Project site could result in increases in erosion and sedimentation due to ground surface and vegetative modifications. Expansive soils and/or bedrock are present in this area.

The potential impacts of erosion and sedimentation and expansive soils and/or bedrock in the sourwestern portion of the Project site under Alternative 1 are comparable to those of the Project. Associated mitigation measures for these impacts for the Project (discussed in *Section 3.6: Soils, Geology and Seismicity*) are similarly applicable to impacts under this alternative.

Biological Resources

Impacts on biological resources under this alternative would be greatly reduced compared to the Project. The *"No Project"* Alternative would result in significantly less habitat loss because new development would occur only on the already-developed Santa Rita site which has minimal habitat value. The "No Project" Alternative would probably not result in significant impacts to the existing habitats or special status species elsewhere on the site. Impacts to wildlife and vegetation along the lower portion of Tassajara Creek would require mitigation although this area is not considered to be of high habitat value.

Visual Resources

The *"No Project"* Alternative would significantly reduce Project impacts to the visual character of the General Plan Amendment area. Provided no business park development occurs along I-580, existing views of the valley grasslands, agricultural fields and rangelands, and ridgelands would be unimpaired. Important natural features, such as ridgelines and riparian vegetation, would remain in their current state. Finally, the function of the undeveloped portions of the Project site as a visual "green" separator between Dublin and Livermore would be retained. Dublin's image and identity as a freestanding city surrounded by rolling hills would be less impacted under Alternative 1 than by the Project.

If development occurs east of Tassajara Road without the benefit of refinement studies such as the Specific Plan, visual impacts comparable to or more significant than those of the Project may occur. This conclusion is based upon the fact that the Community Design standards and land use patterns of the Project have taken visual quality and identity into account. These would not be developed for the *"No Project"* Alternative. Policies calling for the preservation of ridgelines, the protection of hillsides and riparian and scenic corridors are not assumed to be a part of Alternative 1. Consequently, this alternative presents the possibility that the developable portion of eastern Dublin along I-580 will develop as more homogenous and much less visually-interesting place with more uniform land uses.

Comparative visual impacts to the County property are harder to assess because this area is already developed for urban uses. Under the Project, however, land uses in the Santa Rita area will be varied and include protections for the Tassajara Creek corridor and scenic route policies for Tassajara Road. Corollary policies are not provided as part of Alternative 1.

Cultural Resources

Development under the *"No Project"* Alternative would significantly reduce impacts to prehistoric and historic resources. If development is limited to the County property, only two identified sites (Prehistoric Isolate Site #4 and Historic Site D) would be directly impacted. If the City decides to pursue development east of Tassajara Road, then additional identified sites (Prehistoric Isolate Sites #1 and #2, and the 4J Ranch) would all be directly impacted as well. Appropriate mitigation measures as set forth in Section 3.9: *Cultural Resources* would be required.

Noise

The *"No-Project"* Alternative does not represent a no-development scenario but rather a development scenario that would occur without significant additional action by the City. Consequently, roadway noise would be expected to increase on major arterials in a manner similar to the Project. Mitigation measures for new development would be similar to those proposed for the Project. Impacts on existing land uses, however, may be less significant depending on the density of the development.

Air Quality

Buildout under this alternative may not allow for full implementation of design concepts, such as those proposed under the Specific Plan, which focus on reducing dependence on the automobile and achieving a jobs/housing balance in the community that reduces the need for inter-community travel. Opportunities to shift travel away from single- or low-occupant automobiles may diminish under the *"No Project"* Alternative compared to the Project itself. There may be slightly different levels of vehicular air emissions for this alternative, but the same basic conclusions regarding individual and cumulative impact significance holds for the "No Project" Alternative as it does for the proposed Project.

Fiscal Considerations

The *"No Project"* Alternative would have positive fiscal impacts on the City of Dublin. It would generate the least costs and least revenues of the three alternatives under consideration. It would require highway improvements but no significant sewer, water, school, park, or other facilities improvements in the short run. However, in the long term, it is likely that over nine million square feet of commercial development would create intense pressure for more housing units (therefore, more sewer, water, solid waste, and other capital improvments) in the region. Thus, the *"No Project"* Alternative would likely encourage population growth, either in Dublin or elsewhere in the Tri-Valley region, and the cost of infrastructure improvements would have to borne by the jurisdictions in which the population growth occurs. The *"No Project"* Alternative is therefore considered a growth-inducing impact.

Mitigation for this alternative is not considered necessary since population growth is likely to be deemed desirable by those jurisdictions willing to accomodate the growth induced by reduced development in eastern Dublin. Some of these jurisdictions may be located, for example, in the western portions of thee San Joaquin Valley. Pro-growth jurisdictions are required to conduct EIR analyses to proceed with the development they accomodate. Potential impacts of infrastructure costs could be mitigated by a combination of funding sources, including developer funding, impact fees, and bonds issued through Mello-Roos or special assessment districts.

4.4 ALTERNATIVE 2: *REDUCED* PLANNING AREA ("RPA")

Description and Objectives

Alternative 2 - *Reduced Planning Area* - permits development in eastern Dublin within the current sphere-of-influence boundary. The purpose of this alternative is to arrive at a "midpoint" between the development proposal of the Project and environmental concerns. Under this alternative, Doolan Canyon would not develop and its current agricultural land uses and rural character would be maintained. The importance of this area's function as a "green" community separator between Dublin, Livermore and the Tassajara Valley would increase as development occurred in eastern Dublin, and North Livermore, and lands east of San Ramon.

The principal features of the *RPA* Alternative are:

- Buildout of the Specific Plan as proposed.
- Buildout of the General Plan Amendment area within the current Dublin SOI boundary according to the land use plan shown in the General Plan Amendment.
- No annexation and no General Plan Amendment for Upper or Lower Doolan Canyon. These areas could develop under the *Alameda County General Plan* or under the *North Livermore General Plan Amendment* but would not be analyzed as part of this alternative.

The land use development scenario for Alternative 2 is shown in Figure 4.0-B.

Evaluation of the *RPA* Alternative

Land Use

Development will occur on 3,313.7 acres according to the land use scenario proposed in the *Eastern Dublin Specific Plan.* (The 14-acre Crosby property which lies within the Specific Plan area but outside the City's sphere-of-influence would not be developed as part of this alternative.) An additional 862 acres (the remaining portion of the City's sphere-of-influence) would be developed, mostly in single-family and rural residential uses (806 acres). Lands outside the SOI would remain in agricultural and rural residential use.

Significant land use impacts associated with this alternative are the loss of rangelands and locally important farmlands, and the disruption of the existing rural community on Tassajara Road. As in the Specific Plan, this alternative would commit land that is now largely undeveloped to long-term urban uses and extend urban infrastructure, such as sewers, onto previously unserviced areas. These actions represent an irreversible change to the site's environment, as defined by *CEQA*. This environmental impact, however, would be less than under the Project in which the entire GPA area is proposed for development.

Alternative 2 may also have growth-inducing land use impacts, not only within the RPA area but possibly on adjacent lands. This is because the land use plan for the Reduced Planning Area proposes urban land uses where its eastern boundary adjoins unincorporated lands designated as Agriculture/Open Space (see Figure 4-B). Mitigation for this impact can be achieved through a refinement to the land use plan for Alternative 2 which provides for transitional land uses.

As in the Project, the Yarra Yarra riding stable on upper Tassajara Road would cease operations under the *RPA* Alternative. The cessation or disruption of current economic activities at the stable due to implementation of the Project are considered by *CEQA* to be a secondary impact related to the proposed physical change to the site's land use.

Compared to full development of the entire Project site envisioned under the Project, Alternative 2 reduces land use impacts. Specifically, in Alternative 2, 2,744 acres of the General Plan Amendment area would remain as unincorporated land in agriculture/open space use rather than being developed. This acreage encompasses the upper and lower portions of Doolan Canyon or roughly the eastern third of the Project site and could continue to function as an important open space rural area separating Eastern Dublin from North Livermore. Given proposals for development adjacent to the Project site in Dougherty and Tassajara valleys and North Livermore, retaining Doolan Canyon as a "green" buffer is regarded as a beneficial local and regional environmental impact of Alternative 2.

An additional benefit of this alternative is that no disruption to the existing rural residential community in Doolan Canyon would occur.

Williamson Act Lands

Three parcels located within the Reduced Planning Area would remain under Williamson Act contract beyond the year 2000. Agricultural activities on these properties (Moller, Fallon, and Croak) could come under development pressures associated with the land use plan of Alternative 2.

On lands outside the boundary of the Reduced Planning Area, the Moller and Bailey properties to the north and the Bloom and Flanigan properties (approximately 183 acres) are under Williamson Act contract. Under Alternative 2, these lands would remain undeveloped and designated for Agriculture/Open Space; the Project proposes Single Family and Rural Residential for the same sites. Thus, Alternative 2 potentially reduces the growth-inducing impacts of the Project on agricultural lands.

Relevant Plans and Policies

Alameda County General Plan (1977)

This alternative is not consistent with the Agriculture/Open Space land use designations of the current *Alameda County General Plan.* The potential development constraints of Livermore Municipal Airport's proposed Airport Protection Area are similar to those discussed for the Project.

Population, Housing and Employment

The projected total population for Alternative 2 is 32,537. This is a decrease of 10,132 new residents from the Project and an increase of 4,896 new residents over the Specific Plan. (133 projected new residents in the Specific Plan have been deleted for residential land uses on the Crosby property which will remain undeveloped in Alternative 2.)

A small decrease in the amount of commercial development proposed in the Project is foreseen; 10.876 msf for Alternative 2 versus 11.647 msf for the Project. This will result in a net decrease of 1,340 jobs. Compared to the Specific Plan, Alternative 2 will result in a net decrease of only 87 jobs due to the deletion of 4.6 acres of Industrial Park land on the Crosby property.

The RPA Alternative will result in a less-favorable jobs/housing balance than that achieved in the Project: 1.25 jobs for each new employed resident of eastern Dublin or a projected surplus of 5,633 jobs versus 544 surplus jobs (1.02:1.00 ratio) for the Project. Alternative 2 represents a modest improvement over the jobs/housing balance of the Specific Plan in which jobs surpass housing units by 8,106.

Traffic and Circulation

The circulation, transit and pedestrian improvements proposed in the Specific Plan will be maintained. No link between Doolan Canyon Road and Tassajara Road is planned and the sections of Hacienda

Drive, Tassajara Road and Fallon Road between I-580 and Dublin Boulevard may not need to be built to accomodate eight through-lanes.

Alternative 2 would generate 434,000 daily and 37,700 P.M. peak hour vehicle trips, representing 90 percent of the traffic generation of the Project. Eastern Dublin traffic volume impacts on the freeways and other regional routes would be reduced by 10 percent. Intersection impacts would be reduced slightly, but all intersection mitigations required for the Project would also be required for Alternative 2.

Implementation of Alternative 2 would reduce the following Project impacts to a level of insignificance: **IM 3.3/B**: I-580, I-680/Hacienda between Dougherty Road and Hacienda Drive; and **IM 3.3/J**: Airway Boulevard and Dublin Boulevard. All other Project impacts identified as significant would remain significant under Alternative 2.

Community Services and Facilities

Compared to the Project, the *Reduced Planning Area* would require seven (versus nine) K-5 schools. Demand for two new junior high and one senior high schools would remain constant. New park needs would be reduced by five (20 versus 25) and Open Space acreage would decrease by 128 acres.

Compared to the Specific Plan, under Alternative 2, eastern Dublin would gain 3 additional neighborhood parks and complete an elementary school site. Modest supplements to the Specific Plan's projections for increased police and fire protection services are estimated. Solid waste generation and demand for utilities will increase in proportion to the new residential development in the Reduced Planning Area.

Sewer, Water and Storm Drainage

Compared to the Project, Alternative 2 would produce less demand for new infrastructure, largely due to the exclusion of Upper and Lower Doolan Canyon. Alternative 2 would require the infrastructure proposed in the Specific Plan, plus additional infrastructure for the remainder of Reduced Planning area. Table 4.0-3 presents the estimated quantitative impacts of Alternative 2 as compared to the Project and the Specific Plan for water, sewer and recylced water.

TABLE 4.0-3

ALTERNATIVE 2: *REDUCED PLANNING AREA*

WATER, SEWER AND RECYCLED WATER IMPACTS
COMPARED TO THE PROJECT AND THE SPECIFIC PLAN

Item	Estimated Average Daily Water Demand (MGD)	Estimated Average Daily Wastewater Flow (MGD)	Estimated Average Daily Recycled Water Irrigation Demand (MGD)
The Project (General Plan Amendment Area)	7.7	5.6	4.5
Specific Plan	5.8	4.2	2.7
Alternative 2: Reduced Planning Area	6.4	4.6	3.1

Domestic Water System: The water demands for Alternative 2 are estimated at 6.4 MGD, which is lower than the Project, at 7.7 MGD, but higher than the Specific Plan, at 5.8 MGD (see Table 4.1-3). This demand is based upon the land use plans for Alternative 2, the Project and the Specific Plan. All the infrastructure for the water system proposed in the Specific Plan will be required for Alternative 2, plus additional infrastructure for areas beyond the Specific Plan, but within the Reduced Planning Area. The water system proposed in the Specific Plan has been sized to accommodate the full buildout of the General Plan Amendment area. Thus the system as proposed in the Specific Plan will be able to accommodate the areas of Alternative 2. In fact, there may be some opportunities to downsize some of the pipelines within the Specific Plan if the full extent of the General Plan Amendment area is not built out.

At 6.4 MGD, Alternative 2 would create a significant water demand on the DSRSD and Zone 7 systems. This demand will require Zone 7 to continue to explore other sources of water supplies in addition to its imported supplies, as is also required by the Project.

Sewer System: As shown in Table 4.1-3, the estimated wastewater flows for Alternative 2 are 4.6 MGD, which is less than the General Plan Amendment area at 5.6 MGD, but greater than the Specific Plan at 4.2 MGD. Again, this parallels the level of land uses for each. Alternative 2 will require a collection system similar to that proposed for the Specific Plan, plus additional collection systems for the areas beyond the Specific Plan but within the Reduced Planning Area. The collection system proposed for the Specific Plan area has been sized to accommodate the full buildout of the General Plan Amendment area. Thus, the collection system as proposed in the Specific Plan will be able to accommodate Alternative 2. Again, there may be opportunities to downsize certain of the pipelines within the Specific Plan area if the full extent of the General Plan Amendment area is not built out.

At 4.6 MGD of wastewater flow, Alternative 2 will have a significant impact on the DSRSD collection and treatment systems and on the planned TWA export system. DSRSD will have to expand its wastewater treatment plant to handle these flows, although the expansion will not be as great as would be required under the Project. TWA has planned its export system to accommodate the Project. Thus, the planned TWA system will be able to handle the lower wastewater flows of Alternative 2.

There will be a substantial potential for a recycled water system for Alternative 2. As shown in Table 4.1-2, there is a potential recycled water irrigation demand of 3.1 MGD. This estimated recycled water demand is less than the estimated recycled water demand for the Project, since under Alternative 2 there is less irrigable land. Development of such a recycled water system may prove viable because of several large potential irrigation users, such as parks and open space. Such a recycled water system could help reduce water demands to the site.

Storm Drainage: Under Alternative 2, all the channel improvements proposed under the Specific Plan will be required, plus additional channel improvements in the areas beyond the Specific Plan, but within the Reduced Planning Area. However, channel improvements will not be required in Upper and Lower Doolan Canyon, as would be required under the Project.

Alternative 2 will increase the stormwater runoff, but not to the degree of the Project, which also includes development in the Upper and Lower Doolan Canyon areas.

Finally, there will still be a strong potential for non-point sources of water pollution under Alternative 2, although not as great as under the Project. Again, this is because of the greater urbanization proposed under the Project than under Alternative 2.

Soils, Geology and Seismicity

Under this alternative, impacts associated with the site's soils, geology and seismic conditions would be similar to those discussed for the Project but would be limited to the Reduced Planning Area. Mitigation measures discussed for Project impacts are equally applicable under this alternative. Outside the Reduced Planning Area boundary, significant impacts are not encountered and no associated mitigation measures are necessary.

Biological Resources

Alternative 2 would result in significantly less habitat loss than under the Project. Significant impacts to some riparian and marsh habitats and special status wildlife species could occur. The golden eagle nest is found within the boundary of this alternative.

Under Alternative 2, development would not occur in or adjacent to Doolan Canyon which provides habitat for red-legged frogs and western pond turtles. More than half the locations of potential kit fox dens or other special status species recorded in the GPA area occurred outside the Reduced Planning Area. Although a large portion of the GPA area would remain in Agriculture/Open Space use, these areas would not necessarily be permanently protected from future development; therefore, this designated open space does not constitute a mitigation area for habitat loss that will occur within the Reduced Planning Area.

Visual Resources

Under Alternative 2, impacts to the visual quality of the Project site will be somewhat reduced, most significantly in the undeveloped portion of the Project site. The key visual resources policies of the Project will be retained: hillside development standards, ridgeline protections, designation and maintenance of scenic corridors, and preservation of watercourses and natural features. Consequently, impacts to the visual character of the Project site within the Reduced Planning Area are the same as those discussed in *Section 3.8; Visual Resources* and same mitigation measures given

for those impacts are applicable. The main difference between Alternative 2 and the Project will be perceived east of the Reduced Planning Area boundary. Here the Project site will retain its current visual character as a rural and agricultural landscape.

Cultural Resources

All impacts to prehistoric and historic sites identified in Section 3.9 would remain. At least two additional historic sites and one prehistoric site would be affected by potential development within the Reduced Planning Area boundary. Cultural resources in the Doolan Canyon area would not be affected, provided this area was not developed. Thus, Alternative #2 reduces Project impacts to cultural resources in this area but does not significantly reduce these impacts in developed portions of the Reduced Planning Area. All mitigation measures for cultural resources impacts given for the Project are applicable for impacts under Alternative 2.

Noise

Impacts and mitigation for this alternative would be similar to those presented for the proposed Project. Since no development is proposed in the Doolan Canyon area, construction noise and other roadway noises may be less of an impact for existing residences in Doolan Canyon. Therefore, Alternative 2 reduces **IM 3.10/B** for Doolan Road to a level of insignificance will impacts to existing residences and businesses on Tassajara Road, Fallon Road and Hacienda Road will remain potentially significant following implementation of *MM 3.10/2.0*.

Air Quality

The size of the Reduced Planning Area will have little effect on air quality and will not significantly reduce the air quality impacts identified for the Project. Ideally, the larger the planning area, the more effectively various TSM measures can be implemented. However, if Upper and Lower Doolan canyons are not annexed into Dublin's sphere-of-influence, they will likely be included in comparable Alameda County or City of Livermore plans capable of achieving TSM efficiency. Reducing the plannning area, therefore, does not achieve substantial reductions in air quality impacts relative to the Project's air quality impacts and would require the implementation of the same air quality mitigation measures as those of the Project.

Fiscal Considerations

shld compare to Project

Alternative 2 will have positive fiscal impacts on the City of Dublin. Like the Project, this alternative includes less housing and more commercial development than Alternative #3. This alternative would therefore generate more net fiscal surplus in the long term than Alternative #3. It would require, however, implementation of extensive infrastructure improvements such as those indicated for the Project.

4.5 ALTERNATIVE 3: *REDUCED LAND USE INTENSITIES ("RLUI")*

Description and Objectives

Congested roadways and traffic delays are among the Project's most significant environmental effects. The traffic analysis (*Section 3.3: Traffic and Circulation*) has identified Dublin Boulevard as the most severely-congested of the Project's roads. Circulation problems are particularly acute at intersections of Dublin Boulevard with other arterials and I-580.

Seems. Tassajara no equal or worse! Sig. cum.

The purpose of this alternative is to reduce the primary and secondary adverse environmental impacts associated with increased traffic, particularly at Dublin Boulevard intersections. In this alternative,

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acreages for land uses which generate a large number of daily vehicle trips (mostly commercial) have been reduced or changed by land uses which generate more modest traffic counts (residential.)

The principal features of Alternative 3 are:

- Both the Specific Plan and the General Plan Amendment would be undertaken as proposed in the Project. Buildout of the Specific Plan and GPA areas would occur at reduced land use intensities to generate reduced traffic.
- Annexation of Upper and Lower Doolan Canyon to the City of Dublin's SOI would occur.

Evaluation of the *Reduced Land Use Intensities* Alternative

Land Use

The important difference between the Project and Alternative 3 is the reduction in commercial acreage from 876 to 591 acres. Residential acreage will increase by 285 acres. Land use impacts resulting from the urbanization of currently undeveloped and agricultural lands would remain the same. This alternative would be growth-inducing in the same manner as the Project because it would require the extension of urban infrastructure into previously unserviced areas. Alternative 3 would also cause the irretrievable conversion of natural resources to urban uses. These significant impacts are similar to those of the Project.

Relevant Plans and Policies

Inconsistencies between Alternative 3 and relevant plans and policies are the same as those discussed in *Section 3.1: Land Use*. The increase of residential land uses adjacent to the Dublin Boulevard Extension will increase the number of housing units proposed within the Livermore Municipal Airport Protection Zone.

Population, Housing and Employment

units ?

The projected residential population in eastern Dublin under Alternative 3 is 36,869. This is a decrease of 5,800 new residents below the 42,699 residents estimated for the Project.

New jobs in Alternative 3 will decrease from the Project level of 29,540 to 16,741 due to a reduction in proposed General Commercial and Campus Office acreage. However, because Alternative 3 also reduces densities for residential acreage, the jobs/housing balance remains stable. Under Alternative 3, residential land uses would generate 20,800 employed residents for 16,741 projected jobs or a ratio of .8 (jobs to residents.)

Traffic and Circulation

Alternative 3 replaces some of the higher traffic generating uses in the Project with uses which would generate less traffic. In particular, the commercial uses between I-580 and Dublin Boulevard would be reduced and partially replaced by housing. This would reduce both commuter traffic and trips generated by large-scale retail (ie. General Commercial) land uses. Overall, Alternative 3 would generate 341,000 daily and 29.700 P.M. peak hour vehicle trips, representing 70 percent of the traffic generation of the Project. Project-generated traffic volume impacts on the freeways and other regional routes would be reduced by 30 percent.

The following significant impacts of the Project would be reduced to a level of insignificance **before mitigation** by implementation of Alternative 3: **IM 3.3/B**: I-580, I-680/Hacienda between Dougherty

↖ not discussed in text where is this?

Road and Hacienda Drive; **IM 3.3/C**: I-580, ~~Tassajara/Airway~~ between Fallon Road and Airway Boulevard; **IM 3.3/J**: Airway Boulevard/Dublin ~~Boulevard~~.

IM 3.3/M: Cumulative Impacts on Dublin Boulevard which, under the Project, would be a significant unavoidable impact, could be mitigated to a level of insignificance under Alternative 3. In like manner, **IM 3.3/C**: I-580, ~~Tassajara-Airway~~ between Tassajara and Fallon, which under the Project would remain potentially significant, could be mitigated to a level of insignificance under Alternative 3.

IM 3.3/F: Dougherty Road and Dublin Boulevard would remain significant but mitigation measures required to bring it to a level of insignificance would be less extensive than those in the Project.

All other impacts identified as significant under the Project would be significant under Alternative 3. The same mitigation measures and levels of significance achieved by implentation of these mitigation measures would be applicable.

Community Services and Facilities

Demands for community services and facilities are expected to remain similar to those in the Project. Alternative 3 would require 7 elementary schools rather than 9 elementary schools under the Project. Junior High School demand would remain stable and High School demand would increase by 60 percent.

Sewer, Water and Storm Drainage

Alternative 3 will require the infrastructure similar to that proposed in the Specific Plan, expanded to serve the General Plan Amendment area. Since land use intensities have been modified to reduce traffic, there may be opportunities to downsize infrastructure in certain areas as compared to the Project. However, the modification of land use intensities under Alternative 3 is primarily an increase in residential uses and decrease in commercial uses. Table 4.0-4 presents the estimated quantitative impacts of Alternative 3 as compared to the Project and the Specific Plan for water, sewer and recycled water.

TABLE 4.0-4

ALTERNATIVE 3: *REDUCED LAND USE INTENSITIES*
WATER, SEWER AND RECYCLED WATER IMPACTS
COMPARED TO THE PROJECT AND THE SPECIFIC PLAN

Item	Estimated Average Daily Water Demand (MGD)	Estimated Average Daily Wastewater Flow (MGD)	Estimated Average Daily Recycled Water Irrigation Demand (MGD)
The Project (General Plan Amendment Area)	7.7	5.6	4.5
Specific Plan	5.8	4.2	2.7
Alternative 3: Land Use Intensities	6.5	4.5	4.5

Domestic Water System: The water demand for Alternative 3 is estimated at 6.5 MGD, which is lower than the Proejct, at 7.7 MGD, but higher than the Specific Plan, at 5.8 MGD. This demand comparison parallels the level of land use for Alternative 3, the Project and the Specific Plan. Alternative 3 ahs substantially less commercial acreage than the Specific Plan and the Project which reduces water demand; however, this is somewhat offset by the higher population in Alternative 3 versus the Specific Plan. The result is that water demands for Alternative 3 will be about mid-oint between the Specific Plan and the Project.

Certain pipeline diameters may be downsized in certain areas where the commercial land uses have been downscaled. However, in areas where residential land uses have been increased, pipelines may have to be upsized in diameter. Overall, it is anticipated that approximately the same number of water storage reservoirs will be required to meet fire flows as in the Project.

At 6.5 MGD, Alternative 3 will have a significant water demand on the DSRSD and Zone 7 systems. This demand will require Zone 7 to continue to explore other sources of water supplies in addition to its imported supplies, as is also required by the Project.

Sewer System: The estimated wastewater flow for Alternative 3 is 4.5 MGD which is less than that estimated for the Project (5.6 MGD) but higher than that for the Specific Plan (4.3 MGD: see Table 4.0-4). As with the water demand analysis, the increase in residential land uses and the corresponding increase in residential wastewater flows is somewhat offset by the decrease in commercial land uses and corresponding decrease in commercial wastewater flows. In areas where commercial land uses have been reduced, there may be a potential to reduce sewer pipe sizes. However, in areas of increased residential land uses, sewer pipelines may have to be upsized. Overall, it is anticipated that the main trunk sewers may be slightly less in size for Alternative 3 as for the Project.

At 4.5 MGD of wastewater flows, Alternative 3 will have a significant impact on the DSRSD collection and treatment system and on the planned TWA export system. DSRSD will have to expand

its wastewater treatment plant to handle these flows, although the expansion will not be as great as would be required under the Project. TWA had planned its export system to accommodate the Project, so it should be able to accommodate Alternative #3.

There will be a significant potential for a recycled water system for Alternative 3. As shown on Table 4.0-4, there is a potential recycled water irrigation demand of 4.5 MGD - the same as the Project. Basically the major landscape irrigation land uses for Alternative 3 and the Project are the same -- schools, parks, open space. Thus, a recycled water system for Alternative 3 would be essentially the same as for the Project. Such a recycled water system could help reduce water demands to the site.

Storm Drainage: Under Alternative 3, all the storm drainage improvements proposed under the Specific Plan will be required, plus additional improvements for the General Plan Amendment area. Those overall improvements for Alternative 3 will be essentially the same as for the Project, since both encompass the entire General Plan Amendment area. There may be some localized changes to sizes of storm drains due to land use changes, but overall channel improvements required should remain about the same.

Alternative 3 should increase stormwater runoff about the same level as the Project since each will ultimately develop about the same total numbers of acres of land.

Alternative 3 should also have about the same potential for non-point source water pollution as the Project since each will ultimately develop about the same total number of acres of land.

Soils, Geology and Seismicity

From the perspective of soils, geology and seismicity, the distribution of land uses is similar to the Project and, therefore, impacts from Alternative 3 are the same as those of the Project. Mitigation measures discussed for the Project in *Section 3.6; Soils, Geology and Seismicity* are equally applicable to impacts from Alternative #3.

Biological Resources

The *Reduced Land Use Intensities* alternative would produce similar impacts on biological resources as the proposed Project. The only differences in urban land uses between this alternative and the Project occur within the most intensively developed areas close to Dublin Boulevard. Residential development along Doolan Canyon would not change and resulting impacts to special status species would be the same as from the Project.

Visual Resources

Impacts to the Project site's visual resources under Alternative 3 are expected to be similar to those of the Project. Policies protecting the site's hillsides, ridgelines and watercourses remain constant. Scenic corridor policies will be retained.

At buildout, Alternative 3 may differ in its visual character from the Project due to the increase in residential units and decrease in overall commercial acreage. The form of residential neighborhoods and commercial areas is subject to different development standards, as described in *Chapter 7.0; Community Design* of the *Eastern Dublin Specific Plan.* This change in the Project's visual character will be particularly apparent at the Dublin Boulevard interchanges where housing has generally been substituted for commercial land uses. This land use change does not, however, significantly reduce the overall impacts to the site's existing visual character as it changes from a rural/agricultural to an urban landscape.

Cultural Resources

Alternative 3 does not reduce any impacts to cultural resources. All appropriate mitigation measures set forth in *Section 3.9* would be required.

Noise

The *Reduced Land Use Intensities* alternative would have noise impacts which are be similar for new developments and reduction of the proposed Project since the main difference would be slightly reduce noise from traffic. The only difference would be potential reduction of mitigation required for impacts on existing receptors. The exact reduction in traffic noise levels would depend on future traffic volumes. Impacts and mitigation for this alternative would be similar to the proposed project.

Air Quality

The reduced traffic resulting from the *Reduced Land Use Intensities* alternative would produce associate reduced air emissions and would be beneficial if the growth not occurrring with the Project area were not to occur anywhere else in the air basin. If that same level of unmet growth demand were simply met at some other location, then there is no regional benefit to air quality.

Fiscal Considerations

Based on fiscal analyses performed to date and included in the *Chapter 11* of the Specific Plan, Alternative 3 will have an insignificant long-term fiscal impact on the City of Dublin's cost/revenue balance. Compared to the Project, the ratio of commercial square footage per dwelling unit is lower under Alternative 3 which indicates that Alternative 3 is likely to have a potentially significant impact on the City budget's cost/revenue balance since commercial development generally generates less service costs and more property tax revenues than housing units. As in the Project, Alternative 3 would also require substantial infrastructure improvements. To mitigate the potentially significant impact described above, the City should implement all of the mitigation measures discussed in Section *3.12: Fiscal Considerations* for Project-related fiscal impacts. Implementation of these mitigation measures will reduce fiscal impacts under Alternative 3 to a level of insignificance.

4.6 ALTERNATIVE 4: *NO DEVELOPMENT*

The *No Development* alternative describes a condition in which no development would occur on the Project site beyond existing conditions or as allowed under exisiting land use policies of Alameda County. Unlike the "*No Project*" Alternative which allows buildout of the Project site under policies of the existing *Dublin General Plan*, Alternative 4 assumes that all unincorporated areas of the Project site would remain as Agriculture/Open Space (*Alameda County General Plan.*) This alternative proposes no alteration to existing land uses; its environmental impacts are, therefore, insignificant and, if present, result from existing environmental conditions as described in the *Setting* subsections of *Chapter 3.*

4.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVES

The development scenarios proposed as alternatives to the Project all reduce some potential environmental impacts of the proposal. The following list ranks the environmentally-superior alternatives in descending order of superiority based upon the greatest reductions of potential Project impacts:

- The *No Development* Alternative would achieve the greatest reduction of environmental impacts. Residential development would occur at densities permitted under the current land use policies of the *Alameda County General Plan* (1 dwelling unit/100 acres). Overall, the Project site would remain in its existing rural/agricultural condition. This alternative would not fulfill the City of Dublin's objectives for eastern Dublin.

- The "*No Project*" Alternative would achieve a substantial reduction of Project environmental impacts, particularly if development is kept within the City's current municipal limits. The rural area east of Tassajara Road would remain in its current undeveloped condition. The remaining concern with this alternative, from an environmental perspective, is that it does not resolve long-standing questions of how eastern Dublin is going to develop, nor does it establish any policies for long-term preservation of open space or agriculture, if these indeed are community objectives. This alternative would not fulfill the City of Dublin's objectives for development in eastern Dublin.

- The *Reduced Planning Area* Alternative would reduce Project impacts associated with urban development in the Doolan Canyon area. Impacts discussed for the Specific Plan area would remain undiminished. The function of Doolan Canyon as an open space buffer between Dublin, Livermore and proposed development in the Tassajara Valley is a potential environmental benefit of this alternative, provided adequate regulatory protections are put in place. This alternative would fulfill the City's objectives for development of the Specific Plan and adjacent areas.

- The *Reduced Land Use Intensities* Alternative would achieve reduced environmental impacts associated with traffic congestion, particularly on the local road system and at some key intersections. Related reductions in noise and air quality impacts would occur. From a land use perspective, no reduction in impacts would be achieved because Alternative 3 proposes development over the total Project site. All mitigation measures developed for the Project would be necessary to mitigate the environmental impacts of this alternative except where specified differently in the discussion above. This alternative would achieve the City's objectives to develop eastern Dublin. Questions may remain regarding how the reduction of commercial land uses will affect the fiscal dimension of this alternative in the short-term. Long-term fiscal considerations are identified as insignificant. *CEQA* specifically states that an alternative must be considered, "even if such alternative would be more costly."

4.8 ALTERNATIVES NOT SELECTED

As part of a complete discussion of alternatives to the Project, *CEQA* requires that the EIR describe why certain alternatives were ***not*** selected for analysis. The following possible alternatives were considered for evaluation and not chosen for the reasons given:

- ***Off-Site*** **Alternative:** This alternative was rejected because the preferred optional site for the Project is located in Western Dublin. Western Dublin, a 3,255-acre site located partially within the City's western sphere-of-influence boundary, has recently been approved for 3,133 new housing units. As a result, Western Dublin is not considered available as an off-site alternative. No additional optional sites for the Project exist within Dublin's Extended Planning Area.

- ***Single Family*** **Alternative:** This alternative would assume a lower intensity of land uses than that proposed in *Alternative 3: Reduced Traffic.* This alternative was

rejected for discussion because it would potentially *increase* rather than decrease Project impacts. Single Family Residential land uses over the entire Project site would create an urban form in eastern Dublin closer to a standard suburban subdivision. A central goal of the Specific Plan is to create a pedestrian-oriented community in which residents have the option of walking, bicycling and using transit. Single Family land uses would spread development over the site and increase the need for automobile use, resulting in increased environmental impacts such as traffic, air quality deterioration and noise.

Alternative 1
"No Project"

LAND USE MAP

Legend

COMMERCIAL

Business Park/Industrial

Business Park/Industrial: Low Coverage

CONTRA COSTA COUNTY
ALAMEDA COUNTY

6319.8 Acres
Designated Agriculture/Open Space
on Alameda County General Plan

Tassajara Road

Doolan Road

(approx. 600 acres)

Santa Rita Area

Within Current City of Dublin
Eastern Extended Planning Area

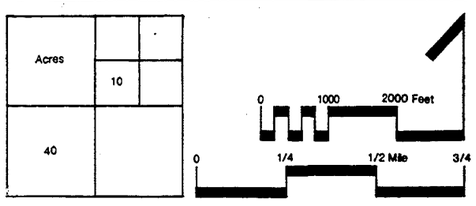
Eastern limit of Eastern Extended Planning Area. See Figure 3.1-F for proposed amended boundary.

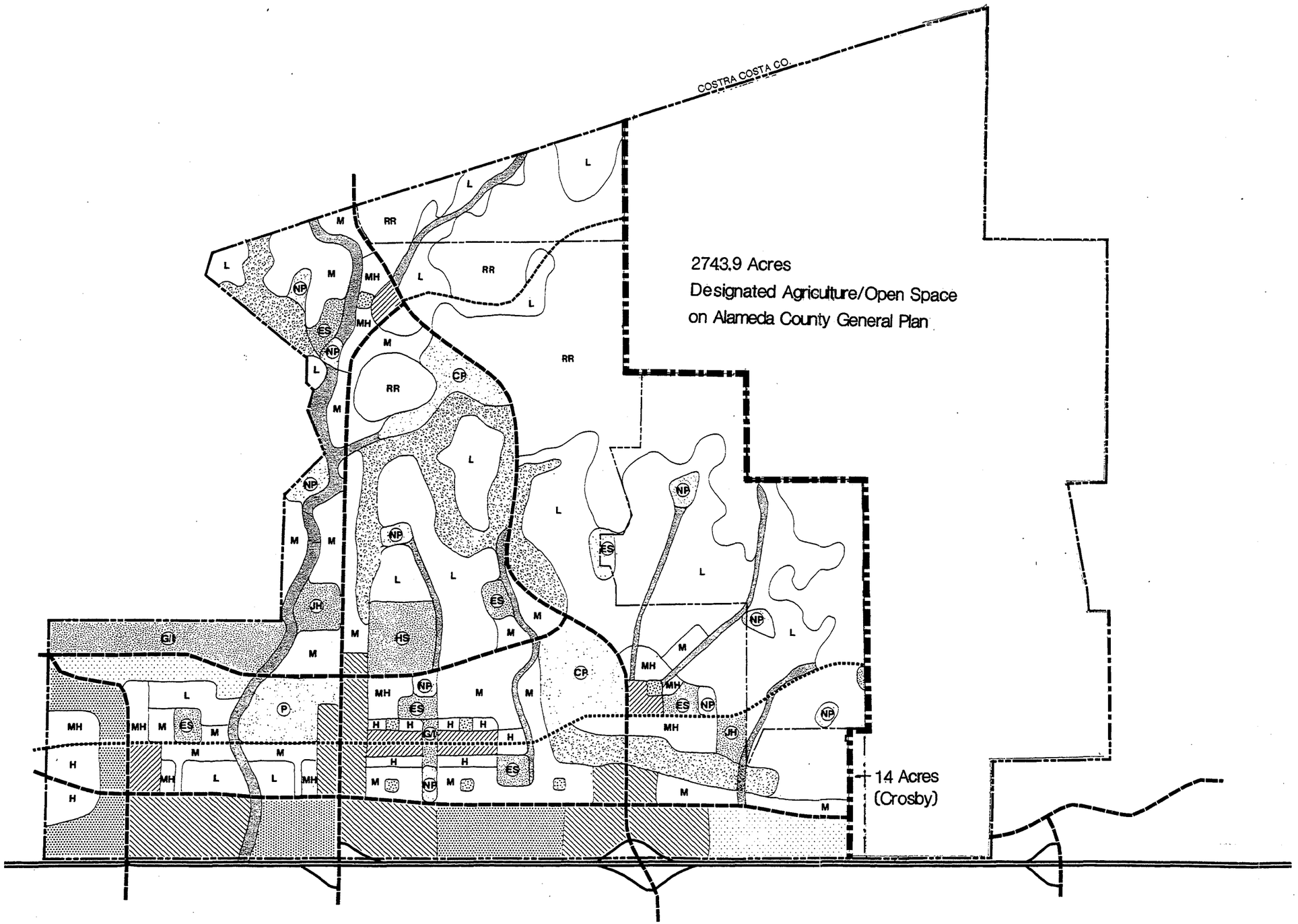
General Plan Amendment Study Area

Specific Plan Study Area

EASTERN DUBLIN
GPA • SP • EIR

Wallace Roberts & Todd **Figure 4 - A**





Alternative 2
Reduced Planning Area

Legend

COMMERCIAL
- General Commercial
- Neighborhood Commercial
- Campus Office
- Industrial Park

RESIDENTIAL

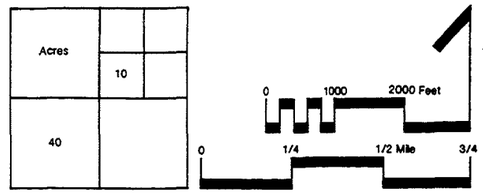
HD	High Density	25- du/ac
MH	Medium-High Density	14-25 du/ac
M	Medium Density	6-14 du/ac
L	Low Density	0-6 du/ac
RR	Rural Residential	1 du/100 ac

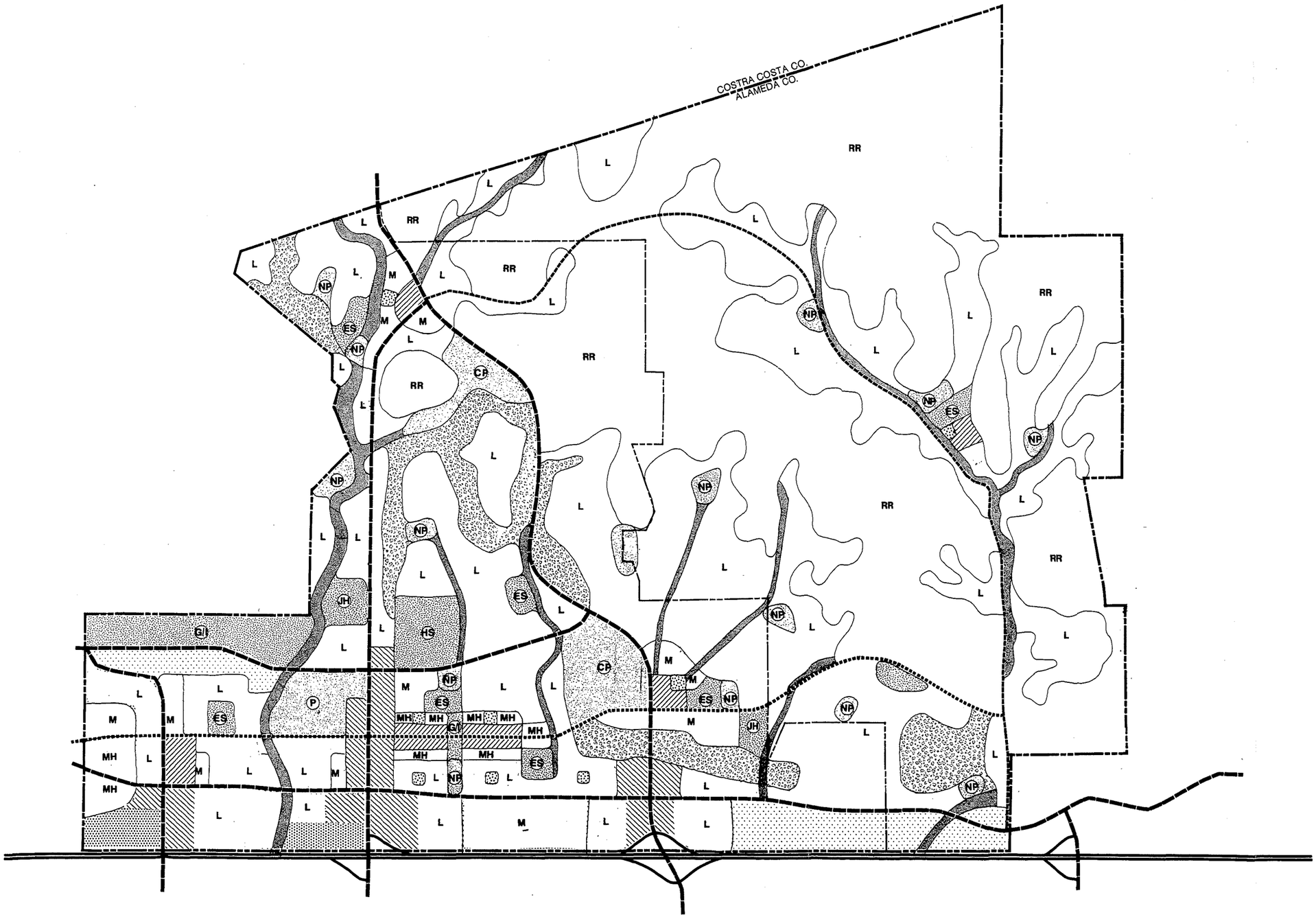
PUBLIC/SEMI-PUBLIC/OPEN
- Public/Semi-Public Facility
  - (ES) Elementary School
  - (JH) Junior High School
  - (HS) High School
  - (G/I) Public/Semi-Public
- Parks & Recreation
  - (P) City Park
  - (CP) Community Park
  - (NP) Neighborhood Park
- Neighborhood Square
- Open Space

CIRCULATION
- Arterial Street
- Collector Street
- Transit Spine
- Sphere of Influence
- General Plan Amendment Study Area
- Specific Plan Study Area

EASTERN DUBLIN
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Wallace Roberts & Todd **Figure 4 - B**





Alternative 3
Reduced Land Use Intensities

Legend

COMMERCIAL
- Campus Office
- Neighborhood Commercial
- General Commercial
- Industrial Park

RESIDENTIAL

HD	High Density	25- du/ac
MH	Medium-High Density	14-25 du/ac
M	Medium Density	6-14 du/ac
L	Low Density	0-6 du/ac
RR	Rural Residential	1 du/100 ac

PUBLIC/SEMI-PUBLIC/OPEN
- Public/Semi-Public Facility
  - (ES) Elementary School
  - (JH) Junior High School
  - (HS) High School
  - (GI) Public/Semi-Public
- Parks & Recreation
  - (P) City Park
  - (CP) Community Park
  - (NP) Neighborhood Park
- Neighborhood Square
- Open Space

CIRCULATION
- Arterial Street
- Collector Street
- Transit Spine
- General Plan Amendment Study Area
- Specific Plan Study Area

EASTERN DUBLIN
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Wallace Roberts & Todd **Figure 4 - C**

Acres 10 40

0 1000 2000 Feet

0 1/4 1/2 Mile 3/4

Chapter 5

CEQA - MANDATED CONSIDERATIONS

5.0 CEQA - MANDATED CONSIDERATIONS

As part of its required contents, *CEQA* mandates that the EIR discuss the following six subjects:

- Cumulative Impacts
- Growth-Inducing Impacts
- Unavoidable Adverse Impacts
- Short-term Versus Long-Term Productivity
- Significant Irreversible Changes
- Impacts Found Not to be Significant

This requirement is satisfied by the discussions contained in the sections below.

5.1 CUMULATIVE IMPACTS

In evaluating potential environmental impacts, *CEQA* requires that the Project be considered within the context of regional development. While the environmental effects resulting from an individual project may appear less than significant when considered alone, they may be significant when added to impacts caused by other projects in the area.

Cumulative impacts are defined by *the CEQA Guidelines*: Section 15355 as "two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts." In fulfillment of *CEQA*'s requirements for an evaluation of cumulative impacts, this section includes a 1) list of ongoing and future development projects ("cumulative projects") in the Project vicinity and 2) a discussion of Project impacts which, in conjunction with the effects of cumulative projects, might compound subregional (ie. Tri-Valley) environmental problems.

While mitigation measures are noted in some instances, it is not the function of this EIR to fully address cumulative mitigations. In many cases, effective mitigation of these impacts would require action by regional agencies or state governments. These mitigations thus may not be within the scope of actions which can be taken by the City of Dublin. Existing regional and statewide mitigations are noted where appropriate.

LIST OF CUMULATIVE PROJECTS

Cumulative projects are shown on Figure 5-A; *Subregional Land Use Planning and Development* and described briefly below. (Note: *Letter designations in parentheses indicate the location of these projects on Figure 5-A.*)

- **City of Dublin**: As given in *Appendix I: Cumulative Residential Project List* of the *Western Dublin Specific Plan/General Plan Amendment Final Environmental Impact Report* (May 1992), the City of Dublin has approved or is considering approval of 924 housing units as of May 1992. This total includes the Hansen Hill Ranch (180 units) and Donlan Canyon (317 units) projects shown on Figure 5-A. This total does not include either the Project or the Western Dublin Specific Plan/General Plan Amendment. (B4)

- **Western Dublin Specific Plan/General Plan Amendment**: The Dublin City Council approved 3,133 residential units on this 3,140-acre site in July 1992. (B3)

- **Dougherty Valley Specific Plan**: Both the City of San Ramon and Contra Costa County are elaborating land use plans for a projected 11,000 units on this 6,000-acre site. The City of San Ramon plan also projects 313,00 square feet of non-residential space. (A2)

- **Tassajara Valley Property Owners Association (TVPOA)**: A proposal for approximately 5,340 residential units on approximately 4,600 acres of unincorporated land in Contra Costa County directly north of the Project site. (A3)

- **North Livermore General Plan Amendment**: A proposal with four buildout scenarios ranging from 3,713 to 16,513 units on 15,500 acres of unincorporated Alameda County land north of Livermore. Commercial space buildout projections range from 5.17 to 7.68 million square feet (msf). The Livermore Planning Commission has recommended the 3,713-unit ("10,000 Population") scenario to the Livermore City Council. (A4)

- **Parks Reserve Forces Training Area ("Camp Parks")**: No residential units planned but land use of the area may be intensified as a result of base closures at locations elsewhere. (A1)

- **Triad Business Park**: A 398-acre site adjacent to the Project site with 300,000 square feet of office and light industrial uses, and 100,000 square feet of hotel/commercial uses. The site is not yet built-out. (A5)

- **Stoneridge Drive Specific Plan**: A 293-acre area in the City of Pleasanton proposed for 1,340 residential units and 1.35 msf of commercial/office uses. (A6)

- **Hacienda Business Park**: A general plan amendment was approved in December 1991 permitting the redesignation of 79 acres of this business park to residential uses. A potential 1,358 housing units could be built. Projected commercial space is 10.18 msf. (A7)

- **Laurel Creek**: A 271-acre site in the City of Pleasanton approved for 100 new residential units. (B1)

- **West Pleasanton Expanded Plan Area**: The buildout characteristics of development in this 7,100-acre area remain undefined after the defeat of the *Pleasanton Ridgelands Plan* by public referendum in June 1992. The *Ridgelands Plan* had set an upper limit for residential development at 2,640 units. (B2)

- **Westside Specific Plan**: Proposed development calls for 1,289 housing units on this site west of the City of San Ramon. (B5)

- **Bishop Ranch Business Park**: Buildout projections for this 585-acre site call for 9.4 msf of commercial/office space. No residential development is planned. (B6)

DISCUSSION OF CUMULATIVE IMPACTS

Traffic and Circulation

To assess the potential impacts of the Project on traffic and circulation conditions, two "time-horizon" dates were used: Year 2010, and "buildout". The buildout horizon is the unspecified future date at which all cumulative projects in the Tri-Valley will have been completed.

this is acceptable

incorrect

As a general assessment, this EIR concludes that *Year 2010* traffic and circulation conditions, while always less severe than conditions at full buildout, will be at level-of-service (LOS) D or lower, and therefore constitute significant cumulative impacts of the Project.

Cumulative impacts are identified by two parameters: Daily Traffic Volumes; and Peak Hour Intersection Operations.

Impacts related to transit, and pedestrians and bicycle circulation are not cumulative.

Daily Traffic Volumes (*Year 2010 Without Project*)

IM 3.3/A I-580 Freeway, Tassajara-Fallon

This section of I-580 would exceed LOS E. This is a significant cumulative impact.

Mitigation Measures of the EIR

MM 3.3/1.0 calls for the cooperation of the City of Dublin with Caltrans' efforts to construct auxiliary lanes on I-580 between Tassajara and Fallon roads.

Implementation of this mitigation measure will reduce this impact to a level of insignificance.

Daily Traffic Volumes (*Year 2010 With Project*)

IM 3.3/B I-580 Freeway, I-680-Hacienda

This section of I-580 will exceed LOS F with the Project. This is a significant cumulative impact.

Mitigation Measures of the EIR

MM 3.3/2.0 and *MM 3.3/3.0* require business with 50 or more employees to participate in TSM programs and for the Project to contribute a proportionately to regional transportation mitigation measures.

Implementation of these mitigation measures will reduce this impact but not eliminate it. It will remain a significant cumulative impact.

IM 3.3/C I-580 Freeway, Tassajara-Fallon-Airway

LOS would exceed level E on this section of I-580 with the Project. This is a significant cumulative impact of the Project.

Mitigation Measure of The EIR

MM 3.3/3.0 calls for the Project's developers to contribute to the construction of auxiliary lanes on I-580 between Tassajara Road and Airway Boulevard.

Implementation of this mitigation measure would reduce this impact to a level of insignificance for the Fallon Road-Airway Boulevard segment. LOS on the Tassajara-Fallon segment would remain a significant cumulative impact.

IM 3.3/D I-680 Freeway, North of I-680

LOS on I-680 north of the I-580 interchange would exceed level E. This is a significant cumulative impact.

Mitigation Measure of the EIR

MM 3.3/4.0 calls for the Project to contribute proportionately to planned improvements at the I-580/I-680 interchange.

Implementation of this mitigation measure would achieve LOS D operations and reduce this impact to a level of insignificance.

Daily Traffic Volumes (*Cumulative Buildout With Project*)

IM 3.3/E Cumulative Freeway Impacts

Additional freeway sections would exceed LOS E under full buildout of cumulative projects including I-580 west of I-680 (from LOS E to LOS F), and I-580 east of Airway Boulevard (from LOS E to LOS F). This is a significant cumulative impact.

Mitigation Measure of the EIR

MM 3.3/5.0 calls for the participation of local jurisdictions in regional transportation mitigation programs.

Despite implementation of this mitigation measure, this impact would remain a significant cumulative impact.

Peak Hour Intersection Operations (*Cumulative Buildout With Project*)

IM 3.3/M Cumulative Impacts on Dublin Boulevard

At the intersection of Hacienda Drive with Dublin Boulevard, LOS would be at level F. At the intersection of Tassajara Road with Dublin Boulevard, LOS would be at level E. This is a significant cumulative impact.

Mitigation Measure of the EIR

MM 3.3/13.0 suggests the construction of grade-separated interchanges on Dublin Boulevard and/or establishment of alternative routes to redistribute traffic flow.

Implementation of this mitigation measure would reduce but not eliminate this impact. It would remain a significant cumulative impact.

IM 3.3/N Cumulative Impacts on Tassajara Road

LOS F operations would result at the intersections of Tassajara Road with Fallon and Gleason roads and the Transit Spine. This is a significant cumulative impact.

Mitigation Measure of the EIR

MM 3.3/14.0 states that buildout of non-Project-related development would require the widening of Tassajara Road to six lanes between Dublin Boulevard and the Contra

Costa County line. This widening would not be compatible with the proposed land use plan.

Implementation of this mitigation measure would reduce the traffic impact. However, due to its conflict with the proposed land use plan of the Project, this impact remains a potentially significant cumulative impact.

Community Services and Facilities

Fire Protection

IM 3.4/E Exposure to Wildfire Hazards

The development of new residential development in ridgelands areas with difficult access exposes the new residential population to increased safety hazards from wildlands fires. As more development is proposed at the edges of the Tri-Valley's core communities in steep grass- and woodlands, response times in emergency fire situations may decrease and the resources of firefighting services may be strained, even in non-wildlands situations. This potential impact to regional firefighting services, many of whom participate in mutual aid systems such as Twin Valley Mutual Aid System Agreement (TVMASA), is identified as a potentially significant cumulative impact.

Mitigation Measures of the Specific Plan

Mitigation for this impact is provided by *MM 3.4/9.0*, *MM 3.4/10.0* and *MM 3.4/11.0* which call for project design that takes fire safety into account, buffer zones for homes which adjoin wildlands, and maintenance of buffer zones, and the integration of fire trails and fire breaks into the trail system.

Mitigation Measures of the EIR

Additional mitigation for this impact is provided by *MM 3.4/12.0* which calls for the preparation of a wildfire management plan.

Implementation of all of these mitigation measures will reduce this impact to a level of insignificance.

Parks and Recreation

IM 3.4/K Demand for Park Facilities

Increased population results in additional need for park and recreation facilities. The City of Dublin Recreation Department is currently unable to develop the Dougherty Hills Open Space due to a lack of sufficient financial resources. The addition of new park and open space areas by the Project to the City's current inventory, in addition to other growth in the City, may exacerbate maintenance and development of existing facilities if adequate funding is not identified and secured. This is a potentially significant cumulative impact.

Mitigation Measures of the General Plan Amendment

MM 3.4/24.0 requires that land be dedicated and improved or that in-lieu fees be collected for the 25 parks designated by the Project.

Mitigation Measures of the Specific Plan

Mitigation for this impact is provided by MM 3.4/27.0 which requires that park

development in eastern Dublin by consistent with the City of Dublin Park and Recreation Master Plan 1992. The Master Plan contains standards and phasing to ensure the adequate provision of park facilities.

Together, these two mitigation measures will ensure that adequate monies are available for park development and that park development is phased with residential development. Implementation of both of these mitigation measures will reduce this impact to a level of insignificance.

Solid Waste

IM 4.4/P Impact on Solid Waste Disposal Facilities

Solid waste generated by the Project would contribute to the cumulative demand for landfill capacity, and could accelerate the closure time for the Altamont landfill which is a regional facility handling waste from Alameda County and San Francisco County. Although the landfill operators are pursuing an expansion program which would provide 350 million cubic yards of capacity, the additional capacity cannot be counted until all permits are granted. This is a significant cumulative impact.

Mitigation Measures of the EIR

MM 3.4/39.0 and *3.4/40* call for the preparation of a *Solid Waste Management Plan* for the Project and link approval for development in eastern Dublin to the availability of landfill capacity to absorb projected wastes generated by proposed development.

Implementation of both of these mitigation measures will reduce this impact to a level of insignificance.

Sewer, Water and Storm Drainage

IM 3.4/D Future Lack of Wastewater Treatment Capacity

Development of the Project will contribute to cumulative demand for treatment capacity from DSRSD. The DSRSD is not currently constrained by lack of wastewater capacity for its existing service areas, but the level of growth projected in the City of Dublin far exceeds the current remaining capacity (2,932 dwelling unit equivalents as of December 1991). DSRSD has prepared a Wastewater Collection System Master Plan to address the potential cumulative impacts of growth in the City's extended planning area. The Master Plan, which was developed with earlier estimates of potential development in Eastern Dublin, will need to be revised to reflect the proposed GPA and Specific Plan. In summary, there is an increasing demand on area wastewater treatment facilities operated by the DSRSD and other agencies. This is a potentially significant cumulative impact on these facilities.

Mitigation Measures of the Specific Plan

This impact is reduced by *MM 3.5/8.0* and *3.5/9.0* which require that wastewater treatment facilities be available to meet the needs of future development in eastern Dublin and that DSRSD can construct the facilities it needs.

Implementation of both of these mitigation measures will reduce this impact to a level of insignificance.

IM 3.5/G Lack of Current Wastewater Disposal Capacity

The Project, combined with other subregional development, will result in an increase in subregional wastewater flows to the wastewater export facilities of the Tri-Valley. Implementation of a new

wastewater export pipeline is being studied by the Tri-Valley Wastewater Authority. Until new capacity is developed, Project wastewater will continue to represent a significant adverse cumulative impact.

Mitigation Measures of the Specific Plan

MM 3.5/11.0 through *MM 3.5/14.0* call for the City of Dublin to support the TWA in its current effort to implement a new wastewater export pipeline and to promote water recycling as a means of reducing wastewater flows.

Implementation of all of these mitigation measures will reduce this impact to a level of insignificance.

Water

IM 3.5/Q Increase in Demand for Water

The Project, combined with cumulative projects, will increase the overall demand for water in the Tri-Valley at a time when water supplies and deliveries are uncertain. The following discussion of water supply and potential cumulative impacts is taken from the *Western Dublin Specific Plan/General Plan Amendment Final EIR.*

Ongoing urban development in the Livermore-Amador Valley and the region is resulting in a cumulative increase in water demand. The San Francisco Bay region has been experiencing periodic shortages, at times resulting in water rationing.

Zone 7 of the Alameda County Flood Control and Water Conservation District is the Livermore-Amador Valley's water wholesaler. Zone 7 obtains its supplies from three sources: The State Water Project, local runoff; and from natural recharge of the ground water basin. A detailed summary of Zone 7's water projections is included in Appendix I: Zone 7 Water Supply Update.

State Water Project. This imported water supply is by far the largest source of water for the Livermore-Amador Valley. The amount of water for which Zone 7 has contracted increases each year until it reaches the maximum annual entitlement of 46,000 acre feet in 1997. See Appendix I for a detailed summary of State Water Project water service capabilities.

Local Runoff. Conserved water runoff is being developed by Zone 7 under its water rights permit on the Arroyo del Valley.[1] *This amount of water obtained from local runoff is essentially fixed.*

Groundwater. In the past, groundwater was the only source of supply for the Livermore-Amador Valley. This resource has gone through several periods of extended withdrawal and subsequent recovery. From 1962 to 1983, Zone 7 conducted a program of groundwater replenishment by recharging water for storage in the groundwater basin. This type of groundwater recharge typically has been done in winter months, during times of off-peak demand. Current groundwater levels are at the level of 1974.[2]

It is estimated that the current average annual natural discharge into the groundwater basin, including the last four years of low rainfall, is about 13,500 acre feet. This is about 10 percent lower than the average annual withdrawal (excluding excess quarry discharges. Zone 7 has

[1]Alameda County Flood Control and Water Conservation District, "Water Supply: Zone 7 Water Service Area." August 1990, page 2.

[2]Vince Wong, Zone 7, personal communication, January 7, 1992.

the objective of offsetting this imbalance by artificial recharge. According to Zone 7, the current deficit could be erased by a few wet years. However, this assumption has been challenged by some local residents, who note that the recent groundwater overdrafts could become an increasing problem, since additional water withdrawals would have to be balanced by artificial recharge from uncertain sources.[3] The issue is complicated by plans for two new wells. Pleasanton and DSRSD are planning a new well, and Zone 7 is currently drilling another well. These wells are planned for the purpose of alleviating water constraints during times of peak demand.

Potential Cumulative Impacts

In their 1990 analysis of water supply, Zone 7 noted the following:

> *If the State Water Project is unable to complete some of its currently planned facilities...and/or we experience protracted drought periods, improved water conservation and conjunctive use of surface and groundwater supplies become essential...Demand would have to be reduced by voluntary water conservation or rationing. some extra pumping from the groundwater basin should alleviate the need to impose severe water rationing. The groundwater basin would have to be replenished in subsequent average or wet years when there is excess supply to rebuild the reserve groundwater supply...Carefull monitoring of groundwater quality would be imperative in any prolonged groundwater withdrawal.[4]*

Zone 7 recently has completed an analysis of water supply in relation to projected population growth. This report is included in EIR Appendix I. Based on this analysis, the Zone 7 report concludes the following:

- *Zone 7 current water supply can meet the needs of 174,000 to 192,000 people, depending on how successful BMPs [best management practices] and water conservation are in reducing water demands.*

- *If DWR completes planned additions to the State Water Project, the Zone could supply the needs of 210,000 to 231,000 people.*

- *Existing general plans have a population potential of 188,000 in the Zone 7 water service area. Prospective general plans have a potential of 274,000. To meet the needs of 274,000 people, the Zone would need to develop 25,000 acre feet per year of new water. Possible sources of water include water marketing, recycled water, and additional storage.*

Zone 7, then, has a history of responsible groundwater management and reliable delivery. However, cumulative water demand, political decisions, weather, and other unforeseen events outside the control of Zone 7 could result in future water shortages for the Livermore-Amador Valley. Although the analysis by Zone 7 shows that this scenario is unlikely before the year 2010, this still a potential significant cumulative impact. The following mitigation measures are recommended to reduce this impact.

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[3]Abbot, Doug. Personal communication, January 1992.

[4]Alamenda County Flood Control and Water Conservation District, pages 3-5.

Mitigation Measures of the Specific Plan

MM 3.5/26.0 and *MM 3.5/27.0* call for water conservation and water recycling programs.

Mitigation Measures of the EIR

MM 3.5/28.0 through *MM 3.5/31.0* call for improvements to ensure adequate water supplies for eastern Dublin. These improvements include: Zone 7 capital facilities including new Zone 7 turnouts; interconnections with existing systems; and new DSRSD groundwater wells.

Implementation of all of these mitigation measures is required to reduce this impact to a level of insignificance.

Storm Drainage

IM 3.5/Y Potential Flooding

The increase of impervious surfaces associated with development on the Project site would increase the volume and rate of runoff in local creeks and watercourses, thus contributing to a potential increase in flood hazards. As development of former agricultural, rural and open space lands accelerates in the Tri-Valley, the potential for flood hazards on a subregional basis is increasing. The Project, therefore, is identified as contributing to this potentially significant cumulative impact.

Mitigation Measures of the Specific Plan

MM 3.5/44.0 through *MM 3.5/47.0* establish actions that the City of Dublin can take to control flooding, including the submittal of a *Storm Drainage Master Plan* for each development application prior to development approval.

Mitigation Measures of the EIR

MM 3.5/48.0 requires that the conceptual backbone storm drainage facilities proposed for the Specific Plan area be developed for the total Project site.

Implementation of all of these mitigation measures will reduce this impact to a level of insignificance.

IM 3.5/Z Reduced Groundwater Recharge

The Project would contribute to the increase in impervious surfaces in the Tri-Valley which could result in a reduction in groundwater recharge. This is identified as a potentially significant cumulative impact.

Mitigation Measures of the Specific Plan

MM 3.5/49.0 calls for management practices that protect and enhance water quality.

Mitigation Measures of the EIR

MM 3.5/50.0 calls for support of Zone 7's ongoing groundwater recharge program for the Central Basin.

Implementation of both of these mitigation measures is required to reduce this impact to a level of insignificance.

IM 3.5/AA Sources of Pollution

The Project would contribute to a subregional increase in non-point pollution sources, thus leading to a deterioration in the quality of runoff. This is a potentially significant cumulative impact.

Mitigation Measures of the Specific Plan

MM 3.5/51.0 requires that a specific water quality investigation be submitted with each development application.

Mitigation Measures of the EIR

MM 3.5/52.0 calls for the development of educational programs to inform residents and businesses of ways to reduce non-point sources of water pollution.

Implementation of both of these mitigation measures is required to reduce this impact to a level of insignificance.

Soils, Geology and Seismicity

IM 3.6/C Earthquake Ground Shaking: Secondary Effects

The Project site is located in a region subject to ground shaking from active faults. Further settlement of population in the area has the potential to expose residents to significant safety hazards and to strain the capacity of emergency response systems. This is a potential significant cumulative impact.

Mitigation Measures of the EIR

MM 3.6/2.0 through *MM 3.6/8.0* call for a range of measures to protect future residents of eastern Dublin from potential safety hazards related to the secondary effects of earthquake ground shaking.

Implementation of all of these mitigation measures will reduce this impact to a level of insignificance.

IM 3.6/D Substantial Alteration to Project Site Landforms

Grading and excavation will permanently alter the existing landform of the Project site. This impact will contribute to the cumulative process of landform alteration as hillsides and ridgelands of surrounding cities of the Tri-Valley are also graded and excavated for development projects. This is a significant cumulative impact as well as a significant irreversible change to the local environment.

Mitigation Measures of the EIR

MM 3.6/9.0 and *3.6/10.0* call for adapting grading plans to natural landforms and by careful siting of improvements to avoid adverse conditions and the need for remedial grading.

Implementation of both of these mitigation measures would reduce this impact to a level of insignificance. Significant irreversible change is discussed in *Section 5.5* below.

IM 3.6/L Erosion and Sedimentation: Long Term

Grading and construction activities on the Project site will occur concurrent with development of similar sites throughout the Tri-Valley. At a subregional level, the Project will contribute to both short-term and long-term increases in erosion and sedimentation and potentially impact the hydrological conditions of subregional watercourses. This is a significant cumulative impact of the Project.

Mitigation Measures of the EIR

MM 3.6/28.0 calls for long-term measures such as appropriate design, construction, and continued maintenance.

Implementation of this mitigation measure will reduce this impact to a level of insignificance.

Biological Resources

IM 3.7/A Direct Habitat Loss

The Project will contribute to the ongoing process of habitat loss in the Tri-Valley region. This loss involves more than the loss of an individual site, but relates to the cumulative loss of natural habitat areas. While some species can exist in a relatively specific area, others require mobility among a range of habitat areas to satisfy different sustenance needs (ie. feeding, denning, foraging, etc.) The preservation of areas as Open Space, while important, may not significantly reduce impacts to species if preserved areas are discontinuous or do not provide the appropriate ecological conditions.

Fragmentation and isolation of habitat reduces its quality, and makes remaining non-developed areas more vulnerable to perturbations. In addition, habitat fragmentation by roads and development can create barriers to wildlife movements, disrupting migration or dispersal patterns.

Habitat loss on the Project site is therefore considered a significant adverse cumulative impact.

Mitigation Measures of the Specific Plan

MM 3.7/1.0 calls for minimizing direct disturbance or removal of trees or native vegetative cover; *MM 3.7/2.0* calls for vegetation enhancement/management plans for all open space areas; and *MM 3.7/3.0* calls for detailed vegetation restoration plans for all disturbed areas that are to remain undeveloped on the Project site.

Mitigation Measures of the EIR

MM 3.7/4.0 calls for the City to develop grazing management plans to protect riparian and wetlands areas and to increase plant diversity and the recovery of native plants.

Implementation of all of these mitigation measures will reduce this impact to a level of insignificance.

IM 3.7/C Loss or Degradation of Botanically Sensitive Habitat

The continued loss and deterioration of botanically sensitive habitat, and in particular, riparian habitat is of great concern to both federal and state authorities. The majority of the sensitive species expected to occur on the Project site depend on riparian and associated aquatic habitat (Verner and Boss 1980; Thomas 1979). Destruction of riparian habitat or other aquatic habitats has the potential to impact special status species such as red-legged frogs, western pond turtles, and California tiger salamanders. This is a potentially significant cumulative impact of the Project.

Mitigation Measures of the Specific Plan

MM 3.7/6.0 through *MM 3.7/15.0* provide extensive measures designed to reduce impacts to botanically sensitive habitat.

Mitigation Measures of the EIR

MM 3.7/16.0 and *3.7/17.0* call for the avoidance of botanically sensitive habitats and protections where feasible. Construction near drainages is recommended for the dry season.

Although these mitigation measures have been provided to reduce impacts to botanically sensitive resources, there would still be a net loss of habitat. Thus, this impact would remain a **significant cumulative impact** that is an unavoidable result of urban development in the Tri-Valley area.

IM 3.7/K Golden Eagle: Elimination of Foraging Habitat

The ongoing urban development of rangelands and hillsides in the Tri-Valley is contributing to the cumulative loss of foraging habitat for golden eagle and other raptors such as prairie falcon, northern harrier, and black-shouldered kite. This is a potentially significant cumulative impact.

Mitigation Measures of the EIR

MM 3.7/25.0 and, by reference, *MM 3.7/23*, call for the establishment of a Golden Eagle Protection Zone near the golden eagle nesting site. The 3,243.4 acres of land provided by the General Plan Amendment land use plan will also contribute to the preservation of suitable foraging habitat on the Project site.

Implementation of *MM 3.7/23.0* and *MM 3.7/25.0* will reduce this impact to a level of insignificance.

Visual Resources

IM 3.8/B Alteration of Rural/Open space Visual Character

Development of the Project would contribute to the on-going process in which the natural rural character of the Tri-Valley is replaced with urban development. Each development project in the Tri-Valley contributes to this transition. In time, the visual experience of driving through the Tri-Valley will be significantly altered by new development. At present, travel along the major freeways provides views of suburban business parks and residential areas; travel on the backroads, some of which are designated as scenic routes, still largely conveys a sense of the subregion's rural, agricultural and natural heritage. As development moves into the hillsides, the experience of traveling along these roads will be substantially altered. Development of currently proposed projects such as the Eastern Dublin Specific Plan, the Dougherty Valley Specific Plan, Tassajara Valley Property Owners Association proposal, and the North Livermore General Plan Amendment will have a significant cumulative impact on the visual character of the Tri-Valley subregion.

Mitigation Measures of the EIR

MM 3.8/2.0 calls for implementation of the land use plan for the Project site which emphasizes the retention of predominant natural features such as ridgelines and watercourses.

Implementation of this mitigation measure will partially but not fully reduce this impact. If the Project is developed in fulfillment of the City's objectives, the visual character of eastern Dublin will

change. This impact remains a significant cumulative impact.

Noise

IM 3.10/B Exposure of Existing Residences to Future Roadway Noise

The Project would contribute to cumulative traffic-related noise impacts in the region. Each cumulative project may contribute one or two decibels to the overall noise level in the subregional area. This may typically be considered no impact since the increase is generally less than 3 dB. However, over the long term, the noise level increases in a substantial manner. This would be true along such roadways as Fallon and Tassajara road. Therefore, the noise impact of the Project is considered a significant cumulative impact.

Mitigation Measure of the EIR

added? not in noise section

MM 3.10/7.0 *In order to mitigate this significant cumulative impact, the City should develop a noise mitigation fee to pay for mitigating measures such as noise barriers, earthen berms or retrofitting existing structures with sound-rated windows. The mitigation fee could be developed on a "dollars for decibel" basis. For example, if the future noise level is predicted to increase by 4 dB, and the Project will contribute 2 dB, then the applicant should be responsible for 50 percent of the total cost of any off-site mitigation measures.*

This mitigation measure is designed especially to reduce cumulative impacts related to noise. This is an experimental concept which has been adopted by other jurisdictions in the Tri-Valley. Implementation of this mitigation measure would reduce cumulative noise impacts to a potentially significant level.

Air Quality

IM 3.11/A Dust Deposition Soiling Nuisance from Construction Activity

This is a potentially significant cumulative impact due to the non-attainment status of the air basin.

Mitigation Measures of the EIR

MM 3.11/1.0 requires that a series of actions be taken by the City of Dublin to reduce dust deposition from construction activity.

Even if the City implements *MM 3.11/1.0*, cumulative PM-10 impacts will not be reduced to a level of insignificance because the non-attainment status of the air basin imposes a zero tolerance threshold for cumulative impacts for any non-attainment pollutants. This impact will remain a potentially significant cumulative impact.

conflicts w/ earlier text

IM 3.11/B Construction Equipment/Vehicle Emissions

This is a potentially significant cumulative impact due to the non-attainment status of the air basin.

Mitigation Measures of the EIR

MM 3.11/2.0 through *MM 3.11/4.0* propose measures to reduce emissions related to construction operations.

Implementation of these mitigation measures will not reduce this impact to a level of insignificance due to the non-attainment status of the air basin. This impact will remain a potentially significant cumulative impact.

IM 3.11/C Mobile Source Emissions: ROG and NOx

Mobile source emission may result in regional impacts through emissions of ozone precursor pollutants. This impact is, therefore, a potentially significant cumulative impact.

Mitigation Measures of the EIR

MM 3.11/5.0 through *MM 3.11/11.0* propose measures that the City of Dublin can implement to reduce emissions related to vehicle operations. Additionally, the BAAQMD is pursuing legislative authority needed for market-based measures, such as "smog-based" vehicle registration fees, gas taxes, and parking fees. Near-term programs to reduce cumulative impacts of growth that are expected to be developed include a mandatory TSM program for major employers and a vehicular emissions reduction program from all major traffic generators (called "indirect" sources".) Because of the degree of possible controversy over many candidate emissions reduction measures that affect mobility, lifestyle and/or cost, adoption of the more controversial measures is expected to be gradual after much additional analysis and evaluation.

Implementation of all of these mitigation measures, however, will not reduce this impact to a level of insignificance. This impact will remain a potentially significant cumulative impact.

IM 3.11/E Stationary Source Emissions

Stationary source emissions may create a potentially significant impact from regional electricity generation emissions, from on-site natural gas combustion, and from miscellaneous non-vehicular fuel combustion and volatile organic compound evaporative emissions. Residual impacts will be significant cumulative impacts because of the non-attainment status of the airshed.

Mitigation Measures of the EIR

MM 3.11/12.0 and *MM 3.11/13.0* calls for measures to minimize stationary source emissions.

Implementation of both of these mitigation measures cannot achieve the eight-fold reduction in stationary source emissions needed to meet the insignificant threshold. This impact will remain a significant cumulative impact of the Project.

5.2 GROWTH-INDUCING IMPACTS

Growth-inducing impacts, as defined by *CEQA Guidelines*: Section 15126 are those which could "foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the **surrounding** environment." The focus of this discussion is Project impacts that may lead to growth outside the boundaries of the Project site.

Community Services and Facilities

IM 3.4/Q Demand for Utility Extensions

Development of the Project site will require expansion of electrical and gas lines onto undeveloped

lands currently in agricultural and open space land uses. The expansion of utilities infrastructure to serve the Project site will have a growth-inducing impact on adjacent undeveloped areas.

why doesn't EIR provide some

Although mitigation measures have been developed to diminish impacts to sensitive habit and visual resources, no mitigation is provided for growth-inducement. This impact remains as a growth-inducing impact, primarily because utilities infrastructure is considered less of a growth-inducer than other types of infrastructure, such as roads, sewer and water lines.

unclear

Sewer, Water and Storm Drainage

IM 3.5/C Extension of A Sewer Trunk Line with Capacity to Serve New Developments

The extension of sewer infrastructure onto the Project site may have a growth-inducing impact on adjacent undeveloped areas in Alameda County and Contra Costa County.

Mitigation Measure of the EIR

> *MM 3.5/6.0* states that the wastewater system has been designed only to serve the Specific Plan area with additional capacity to serve the Project site only.

Implementation of this mitigation measure will restrain development beyond the boundaries of the Project site and reduce this impact to a level of insignificance.

IM 3.5/T Inducement of Substantial Growth and Concentration of Population

The water distribution system infrastructure has been sized in anticipation of growth beyond the Project site (particularly, the Dougherty Valley to the north) and will certainly facilitate development within the total Project site as a result.

Mitigation Measures of the EIR

> The Project partially mitigates this growth-inducement by designating most of the outer portions of the General Plan Amendment area as Rural Residential. These areas are intended for very minimal development and will not require any extensive infrastructure. Isolated pockets of Single Family Residential development near the Contra Costa County line remain a concern because infrastructure will need to "leap frog" through rural portions of the Project site to service these areas. Partial mitigation of this growth-inducement can be achieved through a modification of the land use designations for border areas of the Project site.

Implementation of this mitigation measure will partially reduce this impact. Growth-inducement outside the Project boundary appears to be a trade-off with sound planning for an adequately-sized water distribution system. This impact remains significant.

5.3 UNAVOIDABLE ADVERSE IMPACTS

Pursuant to *CEQA*, a draft EIR must describe those significant environmental impacts for which no mitigation or only partial mitigation are feasible. While mitigation measures have been proposed for these impacts, the impact would not be reduced to an insignificant level without substantially altering the basic characteristics of the Project.

Traffic and Circulation

IM 3.3/B states that even with mitigation, LOS would exceed the significance threshold established by the City on I-580 between I-680 and Hacienda Drive. This remains an unavoidable adverse impact of the Project.

IM 3.3/E states that under the *Cumulative Buildout with Project* scenario, LOS would exceed the significance threshold established by the City. Even with mitigation, this impact remains an unavoidable adverse impact of the Project.

IM 3.3/I states that by the year 2010, development with the Project will cause LOS F operations at the intersection of Santa Rita Road with the I-580 eastbound ramps. Mitigation will reduce this impact but will create significant indirect impacts as drivers seek alternate routes to avoid the poor circulation conditions. This impact remains, therefore, an unavoidable adverse impact.

IM 3.3/M states the under the *Cumulative Buildout with Project* scenario, LOS would exceed the City's significance thresholds at two key intersections of Dublin Boulevard: Hacienda Drive and Tassajara Road. Implementation of *MM 3.3/13.0* would reduce but not eliminate this impact. It remains an unavoidable adverse impact of the Project.

The impact of the Project on level-of-service (LOS) at Tassajara Road intersections is identified as a significant cumulative impact: **IM 3.3/N**. To mitigate this LOS F, Tassajara Road would need to be widened to at least six lanes. A widening of this kind would fundamentally change the visual and physical character of the planned community. It is considered preferable to leave Tassajara Road at its current width and to accept congestion as an unavoidable adverse impact of the Project.

Community Services and Facilities

The extension of utility lines onto the Project site for gas, electric and telephone service has been identified as a significant growth-inducing impact of the Project. If the Project is to be developed, these extensions will be a necessity and are, therefore, unavoidable adverse impacts. Substantial mitigation can be achieved by *MM 3.7/26.0* which calls for the undergrounding of utilities lines. Implementation of this mitigation measure will reduce this impact to a level of insignificance.

Air Quality

Regional Ozone Emissions

Motor vehicles associated with the Project would contribute to regional ozone emissions. Given the region's existing non-compliance with air quality standards, and regulatory requirements to reduce ozone emissions, this would be a significant unavoidable adverse impact. Mitigation measures in the EIR would not reduce this impact to an insignificant level.

Noise

Increased traffic on area roadways will significantly increase noise levels, thus adversely affecting existing residences and population. Mitigation can be achieved to buffer residents from levels that exceed acceptable standards, by providing berms or walls adjacent to outdoor use spaces of existing residences. However, the magnitude of change in the noise environment, from quiet rural roads with little traffic to busy suburban thoroughfares, cannot be avoided. This is, therefore, an unavoidable adverse impact of the Project.

Visual

Development of the Project area will adversely impact the existing rural, agricultural character of the area, eliminating the sense of simplicity and openness that currently characterizes the planning area landscape. Although the highest ridgelines would be preserved as open space, the visual character of the rounded lower foothills in the foreground would be altered by construction of homes and roads. This is, therefore, an unavoidable adverse impact of the Project.

5.4 SHORT-TERM VERSUS LONG-TERM PRODUCTIVITY

The impacts discussed below are those which would narrow the range of long-term beneficial uses of the site. If the Project is approved, the City of Dublin would, by this action, foreclose other future beneficial and productive uses.

Cultural Resources

Despite archaeological surveys performed to date, it is possible that unidentified prehistoric sites may exist on the Project site. Urban development of these areas may preclude their discovery and study by future generations. The Specific Plan includes extensive policies, in conformance with Appendix K of *CEQA*, to protect identified and unidentified prehistoric resources. If fully implemented, these provisions will at least protect resources identified during the construction of the Project.

5.5 SIGNIFICANT IRREVERSIBLE CHANGES

This discussion evaluates the Project in terms of its consumption of irretrievable natural resources. The discussion also focuses on Project land uses that will make it unlikely for future generations to reverse or remove these land use decisions.

Electricity, Natural Gas and Telephone Service

IM 3.4/S Consumption of Non-Renewable Natural Resources

The Project will increase demand for non-renewable fuel sources, including fossil fuels used in the generation of electricity, and natural gas. This commitment of non-renewable resources represents a significant irreversible change caused by the Project.

Mitigation Measures of the EIR

As mitigation measures, *MM 3.4/45.0* and *MM 3.4/46.0* encourage conservation, the use of alternative fuel sources, and energy-conserving design.

Despite implementation of these mitigation measures, the consumption of non-renewable resources associated with Project development is expected to remain a significant irreversible change.

Sewer, Water and Storm Drainage

IM 3.5/F Increase in Energy Usage Through Increased Wastewater Treatment

and

IM 3.5/H Increase in Energy Usage Through Increased Wastewater Disposal

Development of the Project will increase demand for non-renewable fuel sources, including fossil fuels for electricity. More specifically, wastewater treatment including 1) pumping of raw wastewater

to the Contra Costa County Sanitary District for treatment under the TWA-proposed project; and/or 2) operation of an advanced treatment and distribution system for recycled water will require increased energy use. This is a potentially significant irreversible change caused by the Project.

Mitigation Measures of the EIR

MM 3.5/10.0, MM 3.5/15.0 and *MM 3.5/16.0* call for support for the use of energy-efficient wastewater treatment systems including off-peak pumping and energy-efficient water recycling facilities.

Implementation of these measures will partially reduce but not eliminate impacts to non-renewable energy resources associated with wastewater treatment and disposal. These impacts will remain a potentially significant irreversible change of the Project.

IM 3.5/U Increase in Energy Usage Through Operation of the Water Distribution System

Analogously, the water distribution system required by the Project will increase demand for energy, primarily for pumping water to the system and for storage.

Mitigation Measure of the EIR

MM 3.5/40.0 proposes that the water distribution system that eventually serves the Project be planned, designed and constructed for maximum energy-efficient operation.

Implementation of this mitigation measure will reduce, but not eliminate, this impact. It will remain a significant irreversible change associated with the Project.

Geology, Soils and Seismicity

this is more visual isn't it - already covered by change to visual character.

COR not statistical here — ~~of~~ in geo section pays insig.

As stated in Section 5.1: *Cumulative Impacts* above, grading and excavation of the Project site will permanently change the existing physical condition of the Project site. Once the landscape is graded to create safe and stable building sites, it is highly unlikely that it will revert at some future time to its natural condition. This impact, IM 3.6/D, is a significant irreversible change.

Full mitigation of this impact is not possible. This impact remains a significant irreversible change.

Biological Resources

COR — text says insig. ! add stmt

In developed portions of the Project site, direct habitat loss (IM 3.7/A) will be total and permanent. This represents a significant irreversible change to those portions of the General Plan Amendment area. This loss of habitat would also cause the reduction or elimination of dependent wildlife, including some special status species.

5.6 IMPACTS FOUND NOT TO BE SIGNIFICANT

Discussed below are impacts which, although they appear significant, were determined to be insignificant.

Geology, Soils and Seismicity

IM 3.6/E Elimination of Future Use of Project Site for Aggregate Resources

The use of the Project site for urban development will preclude future extraction of aggregates. Land set aside for Rural Residential, Open Space and Parks use, while potentially available for resource extraction, would not be accessible or appropriate for this kind of land use activity once the residential community is established in eastern Dublin. While the Project might be considered a short-term use of the site which would eliminate other productive long-term uses, the geological assessment has concluded that aggregates are not considered adequate for extraction from this area. This impact to aggregate resources is therefore found to be insignificant.

No mitigation measure is necessary.

Noise

IM 3.10/C Exposure of Existing and Proposed Development to Airport Noise

Impacts due to aircraft noise were found to be insignificant since the CNEL 60 contour does not extend upon the Project site. Although aircraft flyovers will be audible on the site, a CNEL of less than 60 dB is considered compatible with residential uses.

No mitigation measure is necessary.

Subregional Land Use Planning and Development

Legend

- General Plan Amendment Area
- Specific Plan Area

Adjacent to the Project Site

A1	Camp Parks
A2	Dougherty Valley
A3	Tassajara Valley
A4	North Livermore GPA
A5	Triad Business Park
A6	Stoneridge Drive Business Park
A7	Hacienda Business Park

Other Nearby Subregional Projects

B1	Laurel Creek
B2	West Pleasanton
B3	Western Dublin SP/GPA
B4	Hansen Hill/Donlan Canyon
B5	San Ramon Westside SP
B6	Bishop Ranch Business Park

EASTERN DUBLIN GPA • SP • EIR

Wallace Roberts & Todd **Figure 5 - A**

Acres: 10, 40, 160

0 2000 4000 Feet

0 1/4 1/2 1 Mile 2

Chapter 6

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Section 6.3

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