DRAFT ENVIRONMENTAL IMPACT REPORT

SCH #94112056

VOLUME I

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El Dorado County Planning Department

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ESA

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INTRODUCTION

CHAPTER 1.0
INTRODUCTION

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

INTRODUCTION

El Dorado County (County) has prepared this Draft Environmental Impact Report (Draft EIR) to provide the public and Responsible and Trustee agencies with information about the potential environmental effects of the proposed Promontory Specific Plan. This Environmental Impact Report (EIR) was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), and the CEQA Guidelines (California Code of Regulations, Title 14). As described in CEQA Guidelines Section 15121(a), an EIR is a public information document that assesses potential environmental effects of the proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid adverse environmental impacts.

TYPE OF EIR

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR is prepared as a Program EIR pursuant to the CEQA Guidelines, Section 15168(a). CEQA Guidelines Section 15168(a) describe a Program EIR as:

> *A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:*
>
> *(1) Geographically,*
> *(2) A logical parts in the chain of contemplated actions,*
> *(3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or*
> *(4) 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.*

1.2 CEQA EIR PROCESS

INITIAL STUDY AND NOTICE OF PREPARATION

In accordance with Sections 15060(c) of the CEQA Guidelines, El Dorado County prepared a Notice of Preparation (NOP) of an EIR on November 16, 1994. The NOP was recirculated on November 13, 1996, with no substantive changes made to the project. The El Dorado County Planning Department was identified as the lead agency for the proposed project. The 1994 and 1996 NOPs are presented in **Appendix A**. These notices were circulated to the public, local, state, and federal agencies, and other interested parties to solicit comments on the proposed project. Concerns raised in response to the NOP were considered during preparation of the Draft EIR and are presented in **Appendix A**.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives.

CEQA requires that a lead agency neither approve nor carry out a project as proposed unless the significant environmental effects have been reduced to an acceptable level, or unless specific findings are made attesting to the infeasibility of altering the project to reduce or avoid environmental impacts (CEQA Guidelines, Sections 15091 and 15092). An acceptable level is defined as eliminating, avoiding, or substantially lessening the significant effects.

PUBLIC REVIEW

This document is being circulated to local, state, and federal agencies and to interested organizations and individuals who may wish to review and comment on the report. Publication of this Draft EIR marks the beginning of a 45-day public review period, during which written comments will be received by the El Dorado County Planning Department at the following address:

El Dorado County Planning Department
Attention: Roger Trout
2850 Fairlane Court
Placerville, CA 95667

FINAL EIR AND EIR CERTIFICATION

Written and oral comments received in response to the Draft EIR will be addressed in a Response to Comments addendum document which, together with the Draft EIR, will constitute the Final EIR. After review of the project and the EIR, the El Dorado County Planning Commission, at a public hearing, will recommend to the Board of Supervisors whether to certify the EIR and whether to approve or deny the project. The County Board of Supervisors will then review the project, the EIR, the Planning Commission's recommendations, and public testimony and decide whether to certify the EIR and whether to approve the project or deny the project.

If the County approves the project, even though significant impacts identified by the EIR cannot be mitigated, the County must state in writing the reasons for its actions. A Statement of Overriding Considerations must be included in the record of the project approval and mentioned in the Notice of Determination (CEQA Guidelines, Section 15093[c]).

MITIGATION MONITORING AND REPORTING PROGRAM

CEQA Section 21081.6(a), requires lead agencies to adopt a reporting and mitigation monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific "reporting or monitoring" program required by CEQA is not required to be included in the EIR. Throughout the EIR, however, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a monitoring and reporting program. Any mitigation measures adopted by the County as conditions for approval of the project will be included in a Mitigation Monitoring and Reporting Program to verify compliance.

1.3 EIR ASSUMPTIONS

The Promontory Specific Plan Draft EIR is based on the following general assumptions:

- The approved Russell Ranch Specific Plan in the City of Folsom will generally be developed consistent with its originally approved site design.
- Ultimate resolution of current issues regarding the ultimate location of Russell Ranch Boulevard extension from the proposed project to Russell Ranch will not result in substantial modification in overall site design of the proposed project.
- Planned and future development in the City of Folsom and El Dorado County will occur substantially consistent with project approvals, specific plans, and both jurisdiction's general plan.

1.4 TERMINOLOGY USED IN THE EIR

This Draft EIR uses the following terminology to describe environmental effects of the proposed project.

- **Significance Criteria:** A set of criteria used by the lead agency to determine at what level or "threshold" an impact would be considered significant. Significance criteria used in this EIR include CEQA Guidelines Appendix G, factual or scientific information, regulatory standards of local, state, and federal agencies, and goals, objectives, and policies identified in the El Dorado County General Plan.

- **Less Than Significant Impact:** A less than significant impact would cause no substantial change in the environmental (no mitigation required).

- **Potentially Significant Impact:** A potentially significant impact may cause a substantial change in the environment; however, additional information is needed regarding the extent of the impact. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

- **Significant Impact:** A significant impact would cause a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects using specified significance criteria. Mitigation measures and/or project alternatives are identified to reduce project effects to the environment.

- **Significant Unavoidable Impact:** A significant and unavoidable impact would result in a substantial change in the environment that cannot be avoided or mitigated to a less-than-significant level if the project is implemented.

- **Cumulative Significant Impact:** A cumulative significant impact would result in a substantial change in the environment from effects of the project as well as surrounding projects and reasonably foreseeable development in the surrounding area.

1.5 EIR ORGANIZATION

This Draft EIR is organized into nine chapters as discussed below.

Chapter 1.0, Introduction. This chapter describes the purpose and organization of the EIR and the EIR preparation, review and certification process.

Chapter 2.0, Executive Summary. A summary of the project description, a description of issues to be resolved and areas of controversy, the significant environmental impacts that would result

from project implementation, and mitigation measures proposed to reduce or eliminate those impacts is provided in this chapter.

Chapter 3.0, Project Description. Chapter 3.0 describes project background, outlines project objectives, and summarizes components of the Promontory Specific Plan. The Project Description also describes subsequent development and approvals for which this EIR may be used.

Chapter 4.0, Environmental Analysis. For each environmental issue area, such as Land Use, Chapter 4.0, describes the existing environmental setting, discusses the environmental impacts associated with project construction and operation, and identifies mitigation measures for the impacts.

Chapter 5.0, Analysis of Alternatives. Chapter 5.0 describes alternatives to the proposed project at a level of detail consistent with CEQA requirements. The alternatives are not analyzed at the same level of detail as the proposed project; they are presented in order to identify options that could mitigate environmental impacts.

Chapter 6.0, Other CEQA-Required Sections. Chapter 6.0 discusses several issues required by CEQA, including cumulative impacts and the potential for the proposed project to induce urban growth and development.

Chapter 7.0, Bibliography. Chapter 7.0 provides a list of reference materials and persons consulted during the preparation of the EIR.

Chapter 8.0, EIR Authors, Consultants, and Persons/Organizations Consulted. Chapter 8.0 provides the names of the EIR authors and consultants, and agencies or individuals consulted during preparation of the EIR.

Chapter 9.0, Acronyms. Chapter 9.0 provides a list of all the abbreviations used in the EIR, and also a list of technical terms used, including definitions.

Appendices. The appendices are bound under a separate cover and consist of the 1994 and 1996 NOPs, and various technical background data.

CHAPTER 2.0

EXECUTIVE SUMMARY

CHAPTER 2.0
EXECUTIVE SUMMARY

2.1 INTRODUCTION

The proposed Promontory Specific Plan (Specific Plan) project is located in the western portion of El Dorado County (County), adjacent to the City of Folsom in Sacramento County (see **Figure 3-1**). The project is south of Folsom Lake, within the beginning of the foothills of the Sierra Nevada Mountains. The project site (or Specific Plan area) is located within the unincorporated community of El Dorado Hills, just north of U.S. Highway 50. The project site consists of approximately 999 acres along the El Dorado County and Sacramento County line. The Specific Plan area is designated as Planned Community by the El Dorado County General Plan.

The proposed project consists of the adoption of a specific plan for a mixed-use development in the El Dorado Hills area. The Promontory Specific Plan provides for the development of 1,387 residential dwelling units, 103,670 square feet of commercial and office uses, 99.8 acres of public open space, two parks, and an elementary school site.

The Promontory Specific Plan's overall goal is the development of a mixed-use planned community while preserving the natural features of the site in a manner consistent with the goals, objectives, and policies of the El Dorado County General Plan. The following objectives have been identified for the Specific Plan:

El Dorado County's objectives for the proposed project include:

- Create new balanced communities in County areas suitable for urban levels of development due to the accessibility of adequate infrastructure and general public services.
- Develop and maintain safe and efficient transportation and circulation facilities to sufficiently serve the project site.
- Designate appropriate sites for commercial uses to provide opportunities for County residents to shop and work within the County.

- Provide a variety of housing opportunities by type tenure, price, and neighborhood character in order to meet County housing needs.

- Ensure that adequate public services and utilities (water supply, wastewater service, solid waste disposal, storm water drainage, schools, fire protection, and law enforcement) are provided concurrent to each phase of project development.

- Provide for the retention and conservation of distinct topographical features and native vegetation.

- Provide a visual and physical separation of the project site from existing communities.

- Conserve wetlands, riparian areas, natural drainages, and other wildlife habitat of significant biological, scenic, and recreational values.

The project applicant's objectives for the proposed project include:

- Develop a new mixed-use community in the El Dorado Hills area.

- Maintain the natural appearance of the project site as much as possible by careful site design, development standards, and incorporation of the natural features and topography into the project in order to preserve vegetation and natural appearance.

- Provide rural and scenic views from collector roads by providing open space buffers and limitations on development along main collector roads.

- Promote a semi-rural design character of the residential villages by reducing road widths, limiting the use of sidewalks, and reducing or eliminating the need for retaining and sound walls throughout the project site.

2.2 ISSUES TO BE RESOLVED AND AREAS OF CONTROVERSY

A Notice of Preparation (NOP) for the Promontory Specific Plan EIR was circulated for public review on November 16, 1994, pursuant to Section 15060(c) of the CEQA Guidelines. The NOP was recirculated on November 13, 1996, with no substantive changes made to the project. The NOP included a summary of probable environmental effects of the proposed project. Comments received on the 1994 NOP and the 1996 NOP were considered in the preparation of this EIR and are included in **Appendix A**. Controversies and issues raised regarding the proposed project are summarized below, as well as identification of those issues not determined to be significant and will not be evaluated further in the EIR, pursuant to Section 15060(c) of the CEQA Guidelines.

LAND USE

Comments received on the NOP identified the following concerns regarding implementation of the proposed project:

- project's contribution to regional urban sprawl;
- inconsistency with existing zoning designation;
- project's consistency with the planned Russell Ranch Specific Plan; and,
- cumulative loss of grazing land.

Land use issues raised that were not considered significant and do not need to be addressed in the EIR included the following:

- Evaluation of market supply of land uses would be a social and economic consideration which is not subject to CEQA. In addition, the El Dorado County General Plan designates land uses within the County and identifies the oversupply of residential and non-residential land use designations for providing market and landowner flexibility as a General Plan objective.

AESTHETICS

Areas of controversy regarding the aesthetic and visual effects of the proposed project identified by commentors included the following items:

- project impacts to the existing perceived open space buffer between the City of Folsom and the El Dorado Hills area;
- project's contribution to the loss of the rural character of El Dorado County;
- creation of substantial light and glare; and
- project effects on the hillsides and natural features of the project site.

POPULATION, EMPLOYMENT, AND HOUSING

Several commenters identified potential project impacts to the County's provision of affordable housing; substantial increases in County population within a small project area; effects to the County's jobs/housing balance; overstock of County housing; and growth inducement of the project.

TRANSPORTATION AND CIRCULATION

The California Department of Transportation (Caltrans) identified that the project traffic analysis should evaluate effects to U.S. Highway 50 and related interchanges, cumulative traffic conditions, identify trip reduction strategies, and identify financing programs for needed roadway improvements. Other commentors identified potential traffic concerns for Green Valley Road, the need for the inclusion of bike lanes and trails, and coordination between City of Folsom and El Dorado County on traffic impacts.

AIR QUALITY

Areas of controversy regarding project air quality effects include increases in ozone, particulate matter, and carbon monoxide, as well as other air toxics generated by project from both mobile and stationary sources.

NOISE

Comments received identified noise concerns regarding implementation of the proposed project:

- project construction generation of noise and effect on sensitive receptors;
- project generated traffic increases of ambient noise levels and related off-site effects; and
- overall noise effect on the perceived rural environment of the El Dorado Hills area.

BIOLOGICAL RESOURCES

The California Department of Fish and Game (CDFG) expressed concerns regarding project effects on wetland and riparian areas. Other items of concern for CDFG and other commenters included loss of oak woodlands, effects to potential on-site special status plant and animal species, and effects on wildlife movement.

GEOLOGY AND SOILS

The El Dorado County Soil Conservation District commented on potential project impacts related to adverse ground stability impacts from grading activities, soil suitability for site development, loss of prime farm land, and soil erosion and sedimentation. Other areas of concern identified include slope stability, seismic hazards, and potential failure of Mormon Island Dam.

HYDROLOGY AND WATER QUALITY

Areas of controversy regarding project hydrology and water quality effects include impacts to Willow and Humbug Creeks and drainages to the north of the project site, water quality, flooding

effects from increased runoff from the project site, identification of detention facilities, urban water quality effects, and general downstream effects.

CULTURAL RESOURCES

Comments received identified cultural resource concerns regarding implementation of the proposed project:

- affects to Native American cultural resources;
- potential for undiscovered cultural resources; and
- cumulative effects of vandalism and desecration of the Mormon Island Relocated Cemetery.

PUBLIC SERVICES

FIRE PROTECTION

Comments received from the El Dorado Hills Fire Department identify that the project site is subject to California Firesafe Regulation. According to the El Dorado Hills Fire Department, project roadways would need to meet Department standards as well as the water distribution system. The El Dorado County Local Agency Formation Commission (LAFCO) comments identified that evaluation of annexation into the El Dorado Hills Fire Department Service Area would require demonstration that the extension of fire protection services would not impact services to existing areas. Other comments identified potential fire hazards related to the steep sloped conditions of the project site.

LAW ENFORCEMENT

Areas of controversy regarding project effects on law enforcement that were identified include the provision of additional law enforcement services to the project site, potential adverse effects to law enforcement services to existing areas, and cumulative conditions.

PUBLIC SCHOOLS

Comments received from Buckeye Union School District, Rescue Union School District, and the El Dorado Union High School District express concerns regarding project generation of student and resulting school capacity problems, full consideration of project impacts on schools and the need for new facilities, and development of the project proposed elementary school site.

School funding and new facility costs issues are addressed in this EIR only in relation to the evaluation of physical impacts of project student generation.

PARKS, RECREATION, AND COMMUNITY SERVICES

Comments received regarding potential park and open space issues included the following:

- project's provision of adequate parks and recreation facilities pursuant to County and El Dorado Hills Community Services District standards;
- the provision of pedestrian and bicycle facilities and access to parks;
- consideration of the establishment of regional park at the project site as a project alternative; and
- the provision of trails and linear parks consistent with County standards.

UTILITIES AND SERVICE SYSTEMS

WATER SUPPLY

Several comments were received regarding concerns over the provision of water service. The El Dorado Irrigation District (EID) comments provided information regarding the availability of water and infrastructure facilities that would provide water service. The El Dorado County Water Agency (EDCWA) expressed concerns regarding water supplies available to EID and future demands for water service from similar projects. LAFCO comments identified that evaluation of annexation into the EID Service Area would require demonstration that the extension of water services would not impact services to existing areas. Other comments received included the following:

- competition for water service with other land uses;
- future water supply sources;
- water conservation measures; and
- future water distribution improvements.

New facility costs issues are addressed in this EIR only in relation to the evaluation of physical impacts of providing water service.

WASTEWATER SERVICE

LAFCO comments regarding wastewater service identified that evaluation of annexation into the EID Service Area would require demonstration that the extension of wastewater services would not impact services to existing areas. Other areas of concern consisted of the existing and future ability of EID to provide wastewater service.

Concerns raised regarding the handling of discharge and waste and general operation of the El Dorado Hills Wastewater Treatment Plant are related to the operational activities of EID, which are not part of the proposed project. Thus, these issues will not be further evaluated in this EIR.

SOLID WASTE DISPOSAL

Concerns raised regarding solid waste disposal services consisted of identification of the amount of waste anticipated to be generated by the proposed project. Issues regarding Union Mine Disposal Site landfill operations and expansion of landfill are related to the operational activities of El Dorado Landfill, Inc., and the County, which are not part of the proposed project. Thus, these issues will not be further evaluated in this EIR.

ELECTRICITY AND NATURAL GAS

Issues of concern regarding project energy use generally consisted of determining methods to reduce project energy use.

PUBLIC HEALTH AND SAFETY

Several comments were received regarding electric and magnetic field effects from existing on-site power transmission lines. Concern raised regarding the El Dorado Hills Dump Site effects will not evaluated in this EIR, since the El Dorado Hills Dump Site is not located on or immediately adjacent to the project site.

FISCAL IMPACTS

Several comments were received regarding the economic sustainability of the project and its effects on public services. Fiscal effects of the proposed project are addressed in this EIR only in relation to the evaluation of physical impacts of public services.

2.3 ALTERNATIVES TO THE PROPOSED PROJECT

CEQA Guidelines (Sections 15123(b)(3) and 15126(d)) requires an EIR to consider a range of alternatives that could feasibly attain the basic objectives of the proposed project. Alternatives evaluated are described below.

- No Project Alternative
- Reduced Intensity Alternative
- Clustered Development/Open Space Alternative
- Off-Site Alternative

These alternatives are discussed in Chapter 5.0.

2.4 SUMMARY OF ENVIRONMENTAL IMPACTS

Table 2-1 presents a summary of project impacts and proposed mitigation measures that would avoid or minimize potential impacts. In the table, the level of significance of each environmental impact is indicated both before and after the application of the recommended mitigation measure(s).

For detailed discussions of all project impacts and mitigation measures, the reader is referred to topical environmental analysis sections in Chapter 4.0.

TABLE 2-1
SUMMARY IMPACT TABLE

Impact Number	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance With Mitigation
4.2 Land Use			
4.2.1 Construction of the proposed project would produce short-term adverse effect on adjacent residential areas because of dust, noise, and construction traffic.	S	4.2.1a Prior to final approval of any project site improvement plans and the commencement of construction activities, the project applicant shall locate construction staging areas as far as feasibly possible from existing residential areas. Construction staging areas shall be identified on project site improvement plans and approved by the El Dorado County Department of Transportation. 4.2.1b During construction activities, the project applicant shall limit the amount of daily construction equipment traffic by staging construction equipment and vehicles on the project site at the end of each work day rather than removing them. 4.2.1c Prior to any construction activities requiring complete or partial closure of existing roadways surrounding the project site, the project applicant shall perform the following tasks to the satisfaction of the El Dorado County Department of Transportation: • Provide written notice to property owners along affected roadways one week prior to roadway closures. • To ensure public safety, clearly mark and secure roadway construction areas. • Steel plates shall be placed over open trenches at the end of each work day to restore vehicle access to all residents.	LS

S = Significant LS = Less than Significant SU = Significant Unavoidable PS = Potentially Significant CS = Cumulative Significant

Impact Number	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance With Mitigation
		4.6.1 Prior to approval of subsequent development, project applicants shall demonstrate to the County and District their compliance with Rule 223 of the El Dorado Air Pollution Control District's Rules and Regulations handbook in written report form. This fugitive dust prevention and control plan shall briefly list all Best Management Practices (BMP) to be implemented for the control of fugitive dust emissions throughout the construction phase. 4.7.1a Construction activities shall be limited to the hours of 7:00 a.m. to 6:00 p.m. on weekdays and the hours of 8:00 a.m. to 5:00 p.m. on Saturday and Sunday. 4.7.1b Locate fixed construction equipment such as compressors and generators as far as feasibly possible from sensitive receptors. Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power construction equipment.	
4.2.2 Development of the proposed Specific Plan would generally be consistent with existing and future adjacent urban development in the El Dorado Hills area and the City of Folsom.	LS	4.2.2 Since no significant impact is identified, no mitigation is required.	
4.2.3 Implementation of the proposed Specific Plan would be substantially consistent with the El Dorado County General Plan.	LS	4.2.3 Since no significant impact is identified, no mitigation is required	
4.2.4 Implementation of the proposed Specific Plan would convert the project site from grazing land to urban development, adding to the cumulative loss of grazing lands.	LS	4.2.4 Since no significant impact is identified, no mitigation is required.	

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Impact Number	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance With Mitigation
4.3.1 Aesthetics			
4.3.1 As viewed from the City of Folsom, the implementation of the proposed project would substantially alter the existing landscape characteristics of the project site from rural land to a developed urban/suburban uses.	S	4.3.1a Prior to County approval of project site grading plans, the following item shall be included in the grading plans: • Project site grading shall avoid disturbing and/or removing rock outcroppings and oak trees to the maximum extent feasible. 4.3.1b Landscaping plans for the project shall be developed and designed to preserve existing natural features, as feasible. The landscaping plans shall include the use of native species within the project site and along project roadways and frontages to blend with the natural features of the project site. Landscaping plans shall be in conformance with County and El Dorado Hills Community Services District standards. 4.3.1c Project Design Guidelines shall include the following design standards that are identified within highly visible areas (see Figure 4.3-5): • All residential structures shall be restricted to earth tone colors and designed to blend with the natural features of the project site. Such earth tone colors may include, but are not limited to, dark ochers, browns, and grays. • Structures and facilities within the Neighborhood Park and Elementary School site shall be restricted to earth tone colors (e.g., dark ochers, browns, and grays) and designed to blend with the natural features of the project site. Landscaping for both sites shall consist of native plant species and will blend with the existing vegetation on the project site. • Proposed lift stations shall be architecturally designed to blend with the surrounding natural features and/or screened with native landscaping in a manner acceptable to the El Dorado Irrigation District.	SU

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Impact Number	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance With Mitigation
		4.3.1d Streetscape features, such as street lights and project entry signage, shall be incorporated into the streetscape landscaping and blend with the natural features of the site. 4.3.1e Solid fences and walls shall be avoided to the maximum extent feasible. If solid fences and walls are used, the color and material used will blend with the natural features of the project site. Continuous fences and walls shall be softened with landscaping.	
4.3.2 Implementation of the proposed project would not substantially alter the visual characteristics of existing views from U.S. Highway 50.	LS	4.3.2 Since no significant impact was identified, no mitigation was required	
4.3.3 As viewed from existing and planned residential areas in the El Dorado Hills area adjacent to the project site, implementation of the proposed project would substantially alter the existing landscape characteristics of the project site and introduce new public facilities that would appear out of character.	PS	4.3.3a Prior to final water and sewer system approval, sewer and water improvement plans shall include details for screening sewer lift stations and the two million gallon water storage tank in a manner acceptable to the El Dorado Irrigation District. Methods of screening may include, but are not limited to, the following: 1. Architectural design of facilities to blend with the surrounding natural features. 2. Screen facilities with native landscaping. 3. Place facilities partially or completely underground. 4.3.3b Implement mitigation measures 4.3.1b, 4.3.1d, and 4.3.1e.	LS

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Impact Number		Level of Significance Without Mitigation	Mitigation Measure		Level of Significance With Mitigation
4.3.4	As viewed from existing and planned residential areas in the El Dorado Hills area adjacent to the project site, implementation of the proposed project could potentially obstruct public scenic views of Folsom Lake and the lower elevation areas of Sacramento County.	LS	4.3.4	Since no significant impact was identified, no mitigation was required	
4.3.5	Implementation of the proposed project, in combination with approved and proposed projects in the El Dorado Hills area and the City of Folsom, would result in the further conversion of the region's rural landscape to urban uses.	CS	4.3.5	Implement mitigation measures 4.3.1a through 4.3.1e and 4.3.3a.	SU
4.3.6	Daytime glare and reflection resulting from project hillside development would be visible along roadways and other public areas in the City of Folsom.	PS	4.3.6	The use of polished or reflecting building materials shall be minimized on the project site. These materials would include, but are not limited to, reflective glass and polished metal exterior materials and facilities on buildings.	LS
4.3.7	Implementation of the proposed project would result in the introduction of new nighttime light sources associated with project roadways, residential, and commercial uses that could adverse affect on adjacent residential areas.	S	4.3.7a	Outdoor light fixtures for non-residential areas shall be low-intensity, shielded and/or directed away from residential areas, and only used where necessary for safety and security purposes.	LS
			4.3.7b	Street light fixtures shall not exceed 30 feet in height and limited to the village center and major project roadway intersections.	
			4.3.7c	Native landscaping, such as shrubs and trees, shall be planted in such a manner to shield motor vehicle lights and street lights from adjacent areas.	
			4.3.7d	Lighted park sports fields shall be restricted to the community park in the village center. Light fixtures for the neighborhood park shall be limited to that required for safety purposes.	

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Impact Number		Level of Significance Without Mitigation	Mitigation Measure		Level of Significance With Mitigation
4.3.8	Implementation of the proposed project would be generally consistent with visual resource and aesthetic goals, objectives, and policies of the El Dorado County General Plan.	LS	4.3.8	Since no significant impact was identified, no mitigation was required.	
4.4	**Population, Housing, and Employment**				
4.4.1	Implementation of the proposed project would increase the population in the El Dorado Hills area of El Dorado County.	LS	4.4.1	Since no significant impact was identified, no mitigation is required.	
4.4.2	Implementation of the proposed project would result in the increase of housing units in the County.	LS	4.4.2	Since no significant impact was identified, no mitigation is required.	
4.4.3	Implementation of the proposed project would result in a jobs to employed resident ratio of approximately 0.07 at the project site, resulting in an imbalance of jobs to employed resident ratio.	LS	4.4.3	Since no significant impact was identified, no mitigation is required.	
4.4.4	The proposed project would be generally consistent with the General Plan, including goals, objectives, and policies related to affordable housing.	LS	4.4.4	Since no significant impact was identified, no mitigation was required.	
4.5	**Transportation and Circulation**				
4.5.1	Implementation of the proposed project will increase traffic volumes in excess of 4,000 per day on sections of Olson Lane and Ridgeview Drive.	S	4.5.1	During the review of tentative maps for each phase of the Promontory Specific Plan, a traffic study shall be performed to determine the amount of project traffic that will be added to the local streets in El Dorado Hills. If any local residential streets would experience a total daily volume in excess of 4,000 as a result of implementing a particular phase of the Promontory Specific Plan, then the tentative map for that phase shall not be approved unless traffic circulation measures are implemented which will prevent the total daily traffic volume on local residential streets from reaching 4,000 average daily trips.	LS

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Impact Number	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance With Mitigation
		Traffic circulation measures would include, but are not limited to: additional connections to other local residential streets (temporarily or permanently); elimination of connections to local residential streets (temporarily or permanently); construction of Russell Ranch Boulevard Extension to Green Valley Road; construction of Russell Ranch Boulevard to the City of Folsom's East Natoma Street Extension (and/or connection to U.S. Highway 50); modification of project phasing; construction of new roads to serve the project site (through the Crown Valley, Ridgeview Village Unit 3, and/or Ridgeview Village Unit 9 approved tentative maps); delay of tentative map approval; and/or reduction in the number of dwelling units.	
4.5.2 Implementation of the proposed project would increase traffic volumes at the Blue Ravine Road/East Natoma Street/Green Valley Road intersection resulting in a deterioration of LOS from "D" to "F" during the a.m. peak hour and LOS "E" to "F" during the p.m. peak hour.	S	4.5.2a Widen Green Valley Road from two lanes to four lanes from El Dorado Hills Boulevard in El Dorado County to the East Natoma Street/Blue Ravine Road/Green Valley Road intersection in the City of Folsom. 4.5.2b Construct a free-flow right-turn lane from westbound Green Valley Road to northbound East Natoma Street and widen northbound East Natoma Street to include two departing lanes for a minimum of 1,000 feet. 4.5.2c Widen southbound East Natoma Street to include dual left-turn lanes and one exclusive right-turn lane.	LS

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Impact Number		Level of Significance Without Mitigation	Mitigation Measure		Level of Significance With Mitigation
4.5.3	Implementation of the proposed project will increase traffic volumes at the Green Valley Road/Francisco Drive intersection resulting in the exacerbation the of LOS "F" conditions during the p.m. peak hour.	S	4.5.3a	Implement Mitigation Measure 4.5.2a.	LS
			4.5.3b	The project applicant shall be responsible for their fair-share cost of the following improvements: • widen the northbound Francisco Drive approach to include dual left-turn lanes, one exclusive through lane, and one exclusive right-turn lane; • widen the westbound Green Valley Road approach to include one exclusive left-turn lane, two exclusive through lanes, and one exclusive right-turn lane; • widen the eastbound Green Valley Road approach to include dual left-turn lanes, two exclusive through lanes, and one exclusive right-turn lane; and • modify the existing traffic signal equipment as necessary to accommodate the intersection widening.	
4.5.4	Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Francisco Drive intersection resulting in a deterioration of the LOS from "E" to "F" during the p.m. peak hour.	S	4.5.4	Install a traffic signal at the El Dorado Hills Boulevard/ Francisco Drive intersection. Since signalization of the intersection is included in the El Dorado Hills RIF, the project will be subject to the RIF concurrently with the issuance of building permits.	LS
4.5.5	Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Wilson Boulevard intersection resulting in a deterioration of the LOS from "A" to "F" during the a.m. and p.m. peak hours.	S	4.5.5	During the review of tentative maps for each phase of the Promontory Specific Plan, a traffic study shall be performed to determine the amount of project traffic that will be added to the El Dorado Hills Boulevard/Wilson Boulevard intersection. When the intersection warrants signalization, as determined by the El Dorado County Department of Transportation, or if the intersection is projected to operate at LOS "D", "E", or "F", as a result of implementing a particular phase of the Promontory Specific Plan, then the tentative map for that phase shall not be approved unless the intersection is signalized.	LS

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Impact Number		Level of Significance Without Mitigation	Mitigation Measure		Level of Significance With Mitigation
4.5.6	Implementation of the proposed project will increase traffic volumes at the Latrobe Road/U.S. Highway 50 Eastbound Ramps intersection resulting in the exacerbation of the LOS "F" conditions during the p.m. peak hour.	S	4.5.6	Install a traffic signal at the Latrobe Road/U.S. Highway 50 Eastbound Ramps intersection. Since signalization of the intersection is included in the El Dorado Hills RIF, the project will be subject to the RIF concurrently with the issuance of building permits.	LS
4.5.7	Implementation of the proposed project will create a new intersection with Green Valley Road. This intersection would operate at LOS "F" during both a.m. and p.m. peak hours under existing plus project conditions.	S	4.5.7a 4.5.7b	Implement Mitigation Measure 4.5.2a. Install a traffic signal and turn lane improvements at the Green Valley Road/North-South Project Collector Road (Russell Ranch Boulevard Extension) intersection. The turn lane improvements shall include an exclusive westbound left-turn lane and an exclusive eastbound right-turn lane on Green Valley Road. In addition, the North-South Collector Road approach shall include a dual left-turn lane and an exclusive right-turn lane. The timing of these improvements will be predicated on the phasing of the project and the results of the traffic studies submitted with each tentative subdivision map.	LS
4.5.8	Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Latrobe Road eastbound and westbound on- and off-ramp junctions with U.S. Highway 50 resulting in the exacerbation of the LOS "F" conditions during both a.m. and p.m. peak hours.	S	4.5.8	The project applicant shall be responsible for contributing their fair-share of the cost to reconstruct the El Dorado Hills Boulevard/Latrobe Road interchange with U.S. Highway 50. Since reconstruction of the interchange is included in the El Dorado Hills RIF and the County's State System Capacity and Interchange Traffic Impact Mitigation program, the project will be subject to the RIF and State System Capacity TIM fee concurrently with the issuance of building permits.	LS

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4.5.9	Implementation of the proposed project will increase demand for public transit service and facilities including fixed route service, commuter service, dial-a-ride service, and park-and-ride lot spaces. In order to accommodate these trips, Policies 3.11.2.3, 3.13.2.2, 3.11.2.1 of the El Dorado County General Plan require new development to install bus turnouts, bus shelters, and other public transportation-related improvements where appropriate. Since the Promontory Specific Plan does not identify bus turnouts, bus shelters, or other public transportation related improvements, this impact is considered significant.	S	4.5.9	The project developer shall be responsible for their fair-share cost of bus turnouts and transit shelters located within the project site. Bus turnouts and transit shelters will be placed along the proposed community and village center collectors, as well as the village center. The specific location of these facilities shall be determined jointly by the El Dorado County DOT and El Dorado Transit Authority. The project applicant's fair-share cost shall be determined by the El Dorado County DOT. Construction of these improvements should occur when transit service is extended to the project.	LS
4.5.10	Implementation of the proposed project will increase demand for bicycle and pedestrian facilities. However, the Promontory Specific Plan includes bikeways and pedestrian facilities as part of the circulation plan.	LS	4.10	Since no significant impacts were identified, no mitigation measures are required.	
4.5.11	Implementation of the proposed project will increase cumulative traffic volumes at the Green Valley Road/Mormon Island Drive intersection resulting in LOS "F" conditions during the a.m. and p.m. peak hours.	CS	4.5.11a	The project applicant shall construct a barrier to prevent private vehicle access to Mormon Island Drive. This barrier shall be passable by emergency vehicles only. The specific barrier design shall be determined by the El Dorado County DOT and El Dorado Hills Fire Department. or 4.5.11b As an alternative, the intersection may be signalized to maintain a LOS "B" in the a.m. and LOS "C" in the p.m.	LS

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Impact Number		Level of Significance Without Mitigation	Mitigation Measure		Level of Significance With Mitigation
4.5.12	Implementation of the proposed project will increase cumulative traffic volumes at the Blue Ravine Road/East Natoma Street intersection resulting in the exacerbation of LOS "D" conditions during the a.m. peak hour and a deterioration in LOS from "E" to "F" during the p.m. peak hour.	CS	4.5.12	No feasible mitigation.	SU
4.5.13	Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Olson Lane intersection resulting in the exacerbation of LOS "F" conditions during both peak hours. The roadway plan prepared for the El Dorado County General Plan projected this section of El Dorado Hills Boulevard to operate at LOS "E" under year 2015 conditions.	CS	4.5.13	The project applicant shall install a traffic signal at the El Dorado Hills Boulevard/Olson Lane intersection and construct exclusive left- and right-turn lanes on the Olson Lane approach.	LS
4.5.14	Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Wilson Boulevard intersection resulting in the exacerbation of LOS "F" conditions during both peak hours. The roadway plan prepared for the El Dorado County General Plan projected this section of El Dorado Hills Boulevard to operate at LOS "E" under year 2015 conditions.	CS	4.5.14	Implement Mitigation Measure 4.5.5.	LS
4.5.15	Implementation of the proposed project will create a new intersection with Green Valley Road. This intersection would operate at LOS "F" under cumulative plus project conditions.	CS	4.5.15	Implement mitigation measures 4.5.7a and 4.5.7b.	LS

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4.6 Air Quality					
4.6.1	Fugitive dust generated by construction activities could potentially add to ambient PM_{10} concentrations.	S	4.6.1	Prior to approval of subsequent development, project applicants shall demonstrate to the County and District their compliance with Rule 223 of the El Dorado Air Pollution Control District's Rules and Regulations handbook in written report form. This fugitive dust prevention and control plan shall briefly list all Best Management Practices (BMP) to be implemented for the control of fugitive dust emissions throughout the construction phase.	LS
4.6.2	Construction of the project would increase criteria air pollutant emissions from construction equipment exhaust systems during the construction phase of the project	SU	4.6.2a	The County shall encourage subsequent site development to incorporate the use of Best Available Control Technologies (BACT) for the control of construction exhaust emissions. The EDCAPCD shall be consulted to determine the appropriate BACT measures available (regular tune-ups, cleaner burning conventional fuels, alternative fueled vehicles and equipment).	SU
			4.6.2b	Prior to future final map approvals, the project applicant shall consult the County and the EDCAPCD concerning feasible transportation alternatives in order to reduce construction worker vehicle trips and associated vehicle exhaust emissions.	
4.6.3	Project-related construction activities would generate fugitive hydrocarbon emissions during construction.	S	4.6.3	Prior to future final map approvals, the project applicant shall demonstrate to the County and the EDCAPCD their compliance with Rules 215 and 224 of the EDCAPCD's Rules and Regulations handbook for the control of ROG emissions from architectural and asphalt coatings.	LS

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4.6.4	Construction of infrastructure improvements will require the removal of vegetation and trees. This cleared slash could potentially be burned and disposed of on site. Any burning of slash would produce smoke containing primarily PM_{10} and CO and possibly be a nuisance to existing residents.	S	4.6.4	Prior to future final map approvals, the project applicant shall demonstrate complete compliance with the El Dorado Air Pollution Control District's open burning rules contained in Regulation III.	LS
4.6.5	Operation of the project would generate both mobile source and area source criteria air pollutants and would increase total criteria air pollutant emissions in the region.	SU	4.6.5	Implementation of the following measures would reduce, but not eliminate, the significant air quality impacts: • The project applicant shall encourage the location of neighborhood-serving shops and services in or adjacent to the Promontory Specific Plan area. By providing these shops and services within the planned commercial center (those facilities to locate in the commercial center are currently unspecified), residential shopping travel distances will be reduced, subsequently reducing mobile source criteria air pollutant emissions. Effectiveness of measure is estimated at a 1-4 percent reduction in total emissions (BAAQMD, 1996). • Public transit system improvements within the project to include: expansion of routes and schedules servicing the project, convenient access to existing or future public transportation system (i.e., possible Regional Transit light rail system extension servicing the Highway 50 corridor), and incorporation of convenient transit stops in project design (i.e., bus turnouts, benches with shelters). Effectiveness of measure is estimated at a 0.2-2 percent reduction in total emissions (BAAQMD, 1996).	SU

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				• All major surface streets are proposed to accommodate Class II bikeways and pedestrian sidewalks. These project proposed bicycle lanes in addition to the sidewalks shall be linked to the commercial center and local area network. Planned bikeways and sidewalks from the City of Folsom in the Russell Ranch Specific Plan shall be extended to connect to the proposed village center. Effectiveness of measure is estimated at a 0.1-2 percent reduction in total emissions (BAAQMD, 1996). • Prior to future final map approvals, the project applicant shall demonstrate that only EPA certified wood stoves and fireplaces inserts are installed in homes. Standard masonry fireplaces, uncertifiable by the EPA, shall not be constructed. EPA certified stoves and fireplace inserts have a 70 to 90 percent lower particulate emission rate than conventional stoves and fireplaces.	
4.6.6	Implementation of the project would increase roadside CO concentrations along heavily traveled roadways at congested intersections.	SU	4.6.6	Implement Mitigation Measure 4.6.5.	SU
4.6.7	Implementation of the project could result in emissions of toxic air contaminants (TAC).	LS	4.6.7	Since no significant impacts were identified, no mitigation is required.	
4.6.8	Implementation of the proposed project could result in an increase in odorous emissions.	PS	4.6.8	As a part of the improvement plans review and approval process, the County shall require project applicants to consult with the El Dorado County Air Pollution Control District and the El Dorado County Irrigation District (EID) regarding sewage pump/lift station odor control technologies. In the event that odor impacts occur, odor control measures shall be required by the County, District, and EID.	LS

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4.6.9	Implementation of the proposed project, by incrementally adding to regional air pollution, would contribute to a cumulative air quality impact.	CS	4.6.9	Implement mitigation measures 4.6.1, 4.6.2a, 4.6.2b, 4.6.3, 4.6.4, and 4.6.5.	SU
4.7	**Noise**				
4.7.1	Construction of the necessary infrastructure improvements, the village center, and the residential units would temporarily increase noise levels in nearby areas.	SU	4.7.1a	Construction activities shall be limited to the hours of 7:00 a.m. to 6 p.m. on weekdays and the hours of 8:00 a.m. to 5 p.m. on Saturday and Sunday.	SU
			4.7.1b	Locate fixed construction equipment such as compressors and generators as far as feasibly possible from sensitive receptors. Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power construction equipment.	
4.7.2	Upon project buildout, subsequent local traffic increases would increase noise levels along local arterial roads. P.M. peak-hour noise levels would increase along segments of Green Valley Road, Francisco Drive, East Natoma Street, and El Dorado Hills Boulevard, exposing existing residents to noise levels exceeding the performance standards outlined in the El Dorado County General Plan Noise Element and the City of Folsom Noise Element where applicable.	SU	4.7.2	Since the identified noise impacts are an offsite consequence of project implementation, no feasible project related mitigation measures are available.	SU
4.7.3	Resultant traffic along the proposed Russell Ranch Boulevard extension would expose residents of the Shadowfax subdivision and Amys Lane to noise levels exceeding the performance standards of the El Dorado County Noise Element and Table 4.7-1.	S	4.7.3	The County shall require: • that speeds along Russell Ranch Boulevard in the area of Shadowfax and Amys Lane be posted at no higher than 30 mph (assumes posted speed limit exceedance by 5 mph and subsequently assures compliance with mitigation); and • that a 4-foot earthen berm be constructed adjacent the west side of Russell Ranch Boulevard blocking line of site between Residence #1 through #3 and Russell Ranch Boulevard.	LS

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4.7.4	Upon project buildout, subsequent local traffic increases would increase noise levels in residential areas east of the project site. Peak hour noise levels would increase along segments of Hensley Circle, Warren Lane, Governor Drive, Gillett Drive, Olson Lane, Ridgeview Drive, Wilson Boulevard, and Julie Ann Way. This increase would expose existing residents to noise levels exceeding the noise impact significance threshold criteria.	SU	4.7.4	Implement Mitigation Measure 4.5.1.	SU
4.7.5	Project generated vehicle traffic would create noise levels along the Russell Ranch Boulevard extension, community collector, and village collector roads that could potentially exceed the noise/land use performance standards outlined in the General Plan and impact future residences of the Promontory Specific Plan.	PS	4.7.5	Prior to County approval of tentative subdivision maps, project applicants shall demonstrate compliance with the transportational noise compatibility requirements outlined in the El Dorado County General Plan Noise Element. Applicants shall demonstrate compliance through noise modeling and/or noise monitoring using approved methods and equipment. Future mitigation measures shall use Best Available Control Technology (BACT), with the use of noise barriers as a last feasible means of mitigation. Housing setbacks are the preferred mitigation method.	LS
4.8 Biological Resources					
4.8.1	An undetermined acreage of oak woodland will be removed due to project implementation.	S	4.8.1	Mitigation for project impacts to trees shall include measures for tree protection, revegetation and compensation, and monitoring. All aspects of the following measures must be implemented to ensure mitigation/ compensation for the impact. • The project applicant shall develop and implement a Tree Protection Plan to minimize direct and indirect impacts to oak woodland on the project site during construction and operation phases of the proposed project. The Plan shall require the use of buffers to prevent or reduce the effects of disruption in the hydrologic or edaphic (growing) environment of heritage trees. Canopy cover retention within oak woodlands shall meet the requirements of General Plan	SU

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		Policy 7.4.4.4 wherever possible. The elements of the Tree Protection Plan shall appear as standards in the tentative subdivision maps, improvement plans, and subdivision CC&Rs. The Plan shall be implemented prior to the initiation of ground clearing, grading, or other construction activities that may impact oak trees. Unless stated otherwise, all measures shall be the sole responsibility of the project applicant. • The County or project applicant shall engage a qualified project biologist or equivalent professional to oversee all aspects of construction monitoring that pertain to oak tree protection. The project applicant shall be responsible for reimbursing the County for all costs related to the compliance monitoring of the project. • The project biologist shall be responsible for contractor education and shall monitor all construction activities in areas supporting sensitive biological resources. The project biologist shall be responsible for scheduling and/or implementing pre-construction tree surveys, and shall inform the County, the project engineer and the project general contractor if there are construction activities that threaten protected oak trees for which no mitigation measures have been identified in this EIR. • The project biologist shall clearly mark on project maps all oak trees and oak woodlands to be avoided and provide these maps to the contractor. These areas shall be designated as "no construction" or "limited construction" zones. These areas shall be flagged by the project biologist prior to construction activities. In some cases, trees may need to be fenced or otherwise protected from direct or indirect impacts, as determined by the project biologist. • The Tree Revegetation Plan shall consist of an implementation and a monitoring component. Because the exact extent of tree loss can only be determined after final grading plans and building envelopes are	

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		defined, a detailed analysis of 1) the precise number and species of trees to be removed, and 2) the specific mitigation areas to be planted, shall be developed and identified as part of the tentative and final map processes, in compliance with General Plan Policy 7.4.5.1. Lost tree canopy cover must be replaced at the percentage required under Policy 7.4.4.4 of the County General Plan. • The Monitoring and Management Plan shall identify monitoring and management techniques for a minimum period of ten years following implementation. The plan shall establish success criteria (performance standards) and shall describe steps to be taken to replace vegetation not meeting the success criteria (contingency plans). Performance standards could relate to the number of trees, species and sizes of trees, area of canopy, or a combination. Appropriate data sampling and statistical treatment of data shall be developed and utilized. • A preliminary mitigation plan (based on the elements presented in this EIR) shall be submitted for review prior to approval of subsequent tentative subdivision maps. A draft mitigation plan (including draft versions of the Tree Protection Plan, Revegetation Plan, and Monitoring and Management Plan) shall be submitted with the applications for tentative subdivision maps and other subsequent approvals. The final mitigation plan shall be submitted as part of the final subdivision map process or prior to approval of a grading permit for improvement plans, whichever occurs first. Prior to implementation, the final plan shall be approved by the County. The project applicant shall identify and secure sources of funding and personnel to carry out all identified measures outlined above before any tree removal or grading permits are issued by the County.	

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4.8.2	Project development would result in the direct filling and alteration of wetlands and waters of the United States.	LS	4.8.2	Since no significant impact was identified, no mitigation is required.	
4.8.3	The project has potential to significantly affect federally and state listed and other special status species.	CS	4.8.3	The project applicant shall hire a biologist(s) approved by the County to conduct protocol surveys for the species listed in Table 4.8-2 as having a potential to occur on the property. In addition, the biologist(s) shall also conduct protocol surveys for any new special status species that may occur on the project site, which are listed by CDFG and/or USFWS subsequent to the certification of this EIR. Results of the surveys shall be submitted to CDFG, USFWS, and the County prior to approval of subsequent tentative subdivision maps. If no sensitive species are located on-site, no further mitigation is necessary. If listed species are located on the property the applicant and County shall enter into informal consultation with CDFG and USFWS and begin preparation of a Biological Assessment or Habitat Conservation Plan, as applicable. The precise mitigation/compensation for direct and indirect impacts to sensitive species will depend on agency consultation and agreements. The project applicant shall implement all measures identified by the CDFG and USFWS to protect and mitigate impacts to listed and other special status species.	SU
4.8.4	Project implementation has the potential to introduce or promote the spread of non-native plant species.	PS	4.8.4	The objective of this mitigation measure is to reduce the potential for introduction or dispersal of non-native plant species to less-than-significant levels. The following measures will be performed: • All seeds and straw material shall be certified weed free by the California Department of Food and Agriculture (CDFA) seed laboratory. All gravel and fill material used during project construction and maintenance shall be certified weed free by the County Agriculture	LS

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				Commissioner's Office. The removal site for all fill materials shall be examined for the presence of noxious weeds by the local County Agriculture Commissioner's Office. Material transported between counties shall be approved by the local County Agriculture Commissioner's Office in the county receiving the materials. • Project landscaping shall conform to County and California Native Plant Society guidelines. Table 4.8-3 presents a list of species that should not be used for project landscaping.	
4.8.5	The project would result in disturbance to, or direct mortality of, common wildlife species.	LS	4.8.5	Since no significant impact was identified, no mitigation is required.	
4.8.6	Project development would result in a worst-case scenario the loss of up to 637 acres of California annual grassland.	LS	4.8.6	Since no significant impact was identified, no mitigation is required.	
4.8.7	The proposed development would contribute incrementally to the cumulative loss and alteration of oak woodlands on a local and regional basis and habitat for sensitive and common plant and animal species.	CS	4.8.7	The project applicant shall implement mitigation measures 4.8.1, 4.8.3, and 4.8.4.	SU

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4.9 Geoogy and Soils			
4.9.1 Development of the project site would include substantial grading activities that would result in ground instability and soil erosion	PS	4.9.1a Prior to approval of the improvement plans for site development, the project applicants shall hire an engineering geologist or equivalent professional to prepare a site specific geotechnical report that will include the following: • Identification of areas of potential slope hazards and measures to minimize the project's impacts to slope stability. • Identification of areas susceptible to soil erosion and measures to minimize the project's impact on soil erosion. • Determination of the suitability of excavated material as engineering fill, topsoil, or other type of reuse onsite. 4.9.1b To the maximum extent practicable, project site development shall avoid areas determined by the site specific geotechnical report to have unstable ground conditions. 4.9.1c Prior to approval of the improvement plans for site development, the project applicant will submit an erosion control plan to the County. Erosion control measures will include techniques such as physical and vegetative stabilization measures and runoff diversion measures. Additionally the plan will specify measures for reuse or disposal of excavated material. If excavated material is suitable for use at the project site, the plan should minimize elapsed time between excavation and reuse and provide adequate stockpile coverage and protection from wind and water erosion during the entire storage period. If excavated material is unsuitable for reuse at the project site, the plan will include specific information regarding the eventual reuse or disposal site, transportation	LS

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		methods, disposal reuse management, and schedule. The plan will be consistent with the El Dorado County Grading, Erosion, and Sediment Control Ordinance and the El Dorado County Resource Conservation District's Erosion and Sediment Control Plan. 4.9.1d Stabilize grading areas left unprotected during the rainy season, as specified by the County Grading, Erosion, and Sediment Control Ordinance. Stabilization measures may include National Pollutant Discharge Elimination System (NPDES) Construction Activity best management practices such as hydroseeding, geotextiles and mats, and straw bale or sand bag barriers. 4.9.1e Implement water quality mitigation measures, including retention of vegetation and avoidance of grading activities near water channels to the maximum extent feasible. Water quality mitigation measures are described in detail in Section 4.10, Hydrology and Water Quality.	
4.9.2 Implementation of the proposed project would expose people and structures to major seismic hazards.	PS	4.9.2a Prior to approval of the improvement plans for site development, a seismicity report will be completed by an engineering geologist or equivalent professional regarding possible damage from seismic shaking and secondary hazards such as landsliding, liquefaction and lateral spreading. This report will include: • An analysis of seismic hazards anticipated at the project site from regional faults. • A discussion and recommendations for seismic mitigation at the project site. Recommendations may include use of reinforced concrete foundations and avoidance of potentially unstable foundation materials.	LS

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			4.9.2b	The project applicant will incorporate the recommendations of the seismicity report into the design for all structures proposed at the project site. All structures will be designed for Seismic Zone 3 and will be designed to withstand the anticipated seismic hazards determined in the seismicity report. Plans for all structures shall be reviewed by the County prior to approval of the improvement plans and building permits.	
4.9.3	Implementation of the proposed project may affect mineral resources at the project site.	LS	4.9.3	Since no significant impact was identified, no mitigation was required.	
4.10 Hydrology and Water Quality					
4.10.1	Construction of subsequent projects under the Specific Plan would result in temporary degradation of downstream surface water quality of Willow Creek, Humbug Creek, Lake Natoma, and Folsom Lake.	S	4.10.1	Prior to approval of improvement plans for site development, the project applicant shall submit erosion control plans and hazardous materials control program to the County consistent with El Dorado County's Grading, Erosion, and Sediment Control Ordinance and El Dorado Resource Conservation District's Erosion and Sediment Control Plan. The plan should include Best Management Practices to minimize and control pollutants in storm water runoff. Suggested water quality control practices should include the following: ***Construction Measures*** • Native vegetation will be retained where possible. Grading and excavation activities will be limited to the immediate area required for construction. • Stockpiled topsoil shall be placed in disturbed areas outside of natural drainageways. Stockpile areas shall be designated on project grading plans.	LS

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		• No construction equipment or vehicles will disturb natural drainageways without temporary or permanent culverts in place. Construction equipment and vehicle staging areas will be placed on disturbed areas and will be identified on project grading plans. • If construction activities are conducted during the winter or spring months, storm runoff will be regulated by temporary on-site detention basins. • Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) will be employed for disturbed slopes until permanent revegetation is established. • No disturbed surfaces will be left without erosion control measures during the winter and spring months. • Sediment will be retained on-site by a system of sediment basins, traps, or other appropriate measures. • Immediately after the completion of grading activities, erosion protection will be provided for finished slopes. This may include revegetation with native plants (deep-rooted species for steep slopes), mulching, hydroseeding, or other appropriate methods. • Energy dissipaters will be employed where drainage outlets discharge into areas of erodible soils or natural drainageways. Temporary dissipaters may be used for temporary storm runoff outlets during the construction phase. • A spill prevention an countermeasure plan will be developed identifying proper storage, collection, and disposal measures for pollutants used on-site. No-fueling zones shall be indicated on grading plans and shall be situated at least 100 feet from natural drainageways.	

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		Operation Measures • All storm drain inlets will be equipped with silt and grease traps to remove oil, debris, and other pollutants, which will be routinely cleaned and maintained. Storm drain inlets will also be labeled "No Dumping - Drains to Streams and Lakes". • Parking lots will be designed to allow as much runoff as feasible to be directed toward vegetative filter strips to help control sediment and improve water quality. • Storm runoff from service stations or other similar uses will be treated with an oil/water separator. • Permanent energy dissipaters will be included for permanent outlets. • The detention/retention basin system on the site will be designed to provide effective water quality control measures. Design and operation features of detention/ retention basins will include: 1. Construct basins with a total storage volume that permits adequate detention time for settling of fine particles even during high flow conditions. 2. Maximize the distance between basin inlets and outlets to reduce velocities, perhaps by using an elongate basin shape. 3. Incorporate some below grade area within the main detention basin for sediment settling. 4. Allow vegetation to reduce velocities and naturally filter water by encouraging vegetation establishment and ensuring adequate water supply to maintain vegetation cover. 5. Establish basin maintenance responsibility and schedules to periodically remove basin sedimentation, excessive vegetation growth, and debris that may clog basin inlets and outlets.	

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4.10.2	Operation of the project site would result in long-term water quality degradation from urban runoff.	S	4.10.2	Implement Mitigation Measure 4.10.1 (operation measures).	LS
4.10.3	Implementation of the proposed project would result in the increase of impervious surfaces on the site, limiting areas for groundwater recharge.	LS	4.10.3	Since no significant impact was identified, no mitigation was required.	
4.10.4	Implementation of the proposed project would expose future residents and structures to inundation in the event of the failure of the Mormon Island Dam.	PS	4.10.4	Prior to approval of improvement plans for site development, the project applicant, in coordination with the El Dorado County Office of Emergency Services and the U.S. Bureau of Reclamation, will develop an evacuation plan for the project site. The evacuation plan will include the establishment of protocol in the event of the failure of Mormon Island Dam and will be consistent with the El Dorado County Operation Area Multi-Hazard Functional Emergency Operations Plan.	LS
4.10.5	Implementation of the proposed project, in conjunction with approved and proposed developments in the El Dorado Hills area and the City of Folsom, would result in increased flows in Willow and Humbug creeks in the City of Folsom. This cumulative increase in flows could result in on-site and downstream flooding in the City of Folsom.	CS	4.10.5a	Prior to approval of improvement plans for site development, El Dorado County shall coordinate with the City of Folsom and the City of Folsom/El Dorado County Joint Powers Authority in developing a formal drainage agreement identifying shared drainage facilities and volumes, pre- and post-development runoff volumes that maintain existing 100-year storm drainage flows, and a review process of future project-specific drainage plans. The drainage agreement shall be approved by both the City of Folsom and El Dorado County.	LS
			4.10.5b	Prior to approval of improvement plans for site development, the project applicant shall prepare a hydrologic study in conformance with the El Dorado County Drainage Manual which would support the project drainage plans. The project applicant shall submit both the hydrologic study and drainage plans to the County for review and approval. These drainage plans shall clearly demonstrate that build-out peak		

S = Significant LS = Less than Significant SU = Significant Unavoidable PS = Potentially Significant CS = Cumulative Significant

Impact Number	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance With Mitigation
		storm runoff flows from the project site will remain at or below existing peak storm runoff flows. The drainage plan will provide details on ultimate location and design of retention/detention basins and other drainage facilities, as well as a maintenance program for all drainage facilities. The drainage plan shall also identify the 100-year floodplain on the project site, or verify that no 100-year flood zones will exist on the site. The drainage plan shall be in conformance with the El Dorado County Drainage Manual, as well as any additional requirements set forth the City of Folsom/El Dorado County drainage agreement described in Mitigation Measure 4.10.5a. 4.10.5c Prior to County approval, the County shall submit project drainage plans to the City of Folsom for review and comment. 4.10.5d If the drainage plan described in Mitigation Measure 4.10.5b identifies 100-year flood plain on the project site, project development shall not occur in those areas identified, unless flood protection improvements approved by the County are implemented.	
4.10.6 Implementation of the proposed project would result in an increase in storm runoff flows in a northern drainageway that drains into Folsom Lake. An increase in flows could result in flooding of residential areas north of the project site.	PS	4.10.6 Implement the procedures outlined in Mitigation Measure 4.10.5b, specifically with regards to the northern drainageway.	LS

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Impact Number		Level of Significance Without Mitigation	Mitigation Measure		Level of Significance With Mitigation
4.11 Cultural Resources					
4.11.1	The proposed project would result in the development of the open space and recreational areas in the location of the four archaeological resources.	LS	4.11.1	Since no significant impact was identified, no mitigation was required.	
4.11.2	Previously undiscovered historic or prehistoric archaeological resources could be encountered during project-related construction activities.	S	4.11.2	In the event that any prehistoric or historic subsurface cultural resources are discovered during construction-related earthmoving activities, all work within 20 meters of the resources shall be halted and the project applicant shall consult with a qualified archaeologist to assess the significance of the find. If any find were determined to be significant by the qualified archaeologist, then representatives of the project applicant, El Dorado County, and the qualified archaeologist would meet to determine the appropriate course of action. If the discovery includes human remains, Section VIII of CEQA Guidelines Appendix K would be followed, requiring coordination with the Native American Heritage Commission if the human remains are of Native American origin. All significant cultural materials recovered would be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.	LS
4.11.3	The proposed project would contribute to the population growth anticipated within the County. As stated in the County's General Plan EIR, this increase in population would increase the likelihood for persons to vandalize or desecrate the existing Mormon Island Relocated Cemetery.	CS	4.11.3	If the County establishes a program to provide fencing or other physical barriers around existing cemeteries to prohibit unlawful entry, the project applicant would contribute a pro-rata share to construct a fence or physical barrier around the existing Mormon Island Relocated Cemetery.	SU

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Impact Number		Level of Significance Without Mitigation	Mitigation Measure		Level of Significance With Mitigation
4.12 Public Services					
4.12.1	Implementation of the proposed project would result in an increased demand in fire and medical services. The proposed project would also increase the level of funding for these services via new development fees and property taxes. The El Dorado Hills Fire Department Ten Year Plan, which incorporates factors associated with growth, forecasts revenue surpluses while maintaining adequate service through the 2005/06 fiscal year.	LS	4.12.1	Since no significant impact was identified, no mitigation is required.	
4.12.2	The project site would increase demand for emergency water supply, storage, and conveyance facilities. The project site would be accessible to fire and emergency service vehicles and is located within the 8-minute fire and 10-minute medical emergency response zones for community regions.	LS	4.12.2	Since no significant impact was identified, no mitigation is required.	
4.12.3	Implementation of the proposed project would locate homes on steep terrain next to open space. Placing homes in this area could increase the potential for wildland fire hazards in the area. The steep terrain within Villages 4 through 8 could impede emergency access and/or response time to these areas.	S	4.12.3a	Prior to approval of tentative subdivision maps and improvement plans, the project applicant shall submit project design plans to the El Dorado Hills Fire Department for review and approval to ensure that project site design meets Department standards. All project roadways and access points shall be designed according to El Dorado Hills Fire Department and El Dorado County Department of Transportation standards to ensure adequate emergency access, in accordance with General Plan Policies 5.7.1.1, 5.7.4.1, 6.2.3.1, and 6.2.3.2.	LS
			4.12.3b	Prior to subsequent tentative map approval for Villages 4 through 8, the project applicant shall prepare and submit a fuel modification plan to the El Dorado Hills Fire Department for review and approval. This plan shall include measures to reduce natural fire hazards, such as removal of overgrown vegetation near homes, and shall conform to Department and State standards.	

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Impact Number		Level of Significance Without Mitigation	Mitigation Measure		Level of Significance With Mitigation
4.12.4	Implementation of the proposed project would increase demand for law enforcement services.	LS	4.12.4	Since no significant impact was identified, no mitigation was required.	
4.12.5	Implementation of the proposed project would increase student enrollment in the local school districts beyond current capacity.	S	4.12.5	Prior to approval of tentative subdivision maps, Rescue Union School District, Buckeye Union School District, El Dorado Union High School District, and the project applicant shall enter into a formal agreement regarding mitigation of project impacts on school facilities. This agreement shall specifically identify mechanisms to construct new school facilities, coordination of timing of new school facilities and build-out of the project site, and construction of the proposed elementary school site.	
4.12.6	The proposed project would increase demand for parks and recreational facilities. The 13.6 acres of parkland included in the project and existing parkland in the El Dorado Hills Community Service District would provide an adequate amount of parkland for project residents.	LS	4.12.6	Since no significant impact was identified, no mitigation is required.	
4.12.7	The proposed project is generally consistent with the El Dorado County General Plan policies relevant to parks, recreation, and community services.	LS	4.12.7	Since no significant impact was identified, no mitigation was required.	
4.12.8	Implementation of the proposed project would be generally consistent with the El Dorado County Hiking and Equestrian Trails Master Plan.	LS	4.12.8	Since no significant impact was identified, no mitigation was required.	
4.12.9	Implementation of the proposed project would result in increased demand for library service. Residents in the El Dorado Hills area, including future project residents, are assessed up to $25 per family to provide library service.	LS	4.12.9	Since no significant impact was identified, no mitigation is required.	

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Impact Number		Level of Significance Without Mitigation	Mitigation Measure		Level of Significance With Mitigation
4.13 Utilities and Service Systems					
4.13.1	Implementation of the project would increase demand for water service in the EID service area.	CS	4.13.1a	In accordance with EID Policy Statement No. 22, the project applicant shall prepare a Facility Plan Report (FPR) for the proposed project. The FPR shall address the expansion of the water and sewer facilities and the specific fire flow requirements for all phases of the project.	LS
			4.13.1b	In accordance with General Plan Objective 4.5.1, water-efficient housing features, such as low-volume and low-flow plumbing fixtures, shall be installed to reduce water consumption.	
			4.13.1c	Efficient irrigation systems shall be installed in common landscaped areas to minimize runoff and evaporation and maximize the water that will reach plant roots. One or any combination of the following methods of increasing irrigation efficiency shall be employed: drip irrigation, soil moisture sensors, and automatic irrigation systems. Mulch shall be used extensively in all common landscaped areas. Drought resistant and native vegetation shall be used in common landscape areas.	
4.13.2	Implementation of the proposed project would require the extension of the existing water distribution infrastructure to the project site. The proposed water system identifies the necessary on-site water distribution infrastructure.	LS	4.13.2	Since no significant impact was identified, no mitigation is required.	
4.13.3	Implementation of the proposed project would require the extension of wastewater infrastructure to the project site. Currently there are adequately sized off-site conveyance facilities to handle project wastewater flows.	LS	4.13.3	Since no significant impact was identified, no mitigation was required.	

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Impact Number		Level of Significance Without Mitigation	Mitigation Measure		Level of Significance With Mitigation
4.13.4	Implementation of the proposed project would generate additional wastewater flows that would be treated at the El Dorado Hills Wastewater Treatment Plant (EDHWTP).	LS	4.13.4	Since no significant impact was identified, no mitigation was required.	
4.13.5	Implementation of the proposed project would result in an increase in the amount of solid waste accepted at the Union Mine Disposal Site.	LS	4.13.5	Since no significant impact was identified, no mitigation was required.	
4.13.6	Implementation of the proposed project would result in increased demand for electrical and natural gas service.	LS	4.13.6	Since no significant impact was identified, no mitigation is required.	
4.13.7	Implementation of the proposed project would result in increased residential, commercial, and industrial demand for telephone services in the El Dorado Hills area.	LS	4.13.7	Since no significant impact was identified, no mitigation was required.	
4.13.8	Development at the project site would result in increased demand for cable television service.	LS	4.13.8	Since no significant impact was identified, no mitigation was required.	
4.14 Public Health and Safety					
4.14.1	Implementation of the proposed project would not likely result in the exposure to contaminants on the project site.	LS	4.14.1	Since no significant impact was identified, no mitigation was required.	
4.14.2	The project could pose impacts related to the storage and use of hazardous chemicals.	LS	4.14.2	Since no significant impact was identified, no mitigation was required.	
4.14.3	Exposure to electric and magnetic fields generated by power lines in the transmission corridor on the project site would expose future project occupants to electromagnetic forces. While no definitive conclusions regarding potential health threats of EMF can be drawn on the basis of direct scientific measurements, recent published literature suggests strongly that this impact would be less than significant.	LS	4.14.3	Since no significant impact was identified, no mitigation was required.	

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CHAPTER 3.0

PROJECT DESCRIPTION

CHAPTER 3.0
PROJECT DESCRIPTION

3.1 OVERVIEW

LOCAL AND REGIONAL SETTING

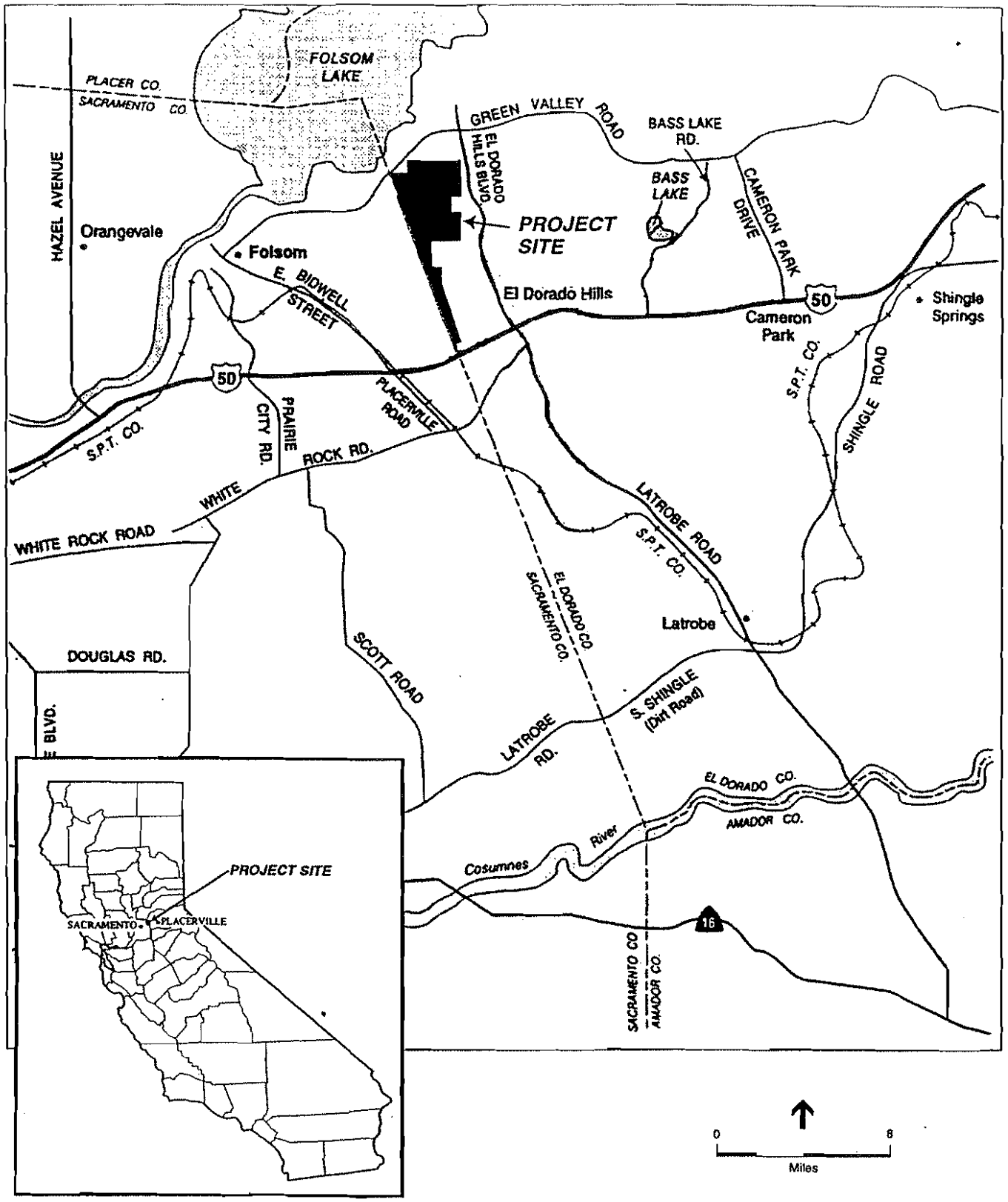
The proposed Promontory Specific Plan (Specific Plan) project is located in the western portion of El Dorado County, adjacent to the City of Folsom in Sacramento County (see **Figure 3-1**). The project is south of Folsom Lake, within the beginning of the foothills of the Sierra Nevada Mountains. The project site (or Specific Plan area) is located within the unincorporated community of El Dorado Hills, just north of U.S. Highway 50. Existing land uses in the general vicinity of the project site consist of agricultural (grazing), residential, commercial, office and light industrial (El Dorado Hills Business Park), and recreational (Folsom Lake State Recreation Area). Major roadways and transportation corridors in the project area include U.S. Highway 50, Green Valley Road, and El Dorado Hills Boulevard.

The project site consists of approximately 999 acres along the El Dorado County and Sacramento County line. The project was originally part of the Russell Ranch and was historically used to graze cattle and is still currently used for this purpose. Existing facilities on the site consist of fencing and two parallel transmission lines which bisect the site. The Specific Plan area is designated as Planned Community by the El Dorado County General Plan.

The topography of the Specific Plan site generally consists of two topographical areas: the valley floor (slopes ranging from 0 to 20 percent) and the uplands area (slopes ranging from 10 to over 40 percent). The uplands area of the site provides views of the City of Folsom, Folsom Lake, and the Sacramento metropolitan area. Natural vegetation on the project site consists of grassland, chaparral, oak woodland, and riparian.

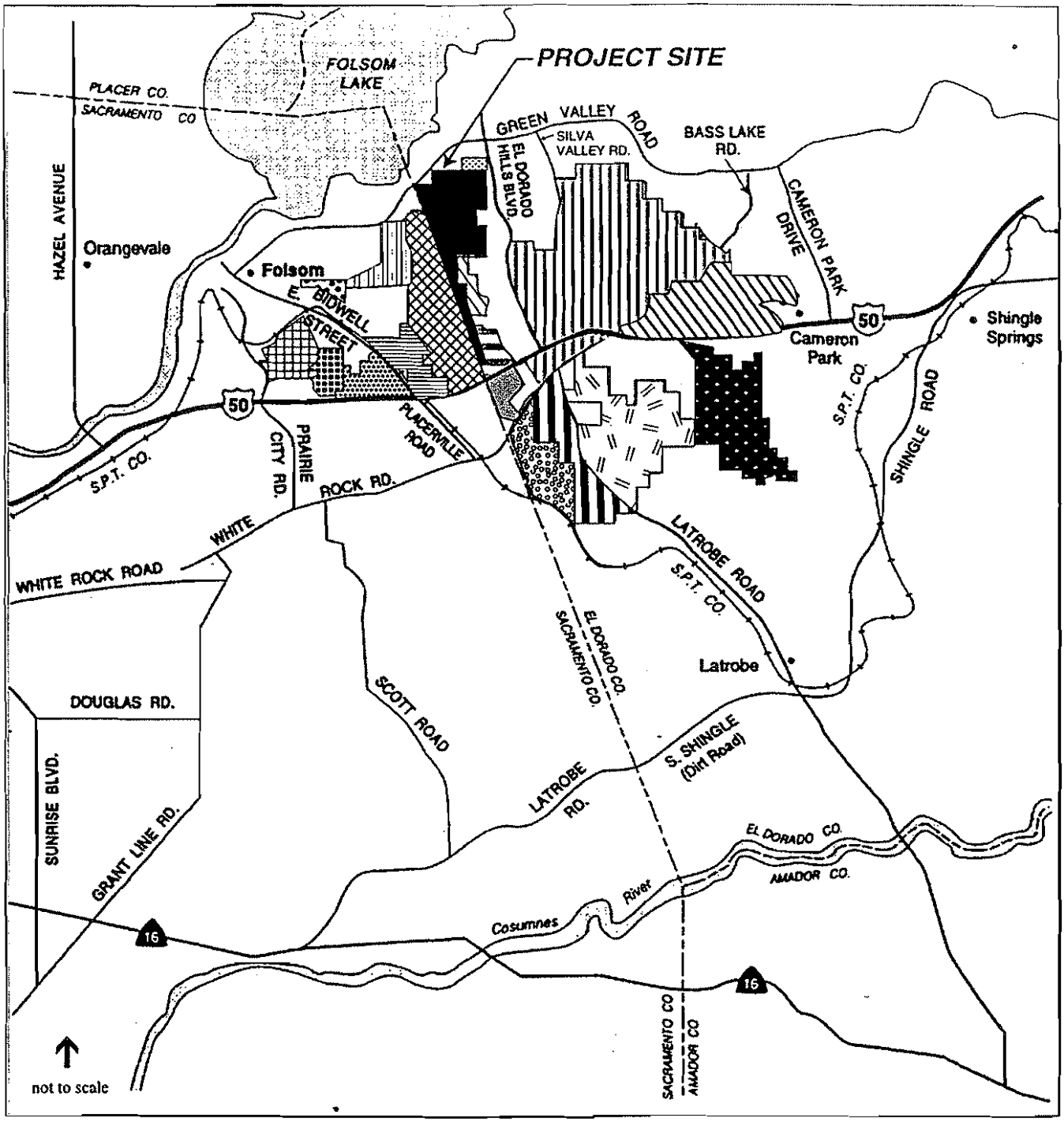
SURROUNDING PROJECTS

Figure 3-2 identifies large-scale proposed, approved, and developing project sites in the general vicinity of the Specific Plan area. Descriptions of these projects are provided in **Table 3-1**.



SOURCE: El Dorado County, 1996

Figure 3-1
Project Location Map



City of Folsom

- Russell Ranch
- Broadstone Unit 2
- Broadstone Unit 3
- The Parkway
- Willow Creek Estates South Unit 10, Lots G,H,J
- Willow Springs
- Prairie Oaks Ranch

El Dorado County

- Rancho Dorado
- Springview Ranch
- Carson Creek
- El Dorado Hills Business Park
- Marble Valley
- Bass Lake Hills Specific Plan
- Valley View Specific Plan
- El Dorado Hills Specific Plan
- Crown Valley
- Ridgeview West

SOURCE: El Dorado County, 1996; Trout, 1996; City of Folsom, 1996

Promontory Specific Plan / 950107 ■

Figure 3-2
Surrounding Large-Scale
Proposed and Approved Projects

TABLE 3-1
SURROUNDING LARGE-SCALE PROPOSED AND APPROVED PROJECTS

Name of Project /a/	Acreage	Description of Project	Status
Broadstone Unit 2 (City of Folsom)	805	Mixed-use development project consisting of 1,005 single- family units, 500 multi-family units, 275 acres of commercial uses, and 130 acres of industrial uses.	Approved, unbuilt
Broadstone Unit 3 (City of Folsom)	570	Mixed-use development project consisting of 687 single-family units, a 8.3-acre multi-family site, 13.5 acres of commercial uses, and 12 office/ industrial lots.	Approved, unbuilt
The Parkway (City of Folsom)	612	Mixed-use development project consisting of 1,355 single-family units, 780 multi-family units, and 12 acres of commercial uses.	Approved, under construction
Russell Ranch (City of Folsom)	1,791	Mixed-use development project consisting of 3,754 single-family units, 344 multi-family units, 20 acres of commercial uses, and 2 golf courses	Approved, unbuilt
Willow Creek Estates South Unit 10, Lots G, H, J (City of Folsom)	285	Residential development project consist of 285 single-family units. Located between Oak Avenue Parkway and Blue Ravine Road.	Approved, unbuilt
Willow Springs (City of Folsom)	269	Specific Plan for 513 single-family units, 168 multi-family units, 25 acres of commercial uses, and 20 acres of industrial uses.	Approved, unbuilt
Prairie Oaks Ranch (City of Folsom)	405	Mixed-use development consisting of 670 single-family units, 860 multi-family units, and 8 acres of industrial development.	Approved, under construction
Rancho Dorado	124	Residential development project consisting of 207 residential lots, 31.5 acres of open space, and 3.2 acres of public park uses.	Approved, unbuilt
Springfield Ranch	147	Residential development project consisting of 283 dwelling units and 26.9 acres of open space.	Approved, unbuilt
Carson Creek	710	Mixed-use development project consisting of 2,434 residential dwelling units, 13.8 acres of commercial uses, 48.4 acres of research and development uses, 31.2 acres of parks, and 142.8 acres of open space.	Approved, unbuilt
El Dorado Hills Business Park	900	Business park project consisting of light industrial, warehousing, office, research and development, and service uses.	Approved, under construction
Bass Lake Hills Specific Plan	1,196	Residential development project consisting of 1,458 dwelling units.	Approved, unbuilt
Marble Valley	2,400	Residential development project consisting 398 dwelling units.	Under review
Valley View Specific Plan	2,038	Mixed-use development project consisting of residential, open space and parks, and mixed-use commercial "village centers".	Under review
El Dorado Hills Specific Plan	4,086	Mixed-use development project consisting of 6,162 dwelling units, 328 acres of commercial uses, 808 acres of open space, a 370-acre golf course, and 60 acres of school uses.	Approved, under construction
Crown Valley	93	Residential project consisting of 68 residential lots.	Approved, unbuilt
Ridgeview West	118	Residential development project consisting of 85 dwelling units and open space areas.	Approved, unbuilt

/a/ Unless specifically identified, the projects listed in the table are located in El Dorado County.
SOURCE: El Dorado County, 1996; Trout, 1996; City of Folsom, 1996

3.2 PROJECT OBJECTIVES

The Promontory Specific Plan's overall goal is the development of a mixed-use planned community while preserving the natural features of the site in a manner consistent with the goals and policies of the El Dorado County General Plan. The following objectives have been identified for the Specific Plan:

El Dorado County's objectives for the proposed project include:

- Create new balanced communities in County areas suitable for urban levels of development due to the accessibility of adequate infrastructure and general public services.
- Develop and maintain safe and efficient transportation and circulation facilities to sufficiently serve the project site.
- Designate appropriate sites for commercial uses to provide opportunities for County residents to shop and work within the County.
- Provide a variety of housing opportunities by type tenure, price, and neighborhood character in order to meet County housing needs.
- Ensure that adequate public services and utilities (water supply, wastewater service, solid waste disposal, storm water drainage, schools, fire protection, and law enforcement) are provided concurrent to each phase of project development.
- Provide for the retention and conservation of distinct topographical features and native vegetation.
- Provide a visual and physical separation of the project site from existing communities.
- Conserve wetlands, riparian areas, natural drainages, and other wildlife habitat of significant biological, scenic, and recreational values.

The project applicant's objectives for the proposed project include:

- Develop a new mixed-use community in the El Dorado Hills area.
- Maintain the natural appearance of the project site as much as possible by careful site design, development standards, and incorporation of the natural features and topography into the project in order to preserve vegetation and natural appearance.
- Provide rural and scenic views from collector roads by providing open space buffers and limitations on development along main collector roads.

- Promote a semi-rural design character of the residential villages by reducing road widths, limiting the use of sidewalks, and reducing or eliminating the need for retaining and sound walls throughout the project site.

3.3 PROPOSED PROMONTORY SPECIFIC PLAN

The proposed project consists of adoption of a specific plan to guide the development of the 999-acre project site. Specific plans are tools used to further implement the goals and policies of a jurisdiction's general plan, and generally consist of a land use plan, guidelines, and standards of development for the specific plan area. Specific plans must be consistent with the general plan. California Government Code Section 65451 requires that specific plans include text and diagram(s) that specify all of the following items:

- The distribution, location, and extent of the uses of the land, including open space, within the area covered by the plan.

- The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.

- Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.

- A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out items listed above.

- A statement of the relationship of the specific plan to the general plan.

The Promontory Specific Plan is divided into four sections discussed below.

DEVELOPMENT PLAN

The Development Plan is composed of a land use plan, circulation plan, open space plan, grading plan, infrastructure plan, and public facilities and services plan. These plans are further described below.

LAND USE PLAN

Table 3-2 summarizes land uses proposed for the project site. As shown in **Figure 3-3** and **Table 3-3**, the Land Use Plan proposes the development of residential units at densities ranging

from 0.8 dwelling units (d.u.) per acre to 8 d.u. per acre, commercial and offices uses, open space and park areas, and an elementary school. As shown in **Figure 3-3**, site development would be in the form of residential villages and a village center.

TABLE 3-2
PROMONTORY SPECIFIC PLAN LAND USE SUMMARY

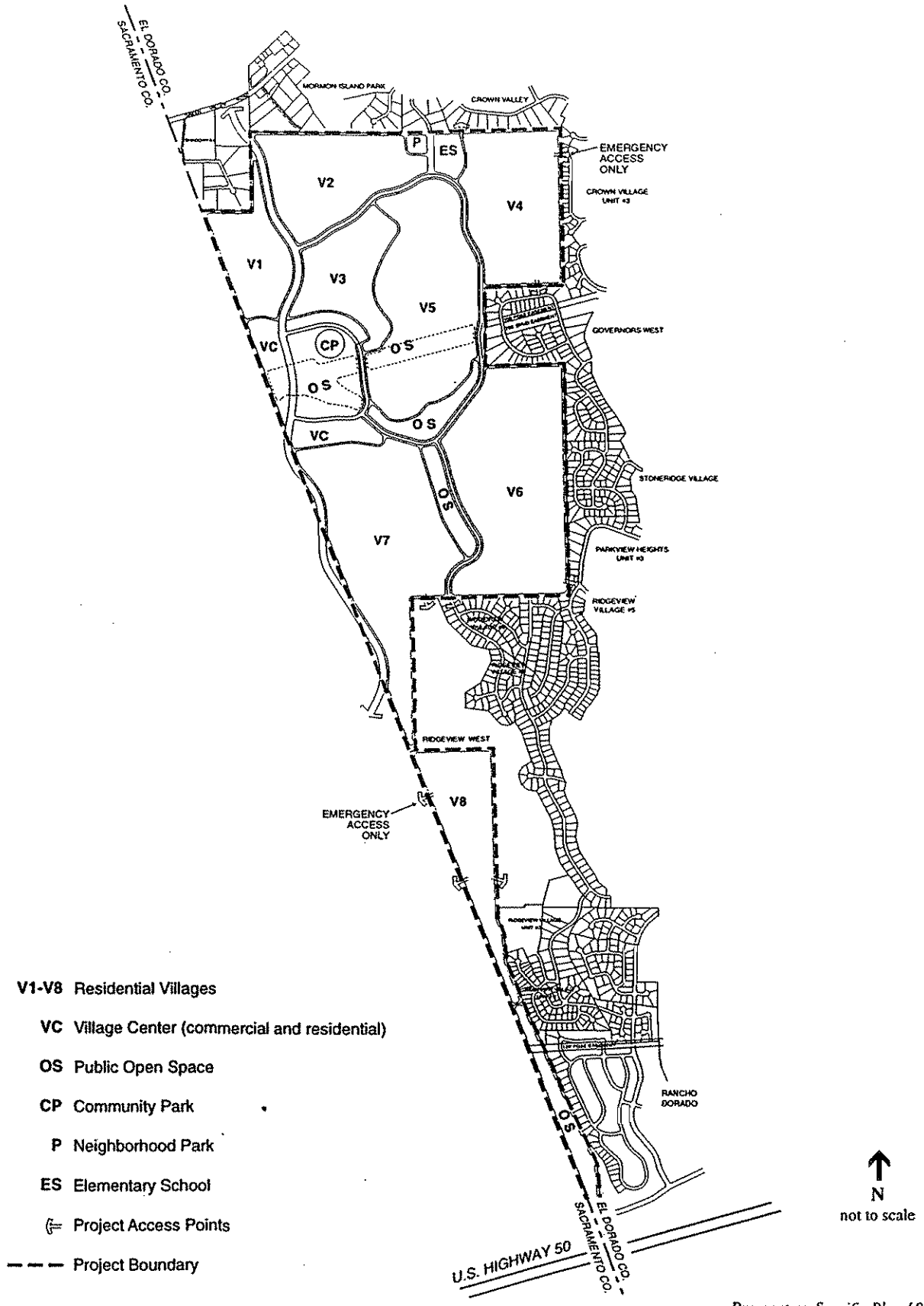
Land Use	Acres	Commercial/Office Square Feet	Units	Density (d.u. per acre)
VILLAGES 1-8				
Residential	820.9		1,059	1.3
Neighborhood Park	3.6			
Public Open Space	77.2			
Elementary School	10.0			
VILLAGE CENTER				
Residential	40.2		328	8.0
Commercial and Office	14.5	103,670		
Community Park	10.0			
Public Open Space	22.6			
Total	999.0	103,670	1,387	1.6

SOURCE: Palisades Development, 1997

Residential Villages

The proposed project would consist of eight residential villages that would range in lot size and housing product, from merchant built homes on minimum 6,000-square-foot lots to semi-custom and custom homes with lot sizes as high as two acres or greater. Residential villages 1, 2, and 3 are generally located on gentler sloping terrain and range from 2.0 to 3.0 d.u. per acre. Villages 4 through 8 are located in the uplands portion of the project where slopes range 15 to over 40 percent. These villages are proposed to range from 1.0 to 0.8 d.u. per acre.

The densities of residential units in villages 4 through 8 are less than villages 1 through 3. Since villages 4 through 8 are located in steep portions of the project site, the Specific Plan proposes further limitations on residential development to protect and preserve the natural terrain of the hillsides and reduce the visual impact of the development of the site. These limitations include the establishment of private open space easements and/or limitations imposed by deed restrictions and Codes, Covenants and Restrictions; designation of development areas for lots; design of project roadways to follow the natural topography; and implementation of other development standards described further in the Development Standards of the Specific Plan.



SOURCE: Palisades, 1996

Promontory Specific Plan / 950107 ■

Figure 3-3
Proposed Land Use Plan

TABLE 3-3
PROPOSED LAND USES AND DENSITIES

Land Use	Acres	Commercial/Office Square Feet	Approximate Units /a/	Approximate Density (d.u. per acre)
RESIDENTIAL				
Village 1	55.6		111	2.0
Village 2	87.8		175	2.0
Village 3	59.0		177	3.0
Village 4	97.0		116	0.8
Village 5	124.2		103	0.8
Village 6	164.1		179	1.0
Village 7	164.3		129	0.8
Village 8	68.9		69	1.0
VILLAGE CENTER				
Development Area /b/	54.7	103,670	328	8.0
Community Park	10.0			
Open Space	22.6			
PUBLIC				
Neighborhood Park	3.6			
Open Space	77.2			
Elementary School	10.0			

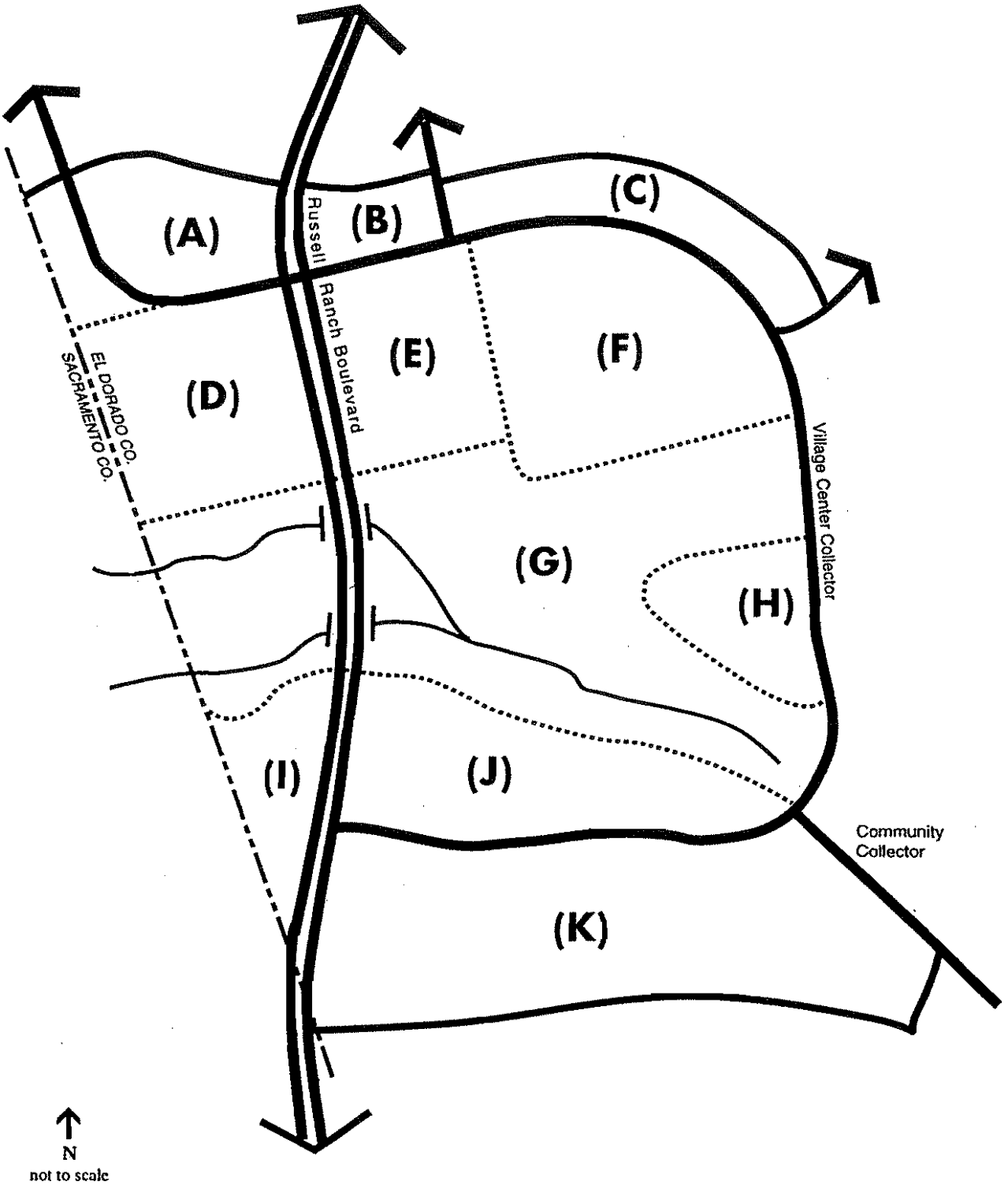
/a/ Density transfers from one village to another are permitted so long as the overall number of dwelling units does not exceed the number of dwelling units allowed in the El Dorado County General Plan.

/b/ The figures given for the development area in the village center are maximum intensities. Actual development would comprise a mix of residential and commercial uses, intensities, and densities. Refer to Table 3-4 for potential mixed-uses in the village center.

SOURCE: Palisades Development, 1997

Village Center

The village center is intended to serve as the focal point of the project site for residents to live, shop, conduct business, socialize, and gather for community events. The village center is located along the proposed Russell Ranch Boulevard corridor to provide access throughout the project site. As shown in **Figure 3-4** and **Table 3-4**, the village center would allow for the development of commercial, office, open space, and park uses to support the proposed residential development. In addition, medium- to high- density residential and multi-family development would be allowed in the village center. The actual mix of residential and commercial uses would be specified during consideration of site-specific development of the village center. The overall intention of the village center is to provide moderately priced housing close to retail services, employment opportunities, and recreation opportunities.



NOTE: See tables 3-4 for proposed land uses and intensities for Village Center.

SOURCE: Palisades, 1996

Figure 3-4
Village Center Areas

TABLE 3-4
VILLAGE CENTER LAND USES AND DENSITIES

Village Area /a/	Development Options or Mix of Options	Acres	Assigned Units	Approximate Density
A	(c) (d) (e)	5.0	40	8.0
B	(d) (e)	1.8	14	8.0
C	(d) (e)	3.8	30	8.0
D	(a) (b)	6.0		
E	(a) (b) (village green)	5.4		
F	(f)	10.0		
G	(g)	22.6		
H	(d) (e)	3.0	32	11.0
I	(a) (b)	3.1		
J	(d) (e)	7.8	62	8.0
K	(d) (e)	18.8	150	8.0
Total		87.3	328	4.0

(a) Commercial
(b) Office
(c) Apartments
(d) Single Family Attached
(e) Small Lot Single Family Detached
(f) Community Park
(g) Open Space

/a/ Refer to Figure 3-4 for locations of village center areas.

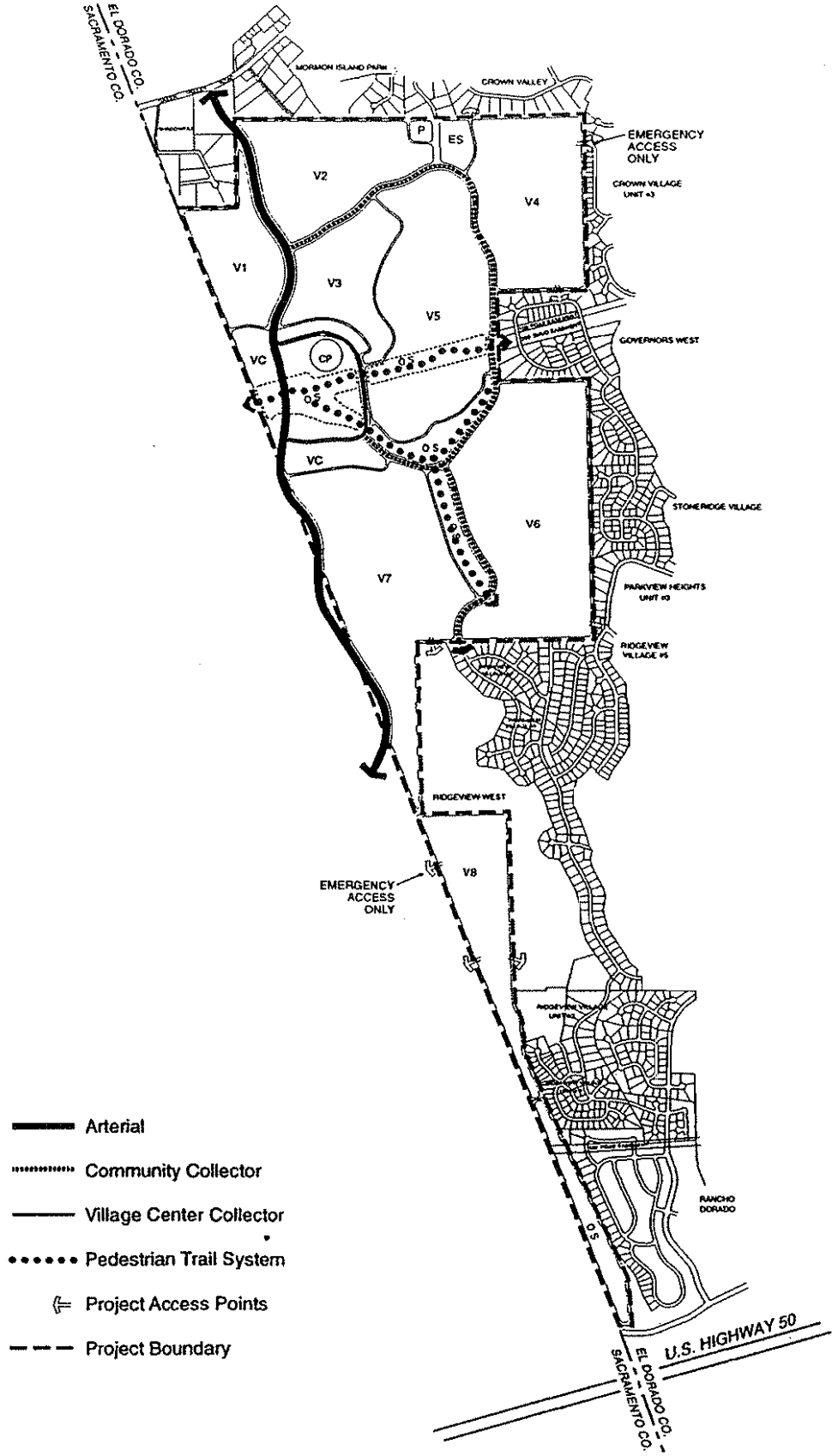
SOURCE: Palisades Development, 1997

Elementary School

The Land Use Plan designates a 10-acre elementary school site in the northern portion of the project site in order to serve the project and surrounding residential areas. This school site would be operated by the Rescue Unified School District.

Parks

As shown in **Figure 3-3**, two public parks are proposed as part of the Specific Plan. A 3.6-acre neighborhood park would be located adjacent to the proposed elementary school, which would provide additional recreation space and opportunities for the elementary school. Potential neighborhood park facilities include a play structure, multi-use hardcourt, picnic area, and open field areas. A 10-acre community park is proposed to be located within the village center. Potential facilities for the community park include baseball/softball fields, soccer fields, basketball and tennis courts, picnic areas, restrooms, and off-street parking. In addition, the park site would be adjacent to the open space corridor, providing access to a proposed trail system (see **Figure 3-5**).



SOURCE: Palisades, 1996

Figure 3-5
Proposed Circulation Plan

Open Space

The proposed 99.8 acres of public open space in the project site is composed of two major drainage/riparian areas, wetland areas, power line corridors, and the area south of village 8. These open space areas provide for preservation and enhancement of wetlands and natural habitat, as well as a future trail system for passive recreation opportunities. The project also proposes the establishment of approximately 184 acres of private open space that would be designated within sensitive residential village lots in order to conserve the natural features of the project site. This private open space would be located in villages 4, 5, 6, 7, and 8.

CIRCULATION PLAN

Figure 3-5 identifies project access points and the circulation network of the Specific Plan. The proposed Circulation Plan identifies the existing and planned circulation features surrounding the project site, as well as provides guidelines for the future development of the project roadway network. Project roadways would be designed to follow the natural topography as feasible. Roadways would generally be curvilinear in design and would comply with the minimum Hillside Design Standards of the El Dorado County's "Design and Improvement Standards Manual". Typical roadway cross sections are shown in **Figures 3-6** and **3-7**. Final alignment and design of project accesses into the City of Folsom are anticipated to be reviewed by the City of Folsom/ El Dorado County Joint Powers Authority, which would likely recommend an agreement to be acted upon by El Dorado County and the City of Folsom.

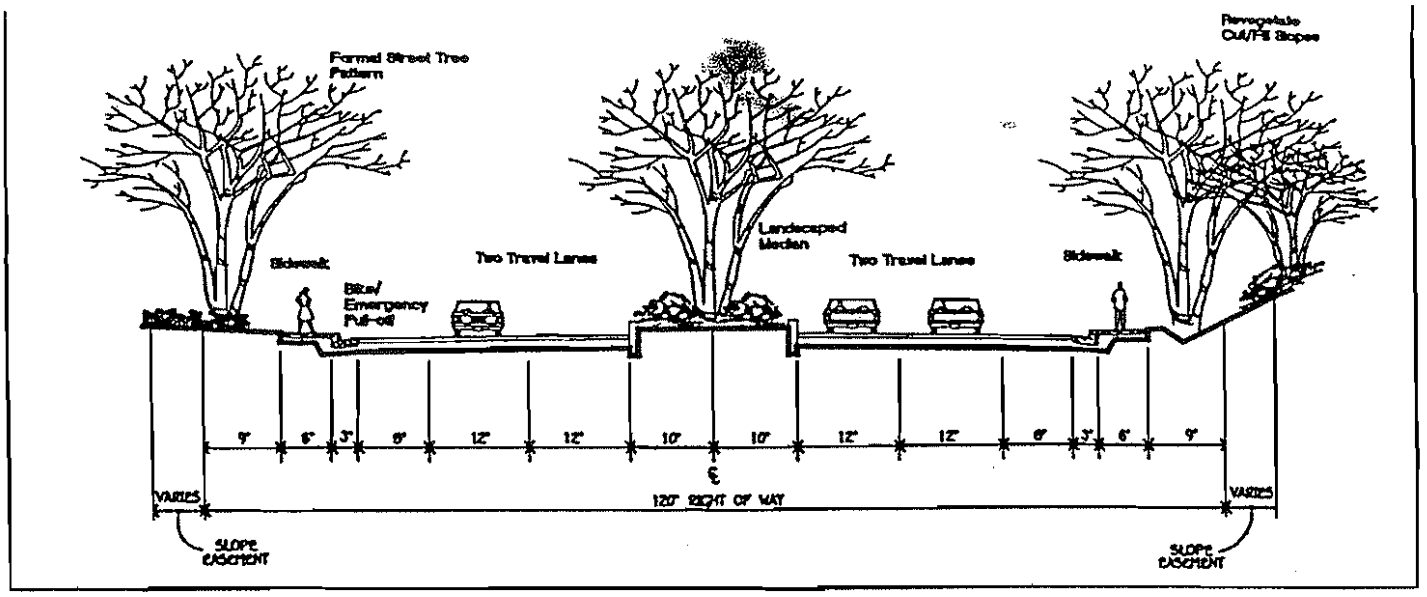
Russell Ranch Boulevard

The proposed Russell Ranch Boulevard (extending from the planned Russell Ranch project in the City of Folsom) would be the primary access to the project site and would extend from U.S. 50 Highway to Green Valley Road. Russell Ranch Boulevard would ultimately be a four-lane facility with bicycle lanes, landscaped median, and pedestrian paths (see **Figure 3-6**). As shown in **Figure 3-8**, the proposed alignment of Russell Ranch Boulevard would cross the Sacramento/ El Dorado County line at three points. The City of Folsom/El Dorado County Joint Powers Authority designated the project proposed alignment of Russell Ranch Boulevard as the preferred alignment on July 22, 1992 (City of Folsom/El Dorado County, 1992).

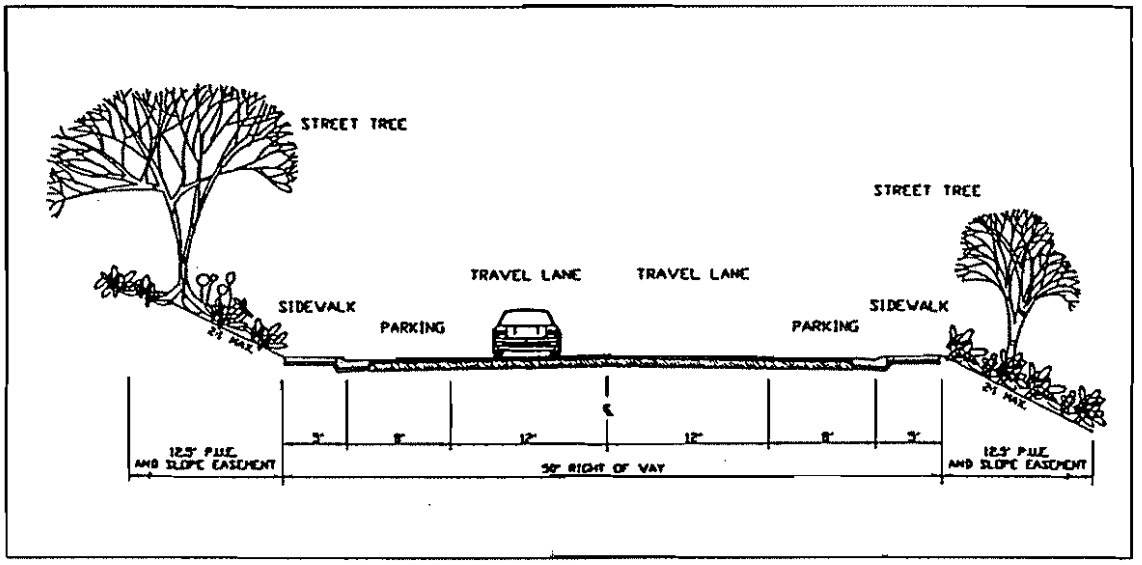
However, the specifics of construction and maintenance of Russell Ranch Boulevard would likely require an agreement to be acted upon jointly by El Dorado County and the City of Folsom.

Collector/Streets

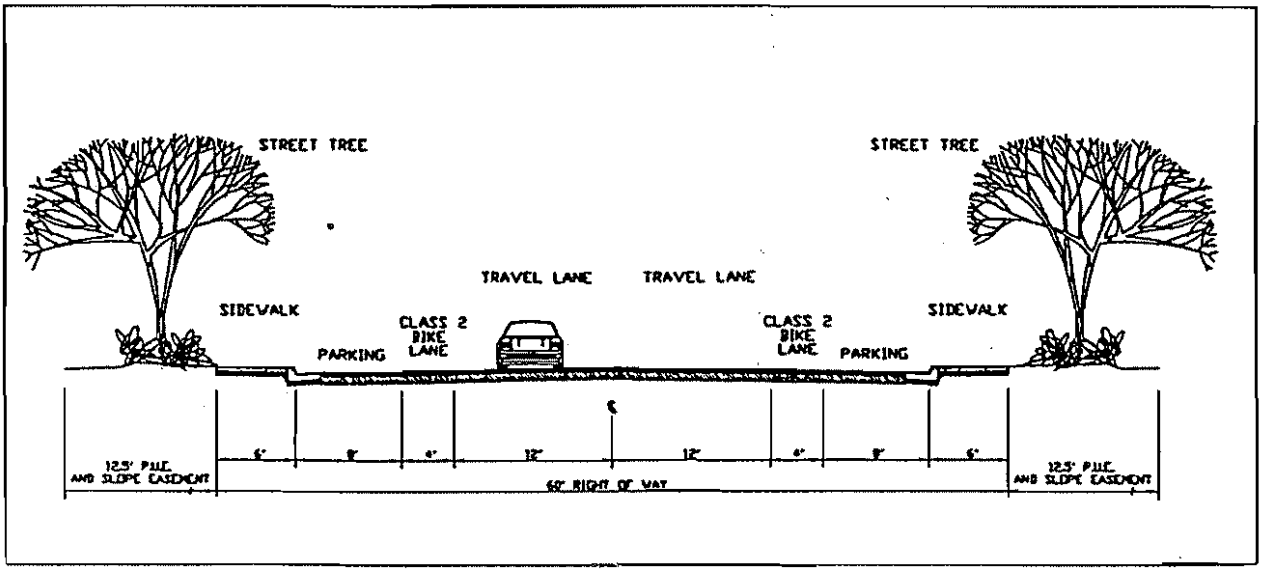
In addition to Russell Ranch Boulevard, the project would consist of a village center collector and a community collector (see **Figure 3-5**). The village center collector would be a two-lane facility with on-street parking on both sides of the roadway. The village center collector would collect



Russell Ranch Boulevard

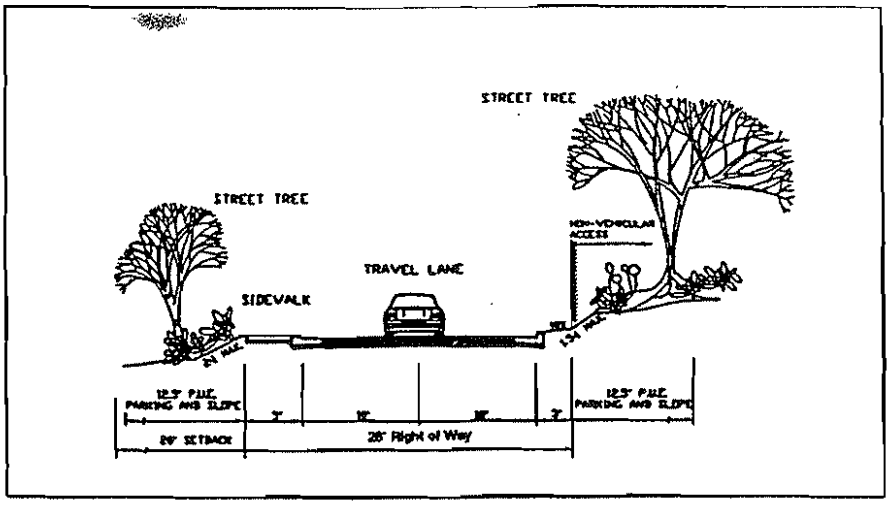


TYPICAL SECTION
COMMUNITY COLLECTOR
NTS

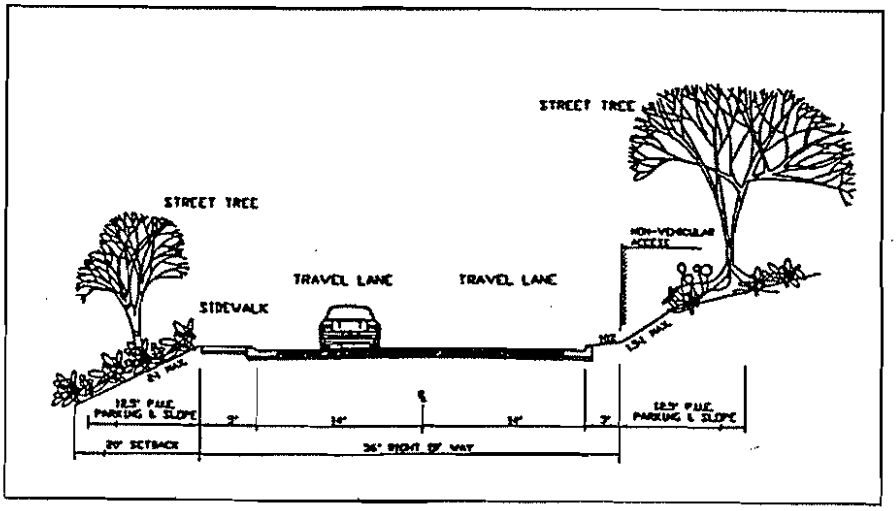


TYPICAL SECTION
VILLAGE CENTER COLLECTOR
NTS

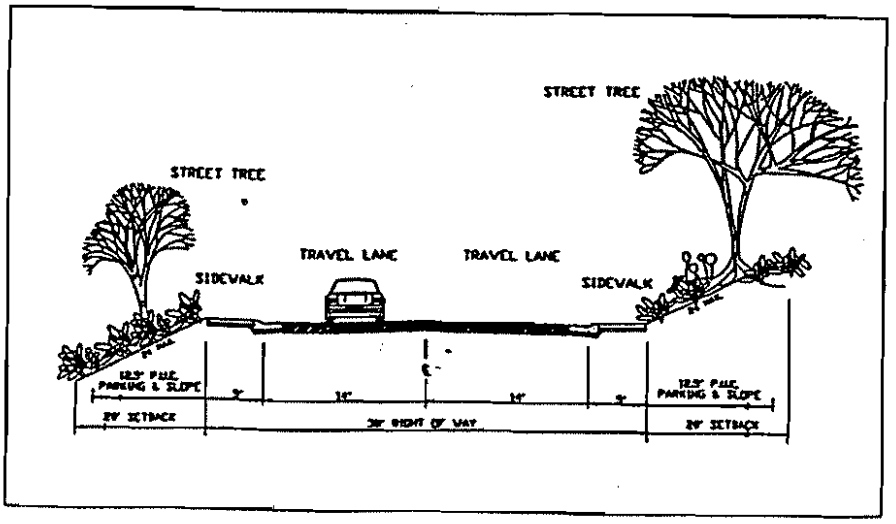
Figure 3-6
Russell Ranch Boulevard, Village Center Collector, and Community Collector Cross Sections



TYPICAL SECTION
UPLAND-ONE WAY ROAD
HILLSIDE DEVELOPMENT AREA
NTS
NOTE: SLOPE EASEMENT EXTENDS FROM THE R.O.W. TO 5' BEYOND THE TOE OF FILL AND/OR TOP OF CUT.



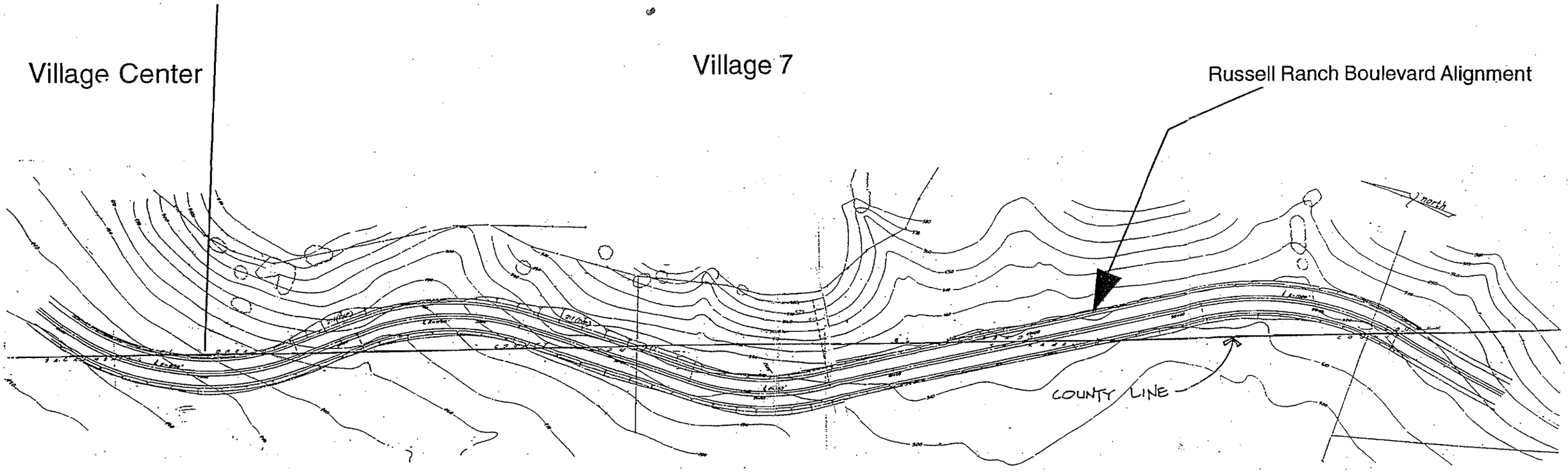
TYPICAL SECTION
UPLAND-TWO WAY ROAD
HILLSIDE DEVELOPMENT AREA
NTS
NOTE: SLOPE EASEMENT EXTENDS FROM THE R.O.W. TO 5' BEYOND THE TOE OF FILL AND/OR TOP OF CUT.



TYPICAL SECTION
UPLAND-TWO WAY ROAD (PREVAILING SLOPE +/- 25%)
NTS
NOTE: SLOPE EASEMENT EXTENDS FROM THE R.O.W. TO 5' BEYOND THE TOE OF FILL AND/OR TOP OF CUT.

Figure 3-7
Typical Residential Roadway Cross Sections

Project Site (El Dorado County)



Russell Ranch (City of Folsom)

SOURCE: Cooper, Thorne, & Associates, 1996

Figure 3-8
Proposed Alignment of Russell Ranch Boulevard

and direct traffic around the village center as well as tie into the community collector. The community collector would consist of two lanes with on-street parking on both sides of the roadway (see **Figure 3-6**). The community collector would collect and route traffic throughout the villages, the village center, and to project access points.

Residential Streets

Residential street designs would consist of several right-of-way (ROW) widths based on existing topographic conditions and average daily trips anticipated in order to avoid substantial disturbance to the natural terrain. **Figure 3-7** illustrates typical residential roadway cross sections for upland and hillside development areas.

Pedestrian Circulation and Bikeways

The pedestrian circulation system on the project site would consist of sidewalks along project roadways, collector roads, as well as an off-street pedestrian trail system within the proposed public open space areas (see **Figure 3-5**). The off-street pedestrian trail system would consist of decomposed granite paths. Class II bicycle lanes would be provided along Russell Ranch Boulevard which would link into planned bikeways from the City of Folsom (Russell Ranch).

OPEN SPACE PLAN

The proposed Open Space Plan designates open space and recreation areas and is designed to protect natural resources, maintain steep slopes in their natural state, minimize adverse effects to project viewsheds, and provide for both passive and active recreation opportunities. The Open Space Plan is comprised of two components: conservation areas (viewshed protection and resources protection) and recreation areas.

Conservation Areas

In order to reduce development impacts on the viewsheds and natural terrain of the uplands portion of the project site, the Specific Plan proposes to preserve approximately 184 acres of private open space as part of the site design of the residential villages and the application of the Specific Plan's Hillside Development Standards. Private open space would consist of restricted areas within residential lots that would not be allowed to be developed, landscaped, or otherwise altered. These private open space areas would be placed in perpetual conservation easements and would be identified at the tentative map stage of residential villages. **Figure 3-9** illustrates the proposed use of conservation easements (private open space) to reduce adverse effects to the natural terrain as part of site development. Maintenance costs of private open space areas may be included in a lighting and landscaping assessment district or some other form of property assessment.

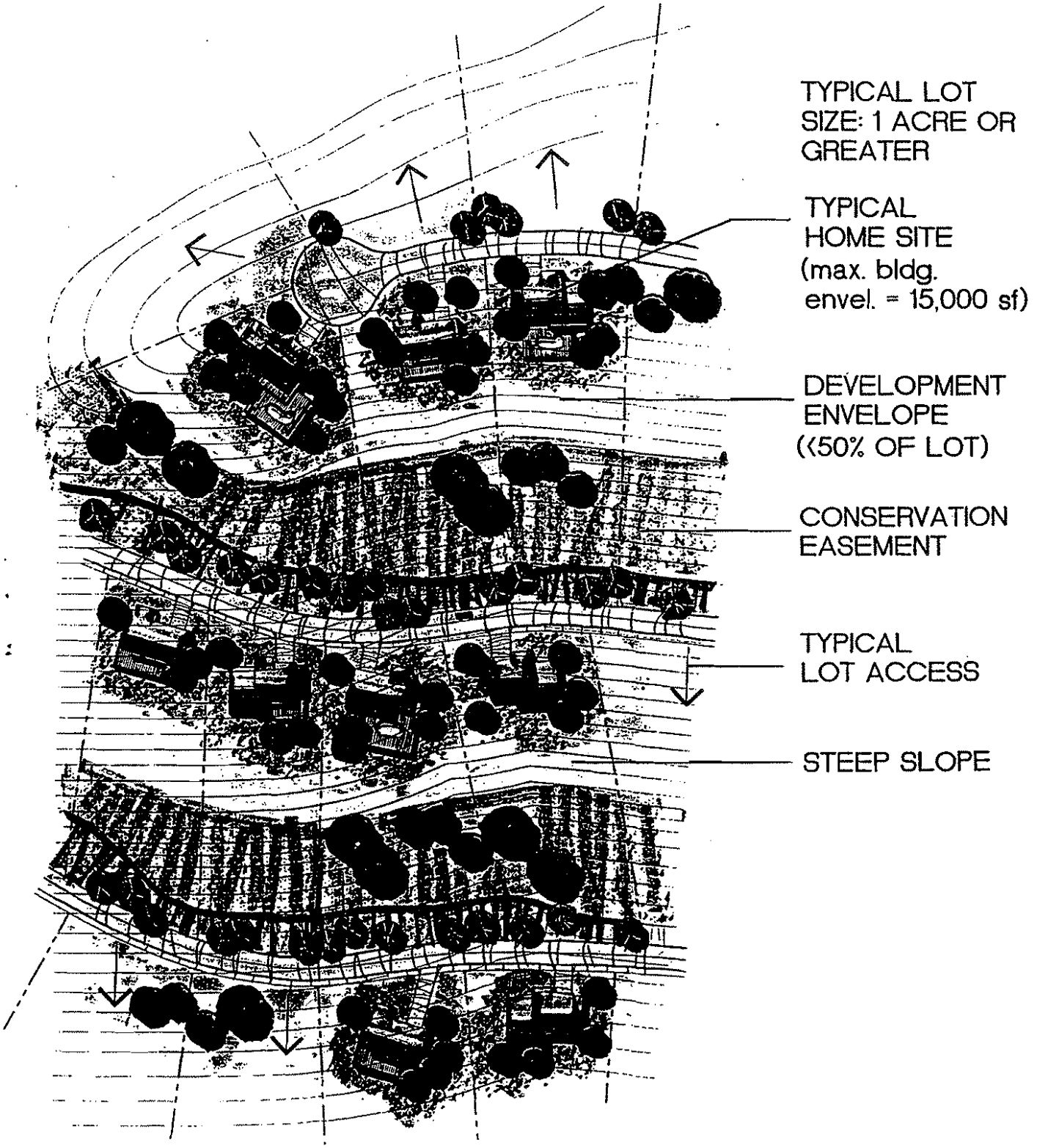


Figure 3-9
Conceptual Residential Village Lotting Plan

In addition to the private open space areas, approximately 99.8 acres of public open space would be provided. The public open space areas would include 1.9 acres of preserved wetlands, 15.7 acres of preserved blue oak woodland, 10.92 acres of created wetlands, 12.26 acres of riparian woodland buffer, and 8.4 acres of grassland within the existing power line easement. In addition to the preservation and enhancement of natural habitat and features, a trail system is proposed within the public open space areas (see **Figure 3-5**).

Recreation Areas

As previously described above, the project site would contain two active recreation parks as shown in **Figure 3-3**.

GRADING PLAN

The proposed Grading Plan's overall intent is to maintain to the maximum extent feasible the natural features and terrain of the project site and to preserve existing vegetation. The Grading Plan is designed to be consistent with, and an expansion of, the broader standards of the El Dorado County Grading Ordinance, and Design and Improvement Standards. Specific guidelines for site development include the following:

- Site development should conform to natural slopes to the maximum extent practicable.
- Grading activities shall conform to requirements of the Resource Conservation District for erosion control.
- Grading policies for site development are to be guided by policies for each of the following slope categories:

    1. 25 percent and over slopes (Restricted Grading Area)
    2. 20 to 25 percent slopes (Limited Grading Area)
    3. 10 to 20 percent slopes (Lot Pad Grading Area)
    4. 0 to 10 percent slopes (Mass Pad Grading Area)

- Contouring techniques shall be employed to avoid angular flat slopes and distinct edges in order to promote a natural appearance.
- Street siting will follow the natural topography of the site in order to retain the natural features of the project site.
- Retaining structures will be encouraged in situations where such a design will reduce grading quantities and adverse visual effects. (Palisades, 1997)

INFRASTRUCTURE PLAN

The Infrastructure Plan addresses existing infrastructure systems available in the project vicinity, and identifies proposed improvements for storm drainage, water, and sewer systems to serve the development consistent with the Specific Plan.

Water

Domestic water service for the project site would be provided by the El Dorado Irrigation District (EID) and served by the El Dorado Hills Service Area. The project site is currently within the boundaries of Assessment District No 3 (AD No. 3) and has been allocated 106 equivalent dwelling units (EDUs). However, the project applicant is currently in the process of formally annexing project site into the EID Service Area and would likely be formed into a new assessment district (AD No. 12) to fund the infrastructure required to serve the project site.

The Infrastructure Plan identifies that the project would ultimately require approximately 850 acre-feet annually in order to provide water service to all proposed uses in the project site. EID is currently in the process of obtaining additional water supplies to support the planned growth in the El Dorado Hills area. The project site ultimately would be serviced by the existing 8-inch and 12-inch diameter water lines located along the eastern boundary of the project site.

Sewer

In addition to domestic water service, EID also provides sewer conveyance and treatment service in the El Dorado Hills area. As with water, the project site is located in AD No. 3 and would be served by the El Dorado Hills Sewage Treatment Plant located off Latrobe Road south of the U.S. Highway 50. Existing sewer facilities in the project vicinity include lift stations, force mains, and gravity flow sewer lines. The Infrastructure Plan has identified that the project site would be served by an existing 18-inch gravity line just east of the project site.

Storm Drainage

A majority of the Specific Plan area drains to the west into the Willow Creek and Humbug Creek Water Sheds, while a small portion of the project site drains north into Folsom Lake. All storm drainage is currently conveyed off-site by natural drainageways. Due to the topographic conditions of the project site, a mutual agreement between the project applicant and the owners of the planned Russell Ranch project in the City of Folsom has been tentatively arranged to jointly provide retention/detention facilities in order to reduce combined developed peak flows to their existing levels for both the 10-year and 100-year storm events.

PUBLIC FACILITIES AND SERVICES PLAN

The proposed Public Facilities and Services Plan addresses fire protection, law enforcement, schools, library services, and gas, electricity, and telephone service. The Plan identifies that the El Dorado Hills Fire District would serve the project site, while the El Dorado County Sheriff's Department would provide law enforcement. A 10-acre elementary school is proposed and would be operated by the Rescue Unified School District. Gas and electric service would be provided by Pacific Gas and Electric, while telephone service would be provided by Pacific Bell.

DEVELOPMENT STANDARDS

The proposed Promontory Specific Plan Development Standards would serve as the primary mechanism for regulating the development of the project site. Development Standards include regulations for special hillside conditions, large lot single-family detached, medium lot single-family detached, small lot single-family detached, single-family attached, apartments, commercial, office, parks, open space, parking (off-street and on-street), and sign standards.

All development with the project site would be required to conform to the Development Standards set forth in the Specific Plan. The El Dorado County Zoning Ordinance would regulate those issues that are not addressed by the Development Standards. Where requirements of the County Zoning Ordinance and the Development Standards of the Specific Plan conflict, the Specific Plan would take precedence.

IMPLEMENTATION

PHASING

The Implementation Section of the Specific Plan identifies the proposed phasing of project development in the following manner:

Phase I
Village 6
Village 7
Village 8

Phase II
Village 1
Village 2
Village 3
Village Center (unspecified portion of)

Phase III
Village 4
Village 5
Village Center (remaining portion from Phase II development)

FINANCING PROGRAM

Construction and maintenance project roadways, infrastructure, public facilities, landscape areas, and other public improvements would require financial commitments and funding mechanisms. The Specific Plan states that prior to approval of any final map within the project site the financing mechanism(s) necessary to fund development of public improvements would be required. Potential financing mechanisms for the project site are summarized below:

Special Assessment District

Special assessment districts are used to provide a method of long-term financing of public improvements. These assessment districts established by public agencies which designate a land area, such as a residential subdivision, that would benefit from the development of public improvements and facilities. Once the public agency has established the assessment district, bonds are sold by the public agency to finance construction costs of the public improvements. These bonds are repaid by property owners within the assessment district over the term of the bond. Repayment of the bond by property owners is typically included in property taxes.

Mello-Roos Community Facilities District

Mello-Roos Community Facilities Districts are established in a similar process and perform a similar financial service to assessment districts. However, Mello-Roos Community Facilities Districts provide more flexibility to finance a wider range of public facilities and improvements.

COMPREHENSIVE MAINTENANCE

Public improvements and facilities within the project site would require routine maintenance and repair by various public agencies or homeowners association. Private facilities would be maintained by the property owner. Some public improvements and facilities, such as landscaped areas and parks, could potentially be maintained by a public agency funded by assessment districts, while the maintenance of other public improvements may be funded by revenues from the County's general fund. Public agencies that would likely be involved in maintenance of public facilities in the project site include, but are not limited to, El Dorado County, El Dorado Irrigation District, El Dorado Hills Community Services District, and Rescue Unified School District.

PLAN ADMINISTRATION

El Dorado County would be responsible for administering and enforcing the Promontory Specific Plan (once adopted). The procedures for amending or modifying the Specific Plan, review of subsequent tentative subdivision maps and development in the project site, and environmental

determinations of discretionary land use development projects are described in the Plan Administration Section of the Specific Plan.

3.4 SUBSEQUENT PROJECTS AND DEVELOPMENT IN THE PROMONTORY SPECIFIC PLAN AREA

As described in the Plan Administration Section of the Promontory Specific Plan, subsequent development would need to be consistent with the adopted Specific Plan. Subsequent development projects anticipated include, but are not limited to, rezoning of the project site concurrent with or after Specific Plan adoption, tentative subdivision maps for the residential villages, development projects in the village center, park development, development of the elementary school site, and implementation of wetland mitigation plans. Environmental review and documentation would need to be performed for subsequent projects to determine consistency with the evaluation performed in this program EIR, pursuant to CEQA.

3.5 REGULATORY REQUIREMENTS, PERMITS, AND APPROVALS

This program EIR may be used for the following direct and indirect actions regarding the Promontory Specific Plan:

EL DORADO COUNTY

The Promontory Specific Plan would be presented to the El Dorado County Planning Commission and Board of Supervisors for comment and review. As part of the Specific Plan's approval, the Board of Supervisors would take the following actions:

- Certification of the Promontory Specific Plan Program EIR.
- Adoption of a Mitigation Monitoring Program for the Promontory Specific Plan.
- Adoption of the Promontory Specific Plan by ordinance.
- Rezoning of the project site.

Subsequent actions that would most likely be taken by the County regarding the Promontory Specific Plan that this EIR would likely be used for include:

- Adoption of Design Guidelines for the Specific Plan.
- Approval of development agreements for the Promontory Specific Plan area.
- Approval of private projects and site development permits and plans in the Promontory Specific Plan area.

- Tentative and final subdivision maps or parcel maps.
- Design review of subsequent development in the Promontory Specific Plan area.
- Approval of final project access point(s) into the City of Folsom, based upon recommendations of the City of Folsom/El Dorado County Joint Powers Authority.
- Approval of final alignment, construction, and maintenance of Russell Ranch Boulevard between the Russell Ranch project and the Promontory Specific Plan site, based upon recommendations of the City of Folsom/El Dorado County Joint Powers Authority.
- Approval of the final shared drainage system of the Russell Ranch project and the Promontory Specific Plan site, based upon recommendations of the City of Folsom/El Dorado County Joint Powers Authority.

OTHER GOVERNMENTAL AGENCY APPROVALS

Additional subsequent approvals and other permits that may be required from local, regional, and state agencies that EIR may be used for are identified below:

- El Dorado County Local Agency Formation Commission approval of the project applicant's petition for annexation into El Dorado Irrigation District's Service Area and the El Dorado Hills Fire Department Service Area.
- School site acquisition and construction of facilities by Rescue Union Unified School District.
- Park facility development by the El Dorado Hills Community Services District.
- City of Folsom approval of final project access point(s) into the City of Folsom, based upon recommendations of the City of Folsom/El Dorado County Joint Powers Authority.
- City of Folsom approval of final alignment, construction, and maintenance of Russell Ranch Boulevard between the Russell Ranch project and the Promontory Specific Plan site, based upon recommendations of the City of Folsom/El Dorado County Joint Powers Authority.
- City of Folsom approval of the final shared drainage system of the Russell Ranch project and the Promontory Specific Plan site, based upon recommendations of the City of Folsom/El Dorado County Joint Powers Authority.
- Regional Water Quality Control Board, Central Valley Region National Pollutant Discharge Elimination System permits under Section 402 of the Clean Water Act.

- Regional Water Quality Control Board, Central Valley Region approval of Section 401 Water Quality Certification or waiver.

- California Department of Fish and Game approval of future potential streambed alteration agreements, pursuant to Sections 1601 and 1603 of the Fish and Game Code.

REFERENCES - Project Description

City of Folsom, 1996. City of Folsom Planning, Inspections, and Permitting. *City of Folsom Current Project List.* City of Folsom, California. May 3, 1996.

City of Folsom/El Dorado County, 1992. City of Folsom/El Dorado County Joint Powers Authority. *Resolution No. 92-02.* 1992.

Palisades, 1997. Palisades Development. *The Promontory Draft Specific Plan, Draft.* El Dorado County, California. February 7, 1997.

Trout, 1996. Trout, Roger, Senior Planner, El Dorado County Planning Department. *Personal Correspondence.* November 18, 1996.

CHAPTER 4.0

ENVIRONMENTAL ANALYSIS

CHAPTER 4.0

ENVIRONMENTAL ANALYSIS

4.1 . INTRODUCTION TO ENVIRONMENTAL ANALYSIS

Sections 4.2 through 4.14 in this EIR provide an integrated presentation of the setting, environmental impacts, and mitigation measures for the issue areas identified in Chapter 2.0. Potential effects of implementing the proposed project, including cumulative effects, are identified, along with mitigation measures recommended to lessen or reduce identified impacts. In cases where no mitigation is available, this fact is noted.

SETTINGS, IMPACT AND MITIGATION MEASURE SECTIONS

As required by CEQA Guidelines, the setting describes the environment in the project and study areas "as it exists before the commencement of the project." The setting is presented from site, local, subregional and/or regional perspectives, as appropriate to each environmental topic. As required by the CEQA Guidelines, the effects of the project are defined as changes to the environmental setting that are attributable to the project.

Impacts are identified and determined to be potentially significant, significant, cumulative significant, significant unavoidable, or less than significant. Cumulative impact analysis in this EIR is based on the implementation of the proposed project as well as approved and anticipated urban development in the City of Folsom and the El Dorado Hills Area as identified in their general plans. A summary of cumulative impacts is provided in Section 6.2.

According to CEQA Guidelines Section 15382, a significant impact is "...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project..." For each category of physical condition evaluated in this EIR, criteria for significance have been developed, using the CEQA Guidelines, El Dorado County standards, or the "significance thresholds" of federal, state, regional, or local agencies. Significance criteria vary for each environmental issue analyzed in this EIR and are defined at the beginning of each impact analysis section.

Mitigation measures identified in this report are characterized in one of three categories: 1) necessary to reduce the identified impact below a level of significance; 2) recommended to

reduce the magnitude of a significant impact, but not below a level of significance; and 3) recommended to reduce the magnitude of a less than significant impact. Where implementation of more than one mitigation measure is needed to reduce an impact below a level of significance, this fact is noted.

Consistent with CEQA Guidelines Section 15370, mitigation follows the strategy of avoid/minimize/rectify/reduce over time/compensation. According to the Guidelines, this strategy includes:

- **Avoiding** the impact altogether by not taking a certain action or parts of an action.
- **Minimizing** impacts by limiting the degree or magnitude of an action and its implementation.
- **Rectifying** the impact by repairing, rehabilitating, or restoring the impacted environment.
- **Reducing** or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- **Compensating** for the impact by replacing or providing substitute resources or environments.

4.2 Land Use

4.2 LAND USE

4.2.1 SETTING

EXISTING LAND USE

Promontory Specific Plan Area

As described in Chapter 3.0, Project Description, the project site is located on approximately 999 acres in the El Dorado Hills area along the El Dorado County and Sacramento County/City of Folsom boundary line. The project site is currently used for active cattle grazing. Physical features of the project site consist of a 100-foot Pacific Gas and Electric power line easement and a 200-foot Sacramento Municipal Utility District power line easement in the northern portion of the site, a 120-foot Pacific Gas and Electric power line easement in the southern portion of the site, and cattle fencing and unimproved dirt access roads throughout the entire project site. There are no structures or buildings on the project site.

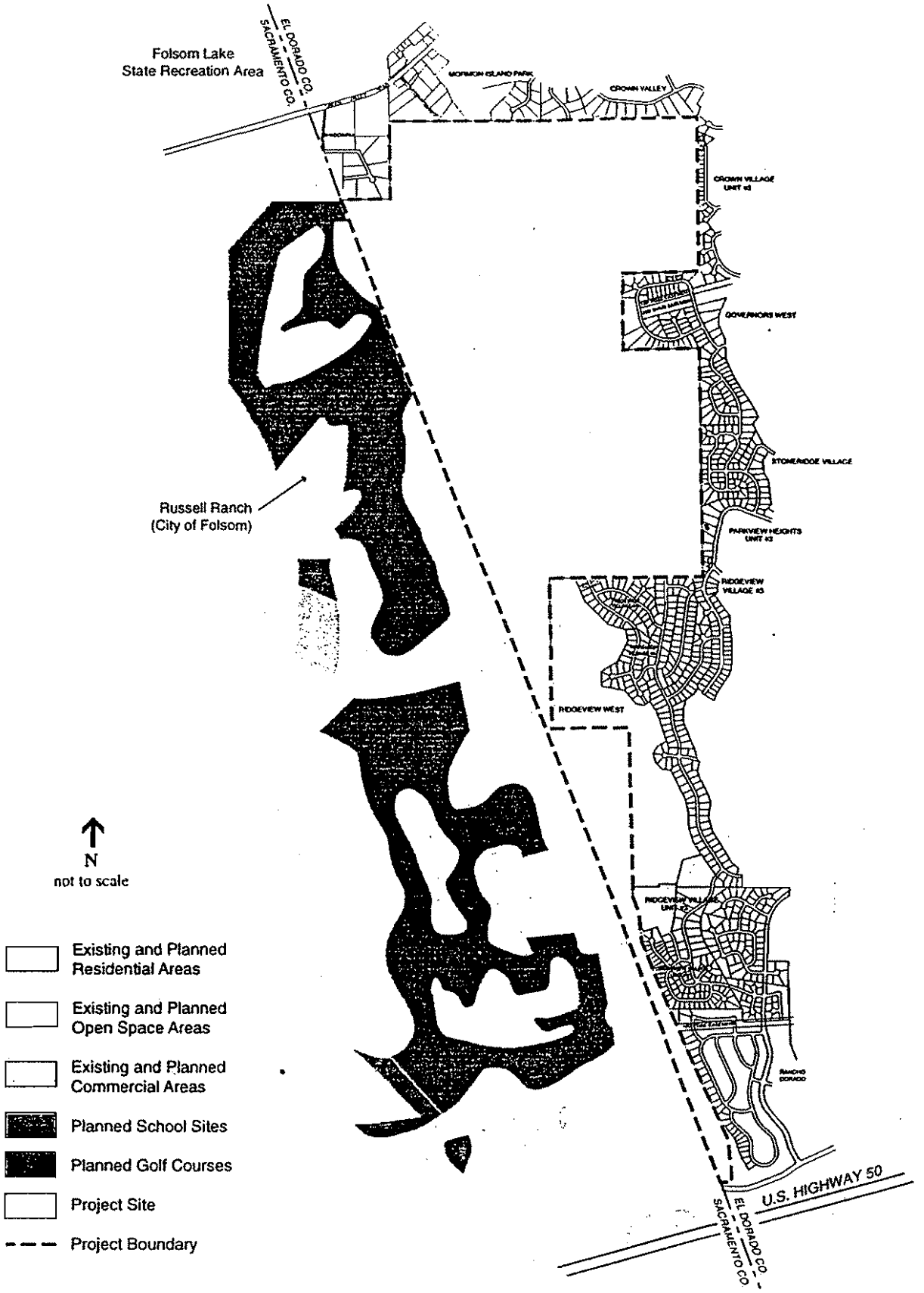
Adjacent Land Uses

As shown in **Figure 4.2-1**, the project site is surrounded by existing and planned single-family residential development and open space uses. Existing and/or developing residential development projects that are adjacent to the project site in El Dorado County include Shadowfax, Crown Village Unit 3, Governors West, Stoneridge Village, Parkview Heights Unit 3, and Ridgeview Villages 2, 3, 5, 8, and 9. Approved but undeveloped residential projects adjacent to the project site in El Dorado County include Crown Valley, Ridgeview West and Rancho Dorado.

As shown in **Figure 4.2-1**, the project site is adjacent to the Russell Ranch project in the City of Folsom in Sacramento County. The Russell Ranch Specific Plan area encompasses approximately 1,791 acres and is currently used for active cattle grazing (see Chapter 3.0, Project Description, for a description of the Russell Ranch project). The City of Folsom approved the Russell Ranch Vesting Tentative Subdivision Map on December 1, 1992 (City of Folsom, 1992a). However, construction of the Russell Ranch project has yet to occur.

In addition to existing and planned land uses in the City of Folsom and El Dorado County, the project site is within 0.5 miles of the Folsom Lake State Recreation Area, which is located downstream of the Auburn Dam Reservoir Site along the American River and is one of the most heavily used areas in the California State Park system.

Folsom Lake has up to 75 miles of undeveloped open shoreline and provides recreation opportunities for swimming, fishing, sailing, wind surfing, jet skiing, water skiing, boating, camping, picnicking, hiking, and nature study. Currently, the Folsom Lake State Recreation Area



SOURCE: City of Folsom, 1996; Palisades, 1996; Environmental Science Associates

Promontory Specific Plan / 950107 ■

Figure 4.2-1

Existing and Planned Land Uses

contains three campground sites, nine boat launch ramps, one marina, seven picnic areas, and 3,700 feet of swimming beaches.

PLANS AND POLICIES

El Dorado County General Plan

The El Dorado County General Plan was adopted January 23, 1996, and serves as the overall guiding policy document for the unincorporated areas of El Dorado County, including the El Dorado Hills area. The General Plan designated land uses are described below for both the project site and adjacent land areas.

Promontory Specific Plan Area

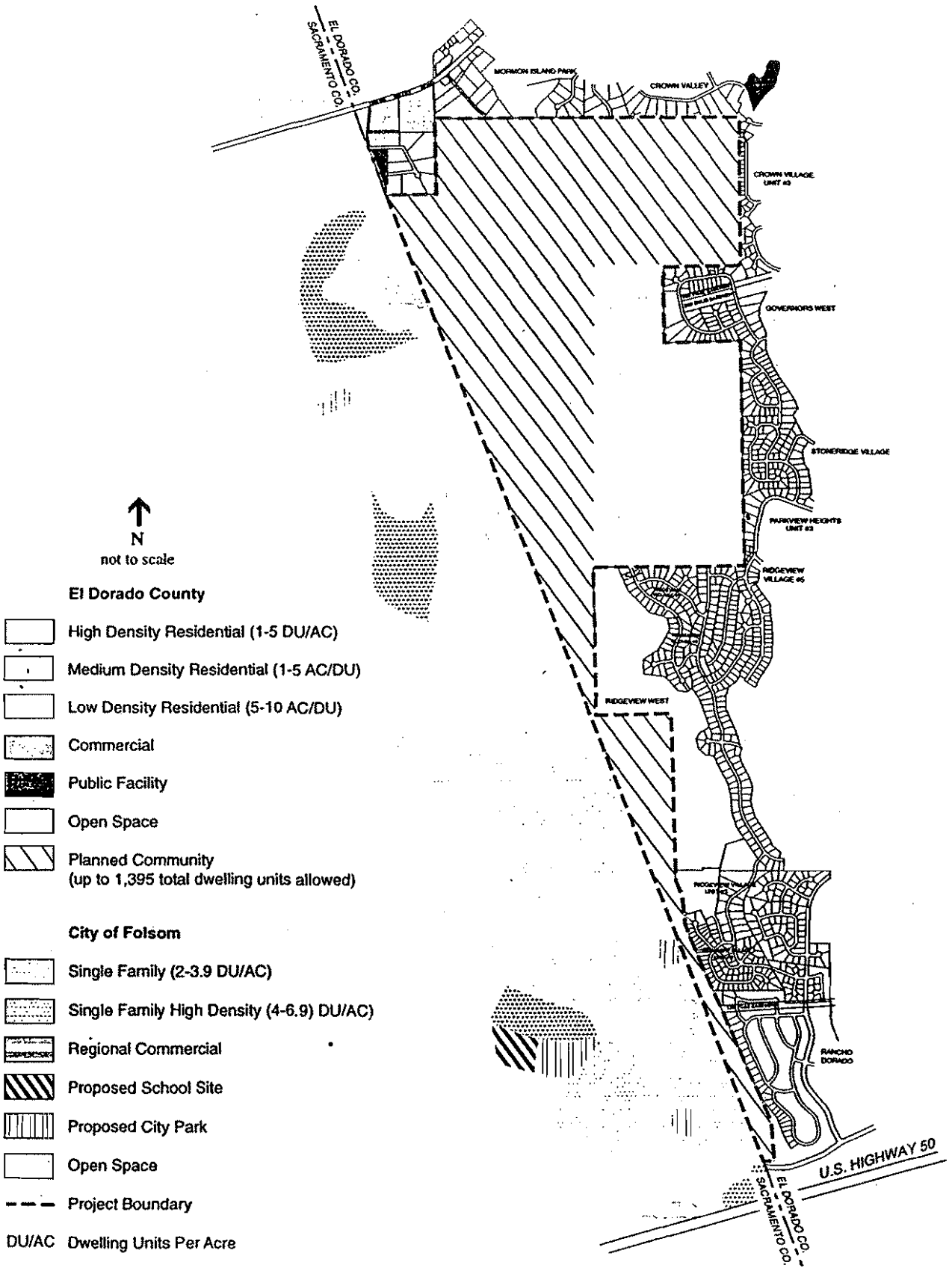
The project site is located within a Community Region in the El Dorado Hills area. "Community Regions" are identified under General Plan Objective 2.1.1 as areas appropriate for urban and suburban development based upon the availability of infrastructure, public services, and major transportation corridors and travel patterns (El Dorado County, 1996). In addition to the project site location within a Community Region, the project site is designated as Low-Density Residential (5-10 acres per dwelling unit), High Density Residential (1-5 dwelling units per acre) and Open Space with a Planned Community overlay (see **Figure 4.2-2**). Planned Community is an overlay designation that supersedes the underlying land use designations. As explained in General Plan Policy 2.1.4.3 below, the Planned Community overlay designation allows the County to approve, without General Plan amendments, specific plans authorizing some residential densities and land use intensities greater than that permissible pursuant to the underlying designation. Proposed development consistent with the underlying designation would not require processing of a specific plan. General Plan Policy 2.2.2.6 defines the purpose of the Planned Community overlay as:

A. Identify lands suitable for new communities that require a specific plan in accordance with Government Code Sections 65450-65457 and common planning and funding for infrastructure and life cycle costs.

B. Allow use of modern planning and development techniques, effect more efficient utilization of land, and to allow flexibility of development.

C. Aid in the reduction of development costs and provide for a combination of different land uses which complement each other but which may not in all aspects conform to the existing zoning regulations.

D. Encourage a more efficient use of public and/or private services.



SOURCE: El Dorado County, 1996; City of Folsom, 1993

Figure 4.2-2
General Plan Designated Land Uses

E. Place the primary emphasis on clustering intensive land uses to minimize impact on various natural and man-made resources, minimize public health concerns, minimize aesthetic concerns, and provide for the creation of open space lands and other community land uses.

F. Provide for public benefit. (El Dorado County General Plan, 1996)

Adjacent Land Uses

As shown in **Figure 4.2-2**, designated land uses surrounding the project site consist of Medium-Density Residential (1-5 acres per dwelling unit), High-Density Residential (1-5 dwelling units per acre), Commercial, Public Facilities, and Open Space.

El Dorado County General Plan Goals, Objectives, and Policies

Relevant El Dorado County General Plan goals, objectives, and policies related to the proposed project are identified below. This discussion is divided into two sections: General Plan Strategies and Concepts, and Land Use Element Goals, Objectives, and Policies. Other General Plan elements, such as Public Services and Utilities Element, and Land Use Element goals, objectives, and policies related to other EIR issue areas (i.e., aesthetics) are discussed in the relevant EIR environmental analysis sections. **Table 4.2-2** summarizes the project's consistency with the General Plan Land Use Element.

General Plan Strategies and Concepts

As part of the development of the El Dorado County General Plan, the County identified a vision of future growth that included, but was not limited to, protection of environmental resources, the use of comprehensive transportation planning in land use decision making, increasing the amount of affordable housing, and improving and expanding park and recreation facilities. Once a vision for the County was identified, General Plan strategies and concepts were developed. General Plan strategies relevant to the project include the following:

1. Recognize urban growth in Community Regions while allowing reasonable growth throughout the rural areas of the County.

2. Promote growth in a manner that retains natural resources and reduces infrastructure costs.

3. Encourage growth to reflect the character and scale of the community in which it occurs and recognize that planned-developments are an effective planning tool to maximize community identity and minimize impact on the surrounding area.

4. Require new growth to fully fund its on-site services and apportioned share of off-site services.

5. Provide sufficient land densities and land use designations throughout the County to accommodate the projected growth for all categories of development.

6. Support the ability of the private sector to create and provide housing for all residents regardless of income, race, sex, age, religion, or any other arbitrary factor to accommodate the County's projected share of the regional housing needs.

7. Recognize economic development as an integral part of the development of existing communities and new communities by allowing for a diverse mix of land use types which would facilitate economic growth and viability. (El Dorado County, 1996)

General Plan concepts related to the proposed project consist of the following:

> Flexible boundaries shall be provided identifying Community Regions, Rural Centers, and Rural Regions on the General Plan Land Use Map for clear distinction between:
>
> A. Community Regions where growth will be directed and facilitated;
>
> Higher levels of infrastructure and public services of all types shall be provided within Community Regions to minimize the demands on services in Rural Regions. The Capital Improvement Plan for the County and all special districts will prioritize improvements (El Dorado County, 1996).
>
> It is the explicit intent of the Plan, through the appropriate application of these planning concept areas, to: 1) foster a rural quality of life; 2) sustain a quality environment; 3) develop a strong, diversified, sustainable local economy; 4) plan land use patterns which will determine the level of public services appropriate to the character, economy, and environment of each region; and 5) accommodate the County's fair share of the regional growth projections while encouraging those activities that comprise the basis for the County's customs, culture, and economic stability.

Land Use Element Goals, Objectives, and Policies

The following General Plan policies are relevant to the proposed project:

> **Goal 2.1:** Land Use - Protection and conservation of existing communities and rural centers; creation of new sustainable communities; curtailment of urban/suburban sprawl; location and intensity of future development consistent with the availability of adequate

infrastructure; and mixed and balanced uses that promote use of alternate transportation systems.

Objective 2.1.1: Community Regions - Purpose: The urban limit line establishes a line on the General Plan land use maps demarcating where the urban and suburban land uses will be developed. The Community Region boundaries as depicted on the General Plan land use map shall be the established urban limit line.

Provide opportunities that allow for continued population growth and economic expansion while preserving the character and extent of existing rural centers and urban communities, emphasizing both the natural setting and built design elements which contribute to the quality of life and economic health of the County.

Policy 2.1.1.2: Establish Community Regions to define those areas which are appropriate for the highest intensity of self-sustaining compact urban-type development or suburban type development within the County based on the municipal spheres of influence, availability of infrastructure, public services, major transportation corridors and travel patterns, the location of major topographic patterns and features, and the ability to provide and maintain appropriate transitions at Community Region boundaries. These boundaries shall be shown on the General Plan land use map.

Policy 2.1.1.3: Mixed-use developments which combine commercial, research and development, and residential uses on a single parcel are permissible and encouraged within Community Regions provided the commercial use is the primary and dominant use of the land. Within Community Regions, the mixed uses may occur vertically. In mixed-use projects, the maximum residential density shall be 10 dwelling units per acre within Community Regions.

Objective 2.1.4: Planned Communities - Creation and development of balanced communities in areas identified as suitable for intensive development due to the availability of adequate infrastructure and services.

Policy 2.1.4.1: Planned communities within the County are identified as Planned Communities (-PC): "The Promontory (Russell Ranch)"; "Carson Creek"; "Pilot Hill Ranch"; and "Missouri Flat Area".

Policy 2.1.4.2: Planned Communities should be designed with an emphasis on alternative modes of transportation to minimize the use of personal motorized vehicles to the maximum extent possible. Pedestrian/bicycle pathways shall be encouraged. These pathways should be separated from roadways whenever possible to allow for greater safety for the pedestrian and bicyclist and to allow vehicular traffic to move more freely.

Policy 2.1.4.3: All planned communities are designated with the Planned Community (-PC) overlay designation and, except for the Missouri Flat Area Planned Community, which is governed by Policy 2.1.4.8, shall require the processing of a specific plan pursuant to Government Code Sections 65450-65457, unless otherwise specified herein. The specific designations of such lands, as well as permissible densities and intensities of use, shall be consistent with the applicable Land Use Summary Table (see **Table 4.2-1**). For these lands, the -PC overlay designation shall function as the General Plan designation governing the types and densities and intensities of allowed land uses and with which implementing planning actions such as adoption of specific plans and zoning must be consistent. Although these lands also have underlying land use designations (e.g., Low-Density Residential), those designations will not control the allowed types and densities and intensities of land uses unless the -PC overlay designation and Land Use Summary Table is removed through a General Plan amendment pursuant to Policy 2.1.4.6. Thus, for example, although the underlying designation (e.g., LDR) may seem to permit only residential uses at relatively low densities, the -PC overlay designation will allow the County to approve, without General Plan amendments, specific plans authorizing some residential densities and land use intensities greater than that permissible pursuant to the underlying designation (see **Table 4.2-1**).

TABLE 4.2-1
THE PROMONTORY PLANNED COMMUNITY LAND USE SUMMARY TABLE

Land Use	Acres	Units	Density (du/ac)	Persons Per Housing Unit /a/	Total Persons	Persons Per Acre
Residential						
	98.0	46	0.5	2.8	128.8	1.4
	345.0	424	1.3	2.8	1,187.2	3.6
	101.1	160	1.5	2.8	448.0	4.2
	109.0	200	1.8	2.8	560.0	5.0
	86.9	173	2.0	2.8	484.4	5.6
	83.9	192	2.3	2.8	537.6	6.4
	77.0	200	2.6	2.8	560.0	7.3
Subtotal	900.9	1,395	1.5 averag	2.8	3,906.0	4.2
Commercial	5.0		10.0 /b/	2.8		28.0
Public Schools	10.0					
Parks	23.1					
Open Space	60.0					
TOTALS	999.0	1,395			3,906.0	

/a/ 1990 U.S. Census
/b/ Maximum of 10 units per acre permitted (Policy 2.2.1.3)
SOURCE: El Dorado County, 1996

Policy 2.1.4.4: Specific plans for planned communities include negotiable design features for public benefit. Examples of these features are:

A. separate bicycle and pedestrian paths that connect residential areas to employment, retail, school, community facilities, and recreation areas;

B. on-street parking;

C. establish reduced mandatory building setbacks that encourage parking lots to the rear of commercial buildings or within the interior;

D. street landscaping within medians and along sidewalks;

E. bus and commuter transit stops;

F. integration of open space amenities to protect environmentally sensitive features;

G. common parking structures within business areas;

H. pedestrian circulation from one retail site to another;

I. pocket parks and plazas and parklands as recommended in the Parks and Recreation Element;

J. bicycle parking and/or storage facilities conveniently located;

K. satellite job center sites for multiple employers/businesses;

L. neighborhood Service Centers;

M. outdoor art, statues, etc.;

N. town/community centers distinguished with major public buildings, parks/plazas or other focal points;

O. a financial element that includes payment of all capital costs for infrastructure and ongoing operations and maintenance;

P. a distribution of housing units to meet the needs of all income levels as specified in Policies 4.1.1.1 and 4.1.1.2 of the Housing Element;

Q. provide for Neighborhood Service opportunities with residential land uses in accordance with Policy 2.2.5.8;

R. maintain significant historic and prehistoric sites, steep slope areas, and stream corridors in continuous and permanently dedicated open space;

S. provide on-site employee services such as restaurants, banks, etc.;

T. a common continuous landscape program that includes planting and design guidelines consistent with the setting, including street landscaping that creates separate walkways and bicycle routes, where appropriate; and

U. shielded, low intensity and efficient lighting.

Policy 2.1.4.5: To achieve a desired mix of uses within a planned community and emphasize the goal of improving the County's employment base, the following target acreage percentages shall be incorporated into the specific plan:

Residential	40-50%
Commercial/Office	1-15%
Research & Development/Industrial	0-15%
Public Facilities/Parks/Open Space	20+%

The actual mixture of uses will be refined and defined through the Specific Plan process. Where the mix of uses with a proposed planned community is substantially consistent with these target percentages, a specific plan for such a community may be approved without a General Plan amendment.

Policy 2.1.4.6: In areas designated Planned Community overlay there will be no further land divisions until such time as the County adopts a specific plan. Development pursuant to the underlying land use designation shall not occur unless there is a General Plan amendment to remove the Planned Community designation.

Policy 2.1.4.7: Planned Community densities reflected in a Board of Supervisors approved specific plan or development agreement shall supersede the underlying land use designation.

Policy 2.1.4.9: Parcels within a Planned Community shall not be subdivided below 40 acres until such time as a specific plan, or other planning document specified herein, is adopted by the County.

TABLE 4.2-2
PROJECT CONSISTENCY WITH THE GENERAL PLAN LAND USE ELEMENT

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Goal 2.1	Yes	The proposed project would create a new mixed-use community, would not induce urban sprawl, would be located in an area with available public services, and would provide facilities for alternate transportation.
Objective 2.1.1	Yes	The proposed project is located within the Community Region boundary in the El Dorado Hills Area.
Policy 2.1.1.2	Yes	The proposed project is located within the Community Region boundary in the El Dorado Hills Area.
Policy 2.1.1.3	Yes	The village center of the proposed project would consist of a mix of residential, commercial, and office uses. The proposed residential density for the village center is 8 dwelling units per acre.
Objective 2.1.4	Yes	The project site has been designated as a Planned Community under the General Plan.
Policy 2.1.4.1	Yes	The project site has been designated as a Planned Community under the General Plan.
Policy 2.1.4.2	Yes	The proposed project includes bike lanes on Russell Ranch Boulevard and pedestrian walkways and trails throughout the project site.
Policy 2.1.4.3	Yes	The proposed project consists of a specific plan and is substantially consistent with The Promontory Planned Community Land Use Summary Table. The project proposes fewer residential units, more commercial and office acreage, and more public open space.
Policy 2.1.4.4	Yes	The proposed project includes several of the identified design features, such as off-street pedestrian trails, on-street parking, and open space areas to protect environmentally sensitive areas.
Policy 2.1.4.5	Yes	The proposed project would generally meet the target percentages because Policy 2.1.4.5 allows the actual mixture of uses to be refined through the Specific Plan process. The proposed project is substantially consistent with the target percentages.
Policy 2.1.4.6	Yes	Parcel and residential subdivision mapping would not occur until the County adopts the Specific Plan.
Policy 2.1.4.7	Yes	Once the proposed specific plan is adopted by the County, the specific plan will supersede the existing underlying land use designation.

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Policy 2.1.4.9	Yes	Parcel and residential subdivision mapping would not occur until the County adopts the Specific Plan.
Policy 2.2.2.6	Yes	The proposed project consists of several modern planning and development techniques including, but not limited to, the designation of natural drainageways as open space in order to rely on site's natural features for drainage and flood control, the design of Russell Ranch Boulevard and circular collector roadways for the residential villages and the village center to enhance and direct project traffic, and clustering of the more intense commercial and residential uses in the village center with close access to major project arterial and collector roadways as well as access to a off-street pedestrian trail system.
Policy 2.2.5.3	Yes	The project site is located within the boundaries of a Community Region and is designated Planned Community by the General Plan. Project impacts concerning public services and utilities, seismic and erosion hazards, water quality, biological resources, transportation, and cultural resources are discussed in appropriate chapters of this EIR.
Policy 2.2.5.4	Yes	Following approval of the Promontory Specific Plan, the Planned Development combining zone district would be applied to the project in accordance with this policy.
Policy 2.2.5.8	Yes	The proposed project includes two public parks, an elementary school site, and a village center with retail and professional office uses. Other neighborhood services, such as libraries, day care centers, and community centers would be allowed within the project site.
Policy 2.2.5.9	Yes	The development standards of the Promontory Specific Plan would allow extended family support services such as daycare, libraries, schools, and public facilities in residential areas of the project. In some cases a special use permit would be required.
Policy 2.2.5.14	Yes	Open space buffer areas would be provided to protect wetlands and riparian areas as well as the proposed storm water detention facilities.
Policy 2.5.2.1	Yes	Opportunities for neighborhood commercial areas are located within the Village Center and are intended to serve the shopping and service needs of The Promontory community and surrounding areas. The design concepts of this policy are reflected in the retail commercial development standards of the Specific Plan.

SOURCE: Environmental Science Associates

Policy 2.2.2.6: The purpose of the *Planned Community* (*-PC*) overlay designation is to supersede underlying land use designations, as set forth in Policy 2.1.4.3, and to:

A. identify lands suitable for new communities that require a specific plan in accordance with Government Code Sections 65450-65457 and common planning and funding for infrastructure and life cycle costs;

B. allow use of modern planning and development techniques, effect more efficient utilization of land, and to allow flexibility of development;

C. aid in the reduction of development costs and provide for a combination of different land uses which complement each other but which may not in all aspects conform to the existing zoning regulations;

D. encourage a more efficient use of public and/or private services;

E. place the primary emphasis on clustering intensive land uses to minimize impact on various natural and man-made resources, minimize public health concerns, minimize aesthetic concerns, and provide for the creation of open space lands and other community land uses; and

F. provide for public benefit.

Policy 2.2.5.3: The County shall evaluate future rezoning: 1) to be based on the General Plan's general direction as to minimum parcel size or maximum allowable density; and 2) to assess whether changes in conditions that would support a higher density or intensity zoning district. The specific criteria to be considered include, but are not limited to, the following:

1. availability of an adequate public water source or an approved Capital Improvement Project to increase service for existing land use demands;
2. availability and capacity of public treated water system;
3. availability and capacity of public waste water treatment system;
4. distance to and capacity of the serving elementary and high school;
5. response time from nearest fire station handling structure fires;
6. distance to nearest Community Region or Rural Center;
7. erosion hazard;
8. septic and leach field capability;
9. groundwater capability to support wells;
10. critical flora and fauna habitat areas;
11. important timber production areas;

12. important agricultural areas;
13. important mineral resource areas;
14. capacity of the transportation system serving the area;
15. existing land use pattern;
16. proximity to perennial water course;
17. important historical/archaeological sites;
18. seismic hazards and presence of active faults; and
19. consistency with existing Conditions, Covenants, and Restrictions.

Policy 2.5.5.4: All development applications which have the potential to create 50 parcels or more shall require the application of the Planned Development combining zone district. However, in no event shall a project require the application of the Planned Development combining zone district if all of the following are true: 1) the project does not require a General Plan amendment; 2) the project has an overall density of two units per acre or less; and 3) the project site is designated High Density Residential.

Policy 2.2.5.8: The Neighborhood Service zoning district shall be permitted in all residential designations within Community Regions, Rural Centers, Medium Density, and High-Density Residential Platted Lands. Uses within the Neighborhood Service Zone District should provide a direct service to the family and/or community and may include educational facilities, day care services, places of worship, lodges, community or group meeting centers, fire stations, libraries, other public facilities, recreational facilities, and commercial uses. Development proposals shall include applications for pre-designating and zoning lands Neighborhood Service Zone at a ratio of up to two acres per 40 units within a new residential subdivision.

Policy 2.2.5.9: The County recognizes the need to allow for certain types of extended family support services and institutional uses in areas in which residential uses are allowed on the General Plan land use map. This policy recognizes the need to provide for support services to both the urban and rural residential areas throughout the County. While allowing for the establishment of such support services, this policy will protect the residential areas by only allowing the establishment of such support services with a special use permit. This will require a finding that the establishment of the uses will have no significant adverse effect on surrounding property or the permitted uses thereof.

Uses which are recognized to be consistent with this policy are those that provide a direct service to the family and/or community and include educational institutions, day care services, places of worship, cemeteries, community and group meeting centers, fire stations, libraries, public utility facilities, other public facilities, and recreational facilities. These uses would be consistent in the Multi-Family Residential, High-Density Residential,

Medium-Density Residential, Low-Density Residential, and Rural Residential land use designations.

Policy 2.2.5.14: Buffers shall be established around future water supplies and other public facilities to protect them from incompatible land uses. Such buffer lands should be contained on-site where possible.

Policy 2.5.2.1: Neighborhood commercial centers shall be oriented to serve the needs of the surrounding area, grouped as a clustered, contiguous center where possible, and should incorporate but not be limited to the following design concepts as further defined in the Zoning Ordinance:

A. maximum first floor building size should be sized to be suitable for the site;
B. residential use on second story;
C. no outdoor sales or automotive repair facilities;
D. reduced setback with landscaping and walkways;
E. interior parking, or the use of parking structure;
F. bicycle access with safe and convenient bicycle storage area;
G. on-street parking to reduce the amount of on-site parking;
H. community bulletin boards/kiosks;
I. outdoor artwork, statues, etc., in prominent places; and
J. pedestrian circulation to adjacent commercial centers.

El Dorado County Zoning

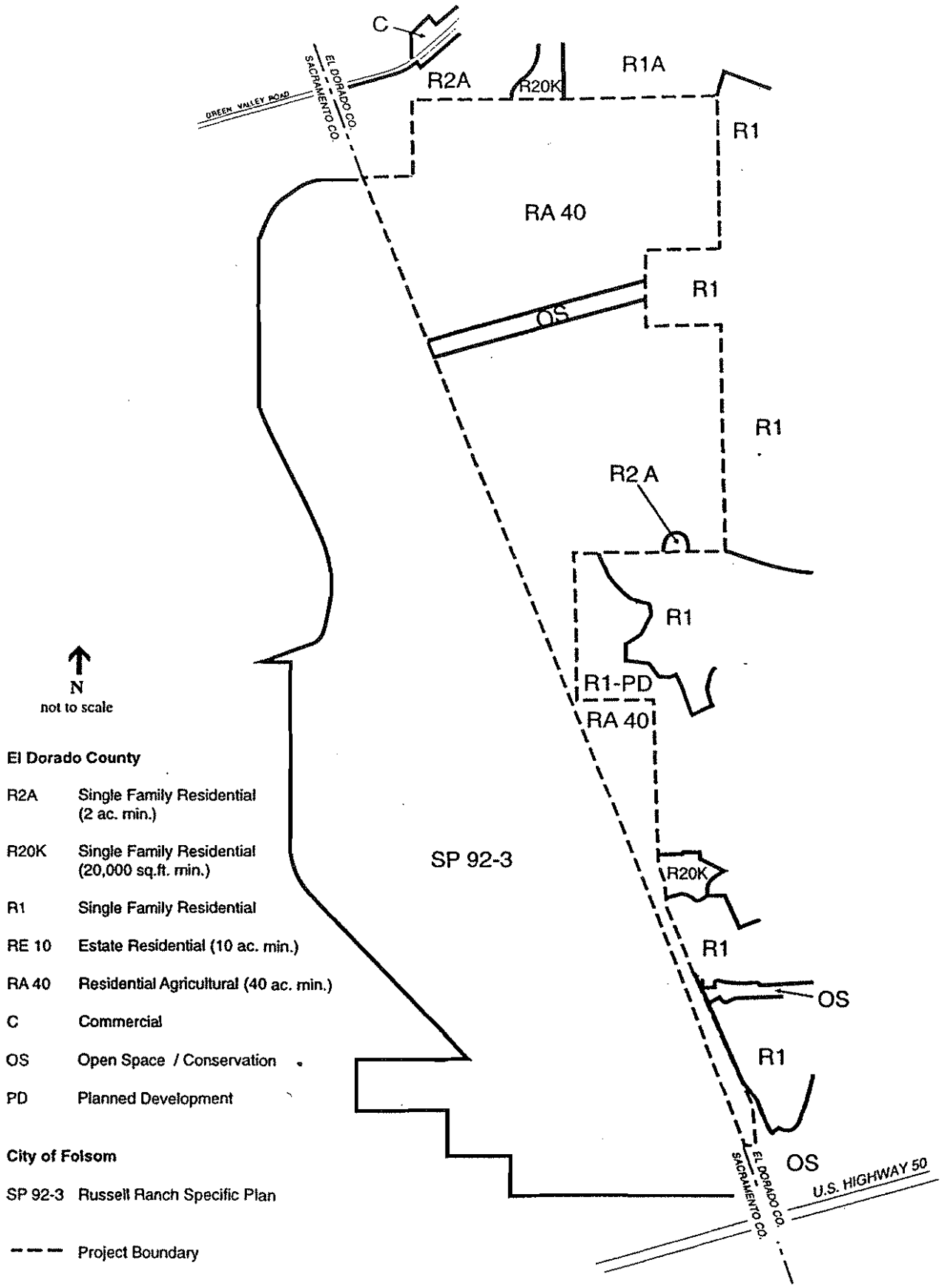
The El Dorado County Zoning Ordinance provides specific development and land use standards for the unincorporated areas of El Dorado County. The County land use zones for the project site and surrounding areas is reflected in the El Dorado Hills Salmon Falls Area Plan Zoning Map (1995).

Promontory Specific Plan Area

As shown in **Figure 4.2-3**, a majority of the project site is currently zoned Residential Agricultural 40-acre minimum and Open Space/Conservation with a small portion zoned Single-Family Residential (two-acre minimum).

Adjacent Land Uses

Land uses surrounding the project are zoned Single-Family Residential (two-acre minimum), Single-Family Residential (20,000-square-foot minimum), Single-Family Residential (one-acre minimum), Single-Family Residential, Estate Residential (ten-acre minimum), and Open Space/Conservation (see **Figure 4.2-3**).



SOURCE: El Dorado County, 1996

Figure 4.2-3
Zoning Designations

City of Folsom General Plan

The City of Folsom General Plan was adopted in October of 1988. As shown in **Figure 4.2-2**, lands adjacent to the project site in the City of Folsom are designated Single-Family (2 to 3.9 dwelling units per acre), Single-Family High-Density (4 to 6.9 dwelling units per acre), Open Space, and Park. Applicable Folsom General Plan goals and policies related to development adjacent to El Dorado County include the following:

> **Goal 5:** To influence land use decisions of Sacramento, Placer, and El Dorado counties and other governmental agencies which may impact Folsom.
>
> **Policy 5.2:** The City shall request copies of proposed plans prepared by other government agencies outside of Folsom but which could affect land in Folsom. City officials should respond in a timely manner to such proposed plans and participate in public meetings or hearings as appropriate (City of Folsom, 1993).

Russell Ranch Specific Plan

The Russell Ranch Specific Plan was adopted by the City of Folsom on December 2, 1992, and serves as the zoning for the Russell Ranch project site (SP 92-3). The Russell Ranch Land Use Map designates land areas adjacent to the project site as Single-Family Low-Density, Single-Family High-Density, Open Space Natural, and Park. Residential land use represents 59 percent of the entire Russell Ranch Specific Plan area, while over 30 percent of the Russell Ranch site is designated for useable open space (City of Folsom, 1992b). The Russell Ranch Specific Plan includes development and regulation standards as well as design guidelines to meet the objectives of the Specific Plan.

There are no development guidelines or regulatory standards specifically addressing the land use "transition" of the Russell Ranch Specific Plan area and the proposed Promontory Specific Plan project. However, the Russell Ranch Small Lot Vesting Tentative Subdivision Map has the following conditions of approval included in the City's approval to address coordination and connection with El Dorado County:

26. All future transportation facilities adjacent to or crossing the El Dorado - Sacramento County line may be coordinated with the Joint Powers Authority and the El Dorado County Department of Transportation to ensure consistency and coordination of plans along the County line, and to ensure that appropriate grading, drainage, and other sound engineering practices will be implemented.

117. All future drainage facilities within local watersheds that cross the El Dorado and Sacramento County line shall be reviewed by and coordinated with the Joint Powers Authority to ensure that appropriate drainage design will be implemented. Individual

projects in upper watershed areas shall be designed to limit runoff flows to pre-development levels, thus reducing the possibility of flooding or the need for enlarged detention basins in downstream watershed areas.

175. Bicycle and pedestrian trails shall be designed for through connections to El Dorado County consistent with the Trail and Bikeway Master Plan. Exact locations of the trails shall be coordinated with El Dorado County and reviewed and approved by the Public Works and Community Development Departments.

176. Privacy solid wall rear yard fencing shall not be allowed for those lots directly adjacent to the El Dorado County line and south of lot 283. Open fencing and landscaping shall be used to reduce the visual impacts of development. Fencing and landscape screening plans shall be submitted to the Community Development Department for review and approval prior to issuance of any building permit for those lots.

177. The applicant shall reserve enough land in the vicinity of lots 165 and 166 pursuant to Folsom Municipal Code Section 16.32.050 to provide local access to El Dorado County from Street "E" on the small lot map. (Government Code Section 66479)

182. A twenty-five-foot easement shall be granted to the City for emergency access over the strip of land designated Open Space Natural (OSN), between lots 289 and 290 of Sub Area No. 2, connecting the property at the El Dorado County line to a City street. Construction over, on, or through this access shall be to the satisfaction of the Public Works Director. (City of Folsom, 1992a)

Agricultural Preservation

A recent trend in land use in California has been the loss of farmland and productive agricultural soils. The U.S. Department of Agriculture and the California Department of Conservation have become involved with analyzing farmland losses. In 1975, the U.S. Department of Agriculture, Soil Conservation Service (USDA-SCS) began a mapping program to produce agricultural resource maps based on soil quality and land use across the nation. In 1982, California created the Farmland Mapping and Monitoring Program (FMMP) within the Department of Conservation to carry on the mapping activity from USDA-SCS on a continuing basis (State of California, 1994a).

The California Department of Conservation's FMMP categorizes land uses into eight categories. The project is located on land that is designated as "Other Land" by the California Department of Conservation (State of California, 1994b). "Other Land" is defined as land that which is not included in any other mapping categories. The following types of land are generally included:

- rural development which has a building density of less than 1 structure per 1.5 acres, but with at least 1 structure per 10 acres;
- brush, timber, wetlands, and other lands not suitable for livestock grazing;
- governmental lands not available for agricultural uses;
- road systems for freeway interchanges outside of the *Urban and Built-up Land* areas;
- vacant and nonagricultural land larger than 40 acres in size and surrounded on all sides by urban development;
- confined livestock, poultry, or aquaculture facilities 10 or more acres unless accounted for by the County's *Farmland of Local Importance* definition;
- strip mines, borrow pits, gravel pits, ranch headquarters, or water bodies larger than 10 acres; and
- a variety of other rural land uses. (State of California, 1996)

Agricultural Land Protection

The California Land Conservation Act (LCA) of 1965, also known as the Williamson Act, is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. In addition, the LCA provides protection for wildlife habitats, marsh lands, salt flats and scenic highway corridors. A Williamson Act contract was issued for the project site in February of 1971. However, the contract was canceled for the site in December of 1982 and no longer applies to the project site (El Dorado County, 1980).

4.2.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The land use analysis presented below evaluates the consistency of the proposed Promontory Specific Plan with the type and intensities of the existing and planned land uses on and surrounding the project site. An impact would be considered significant if it would result in land uses that are incompatible with existing and planned land uses on or surrounding the project site, if it would result in an inconsistency with El Dorado County land use designations, goals, objectives, or policies, or would otherwise conflict with adopted environmental plans and goals of the community where it is located. Since the City of Folsom is adjacent to the project, City of Folsom General Plan policies are reviewed in this EIR for informational purposes; however, these policies are clearly outside of El Dorado County jurisdiction. In addition, an impact would also

be considered significant if it would result in the loss of prime agricultural land as identified by the El Dorado County General Plan or the California Department of Conservation. Potential land use conflicts or incompatibility are usually the result of other environmental effects, such as the generation of noise or objectionable odors. Potential land use conflicts resulting from the effects of the project construction or operation are summarized here, and the reader is also referred to other EIR sections for more detailed discussion of relevant environmental effects.

IMPACT STATEMENTS AND MITIGATION MEASURES

Impact

4.2.1 Construction of the proposed project would produce short-term adverse effect on adjacent residential areas because of dust, noise, and construction traffic. This would be a significant impact.

As described in Chapter 3.0, Project Description, project development will be phased over an unspecified period of time. Disruption of the surrounding residential areas caused by project construction would result from the ongoing impacts of construction activities, including increased dust, noise, and traffic. Each of these physical impacts are discussed in the appropriate chapters of the EIR.

Mitigation Measures

4.2.1a Prior to final approval of any project site improvement plans and the commencement of construction activities, the project applicant shall locate construction staging areas as far as feasibly possible from existing residential areas. Construction staging areas shall be identified on project site improvement plans and approved by the El Dorado County Department of Transportation.

4.2.1b During construction activities, the project applicant shall limit the amount of daily construction equipment traffic by staging construction equipment and vehicles on the project site at the end of each work day rather than removing them.

4.2.1c Prior to any construction activities requiring complete or partial closure of existing roadways surrounding the project site, the project applicant shall perform the following tasks to the satisfaction of the El Dorado County Department of Transportation:

- **Provide written notice to property owners along affected roadways one week prior to roadway closures.**
- **To ensure public safety, clearly mark and secure roadway construction areas.**

- **Steel plates shall be placed over open trenches at the end of each work day to restore vehicle access to all residents.**

4.6.1 **Prior to approval of subsequent development, project applicants shall demonstrate to the County and District their compliance with Rule 223 of the El Dorado Air Pollution Control District's Rules and Regulations handbook in written report form. This fugitive dust prevention and control plan shall briefly list all Best Management Practices (BMP) to be implemented for the control of fugitive dust emissions throughout the construction phase.**

4.7.1a **Construction activities shall be limited to the hours of 7:00 a.m. to 6:00 p.m. on weekdays and the hours of 8:00 a.m. to 5:00 p.m. on Saturday and Sunday.**

4.7.1b **Locate fixed construction equipment such as compressors and generators as far as feasibly possible from sensitive receptors. Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power construction equipment.**

The above mitigation measures will limit construction activities to the specified time period as well as locate construction staging areas away from project area residents, which will reduce the temporary effect of construction activities.

Significance After Mitigation

Less than significant.

Impact

4.2.2 **Development of the proposed Specific Plan would generally be consistent with existing and future adjacent urban development in the El Dorado Hills area and the City of Folsom. This would be a less than significant impact.**

Ultimate development of the Promontory Specific Plan residential villages adjoining existing residential development in the El Dorado Hills area would be compatible and similar in use. Residential villages 5, 6, 7, and 8 would generally be developed at a density lower than the adjoining residential development of the Ridgeview, Stoneridge Village, and Governors West projects.

In addition, the project would be located adjacent to approved but undeveloped residential projects including Ridgeview West, Crown Valley, and Rancho Dorado in El Dorado County and Russell Ranch in the City of Folsom. Project proposed residential densities are similar or lower than these approved projects, and thus are compatible.

Mitigation Measure

4.2.2 Since no significant impact is identified, no mitigation is required.

Impact

4.2.3 Implementation of the proposed Specific Plan would be substantially consistent with the El Dorado County General Plan. This would be a less than significant impact.

The proposed project is generally consistent with General Plan strategies and concepts related to providing urban and mixed-use growth in Community Regions, promotion of growth that retains natural resources and has access to necessary infrastructure. As described in **Table 4.2-2**, the proposed project is substantially consistent with the General Plan Land Use Element goals, objectives, and policies, and is specifically identified as a "Planned Community" by the General Plan.

Mitigation Measures

4.2.3 Since no significant impact is identified, no mitigation is required.

Impact

4.2.4 Implementation of the proposed Specific Plan would convert the project site from grazing land to urban development, adding to the cumulative loss of grazing lands. This would be a less than significant cumulative impact.

Conversion of agricultural lands in California and subsequent land use conflicts of urban uses in close proximity to active agricultural lands continues to be a state-wide concern. The California Department of Conservation's Farmland Conversion Report 1992-1994 identifies that approximately 61 acres of grazing land in El Dorado County were converted to non-agricultural uses between 1992 and 1994. This loss represents approximately 0.03 percent of all grazing lands within the County (State of California, 1996a).

Implementation of the specific plan would result in the loss of existing grazing activities. However, the project site is located within the boundaries of a Community Region and is designated Planned Community by the General Plan. As identified in General Plan Policy 2.1.4.3 (The Promontory Planned Community Land Use Summary Table), the project site is anticipated for urban development under the General Plan. In addition, the project site is designated as "Other Land" by the California Department of Conservation's Farmland Mapping and Monitoring Program and is not considered to be productive (or prime) farmland. The 1980 Draft Environmental Impact Report on the cancellation of the Williamson Act contract for the project site concluded that, due to the site's steep topography and soil conditions, the only agricultural use the property would be suited for is grazing (El Dorado County, 1980).

The 1980 EIR also found that cattle operations in this area would not be profitable because of the steep terrain and interference from residents and pets in adjacent residential areas. Since the project site is not suited to agricultural uses, the loss of grazing land that would result from the project would not be considered significant.

Mitigation Measures

4.2.4 Since no significant impact is identified, no mitigation is required.

REFERENCES - Land Use

City of Folsom, 1993. City of Folsom. *City of Folsom General Plan, January 1993 Update.* Folsom, California. January, 1993.

City of Folsom, 1992a. City of Folsom. *Resolution No. 3899, Resolution of the City Council of the City of Folsom Approving a Small Lot Vesting Tentative Map for the Russell Ranch for 3,887 lots.* Folsom, California. December 1, 1992.

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4.3 AESTHETICS

4.3 AESTHETICS

4.3.1 SETTING

VISUAL CHARACTER OF THE REGION

The Folsom/El Dorado Hills area is generally characterized by the broad plains of the Central Valley and the Sierra Foothills, which provide the backdrop for the area's visual resources. The area surrounding the project site generally consists of urbanizing residential and semi-rural areas, developing commercial and industrial areas, U.S. Highway 50, the natural riparian habitat of the Humbug/Willow Creek Parkway, and the Folsom Lake State Recreation Area.

VISUAL CHARACTER OF THE PROJECT SITE

As described in Chapter 3.0, Project Description, the project site is located within the western edge of the Sierra Foothills in the unincorporated community of El Dorado Hills. The project site is currently used for cattle grazing. Elevations on the project site range from 420 feet to 1,040 feet above mean sea level. Existing facilities on the project site consist of wire fencing and two parallel transmission lines that bisect the site.

Landscape features that make up the visual characteristics of the project site are related to a variety of natural features. The topography of the project site generally slopes west towards the City of Folsom and consists of two topographical areas: the valley floor (i.e., village center and portions of villages 1, 2, and 3) and the uplands area (i.e., villages 4, 5, 6, 7, 8, and portions of villages 1, 2, 3). Landscape features of the valley floor area consist of grasslands, scattered oak trees, and intermittent drainage swales (see **Figures 4.3-1** and **4.3-2**). The upland area's landscape features are the most prominent and visible of the project site and consist of rock outcroppings, grasslands, oak woodlands, and riparian vegetation associated with intermittent drainage swales (see **Figures 4.3-1** and **4.3-2**).

VISUAL CHARACTER OF ADJACENT LAND USES

As described in Section 4.2, Land Use, existing land uses adjacent to the project site in the El Dorado Hills area consist of developed and developing single-family residential and open space uses and approved but undeveloped single-family residential projects. Existing land uses to the west in the City of Folsom currently consist of grazing activities. However, the approved Russell Ranch Specific Plan will eventually convert these grazing activities to urban residential and open space uses (i.e., two golf courses).

SCENIC VISTAS, PUBLIC VIEWS, AND SIGNIFICANT FEATURES

The visual characteristics of the project site are characteristic of the scenic and rural features typical of the western slope of El Dorado County. Since the topography of the project site rises substantially from areas to the west, there are extensive public views of the project site. Sensitive viewsheds identified for the project site consist of the City of Folsom, the U.S. Highway 50 corridor, and the El Dorado Hills area, and are discussed further below. For the purposes of this analysis, a "sensitive" viewshed is generally defined as public viewing areas (e.g., public roadways, parks, and open space areas) within close proximity to the project site that have relatively open views of the project site and from which alteration of the site would be noticed.

City of Folsom

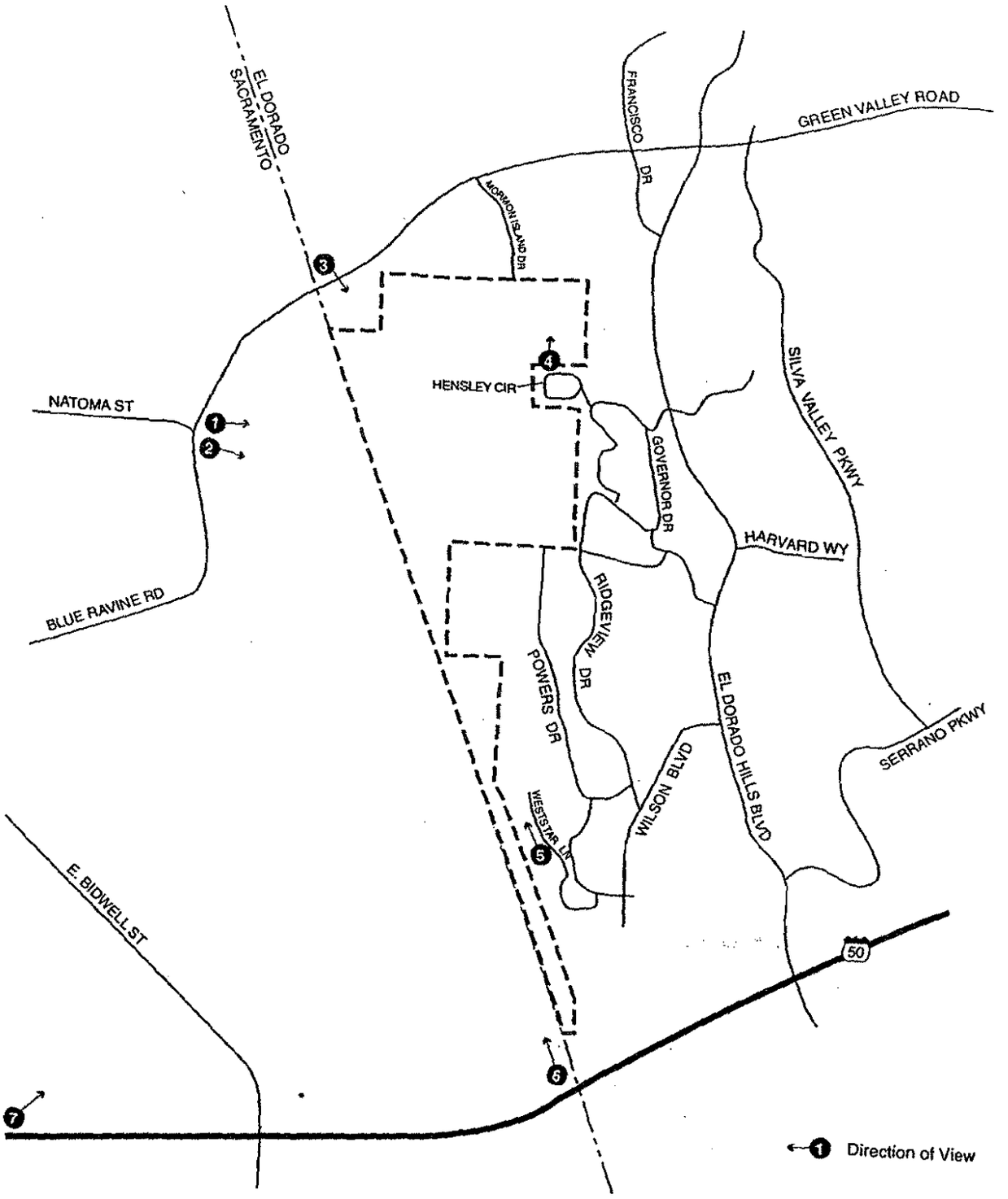
On clear weather days, portions of the project site are visible from several areas in the City. However, the project site is most visible in the northeastern portion of the City along Blue Ravine Road (from the intersection of Blue Ravine Road and Oak Avenue Parkway to the intersection of Blue Ravine Road and Natoma Street) and Green Valley Road (from the El Dorado County line to the intersection of Blue Ravine Road and Natoma Street). As shown in **Figure 4.3-2**, extensive views of a majority of the project site from this portion of the City can be seen. As viewed from the City, the project site generally blends with the existing rural landscape appearance of the eastern portion of the City providing a transition between the City of Folsom and the urban areas of the El Dorado Hills area.

U.S. Highway 50 Corridor

U.S. Highway 50 consists of four lanes and serves a mix of both local and regional commuter and freight traffic. As shown in **Figure 4.3-1**, U.S. Highway 50 extends in a west to east alignment just south of the project site. Although U.S. Highway 50 is within close proximity of the project site, existing vegetation, urban development, and topographic variations limits views of the project site. **Figures 4.3-1** and **4.3-4** identify limited views of the project site from U.S. Highway 50. Views 6 and 7 along the highway are both approximately 0.13 miles in length and provide limited views of the project site for an approximate seven second duration for travelers on U.S. Highway 50 (see **Figure 4.3-4**).

El Dorado Hills Area

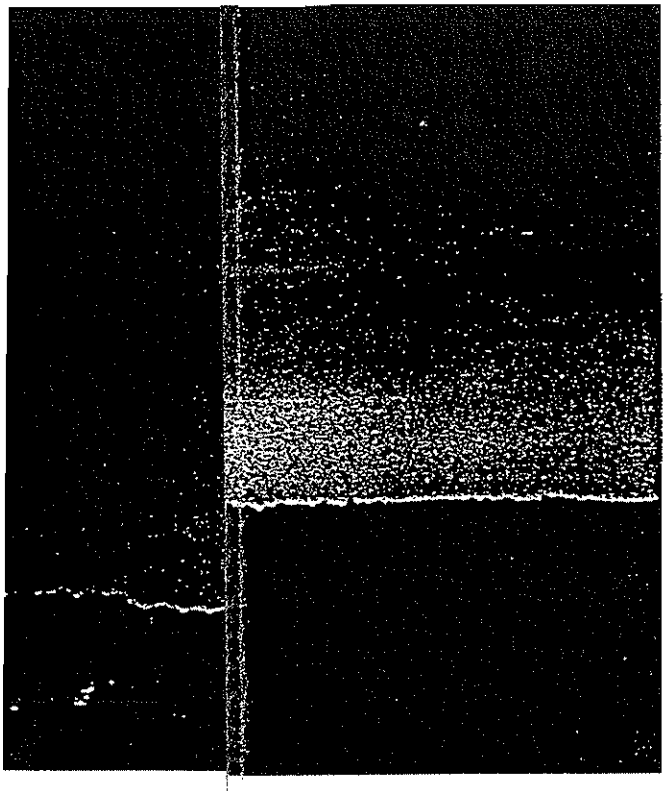
Views of the project site from the El Dorado Hills area are limited to existing and developing adjacent residential areas and Green Valley Road. Weststar Lane and Powers Drive in Ridgeview Village Units 3 and 5 residential subdivisions have partial views of the southern portion of the project site (proposed village 8), while the Governors West residential subdivision has partial views of the northern portion of the project site (proposed villages 4, 5, and 6)(see **Figure 4.3-3**).



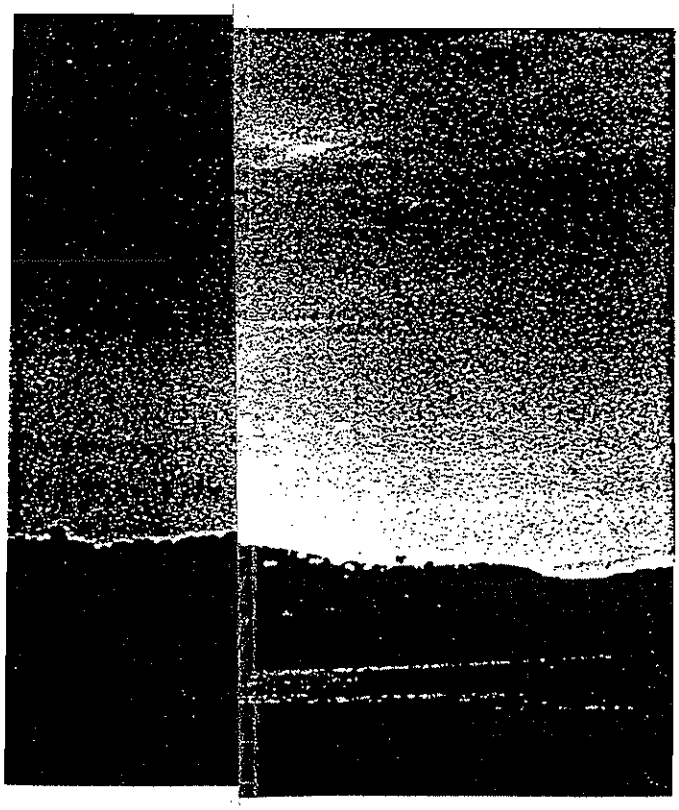
SOURCE: Environmental Science Associates

Promontory Specific Plan / 950107 ■

Figure 4.3-1
Key to Photographic Views



View 1: Looking

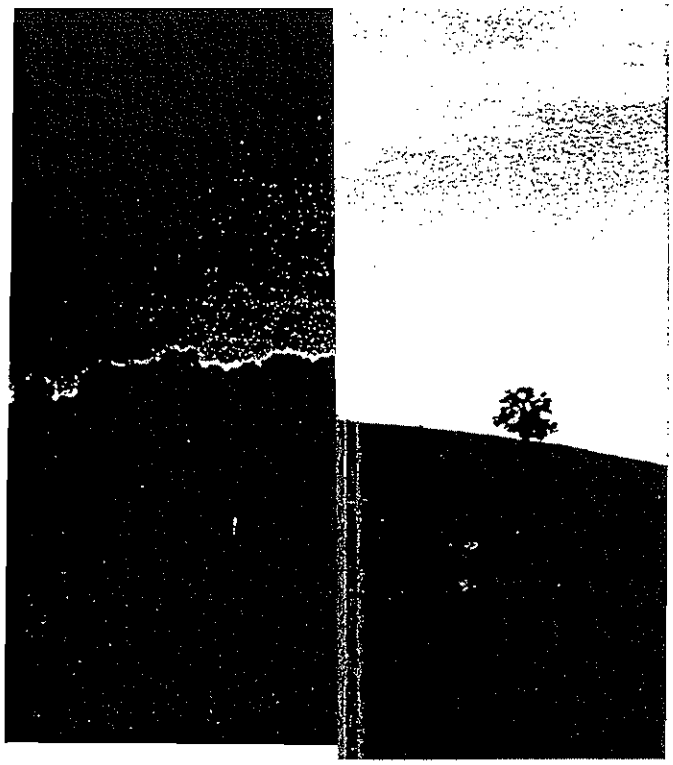


View 2: Looking e

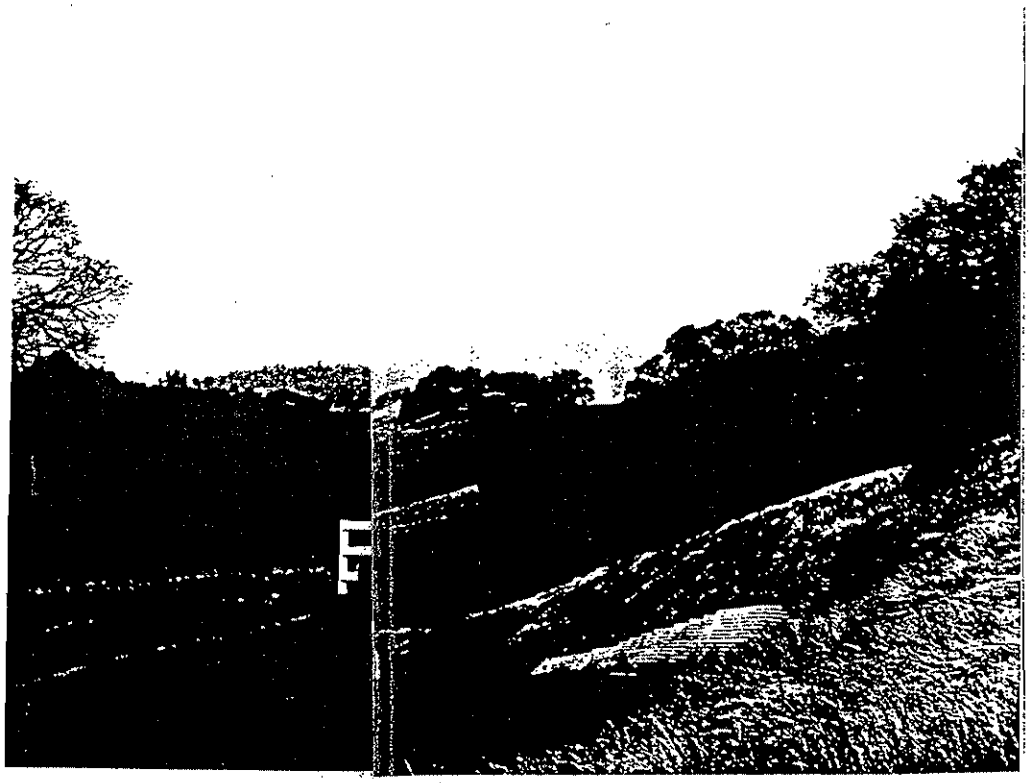
SOURCE: Environmental Science Asso

Figure 4.3-2

: Views of the Project Site From The City of Folsom



View 3: Looking south at



View 4: Looking north at the site (Village 8) from Weststar Lane.

SOURCE: Environmental Science Ass

Figure 4.3-3

Views of the Project Site From The El Dorado Hills Area

View 6: Looking north at project site (Village 8 and open space area) from U.S. Highway 50 at the Sacramento/El Dorado County line.

View 7: Looking northeast at the project site from U.S. Highway 50 east of the Prairie City Road Interchange.

SOURCE: Environmental Science Associates

Figure 4.3-4

Photographic Views of the Project Site from U.S. Highway 50

In addition to residential areas in the El Dorado Hills area, portions of the project site (proposed villages 1 and 2) are also visible from Green Valley Road, a regional roadway.

PLANS AND POLICIES

El Dorado County General Plan

The following General Plan goals, objectives, and policies for visual resources and aesthetics are relevant to the proposed project. **Table 4.3-1** summarizes the project's consistency with the General Plan.

Goal 2.3: Natural Landscape Features - Maintain the characteristic natural landscape features unique to each area of the County.

Objective 2.3.1: Topography and Native Vegetation - Provide for the retention of distinct topographical features and conservation of the native vegetation of the County.

Policy 2.3.1.1: The County shall continue to enforce the tree protection provisions in the Grading Erosion and Sedimentation Control Ordinance and utilize the hillside road standards.

Objective 2.3.2: Hillsides and Ridge Lines - Maintain the visual integrity of hillsides and ridge lines.

Policy 2.3.2.1: Disturbance of slopes forty (40) percent or greater shall be discouraged to minimize the visual impacts of grading and vegetation removal.

Goal 2.4: Existing Community Identity - Maintain and enhance the character of existing rural and urban communities, emphasizing both the natural setting and built design elements which contribute to the quality of life, economic health, and community pride of County residents.

Objective 2.4.1: Community Identity - Identification, maintenance, and enhancement of the unique identity of each existing community.

Policy 2.4.1.2: The County shall develop community design guidelines in concert with members of each community which will detail specific qualities and features unique to the community as Planning staff and funds are available. Each plan shall contain design guidelines to be used in the project site review of all discretionary project permits. Such plans may be developed for Rural Centers to the extent possible. The guidelines shall include, but not be limited to, the following criteria:

A. Historic preservation
B. Streetscape elements and improvements
C. Signage
D. Maintenance of existing scenic road and riparian corridors
E. Compatible architectural design
F. Designs for landmark land uses
G. Outdoor art

Goal 2.5: Community Identity - Carefully planned communities incorporating visual elements which enhance and maintain the rural character and promote a sense of community.

Objective 2.5.1: Physical and Visual Separation - Provision for the visual and physical separation of communities from new development.

Policy 2.5.1.1: Low-intensity land uses shall be incorporated into new development projects to provide for the physical and visual separation of communities. Low-intensity land uses may include any one or a combination of the following: parks and natural open space areas, special setbacks, parkways, landscaped roadway buffers, natural landscape features, and transitional development densities.

Policy 2.5.1.2: Greenbelts or other means of community separation shall be included within a specific plan and may include any of the following: preserved open space, parks, agricultural districts, wildlife habitat, rare plants preserves, riparian corridors, and designated Natural Resources areas.

Policy 2.6.1.5: Discretionary development on the ridge lines shall be limited within identified scenic corridors. Visual impacts will be assessed and may require setbacks, screening, or other methods as conditions to receiving discretionary approval.

Goal 2.8: Lighting - Elimination of high-intensity lighting and glare consistent with prudent safety practices.

Objective 2.8.1: Lighting Standards - Provide standards, consistent with prudent safety practices, for the elimination of high intensity lighting and glare.

Policy 2.8.1.1: Include standards, consistent with prudent safety practices, for outdoor lighting to reduce high-intensity nighttime lighting and glare in the update of the County Zoning Ordinance.

Policy 7.3.4.1: Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.

Objective 7.4.4: Forest and Oak Woodland Resources - Protect and conserve forest and woodland resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values (El Dorado County, 1996).

TABLE 4.3-1
PROJECT CONSISTENCY WITH THE GENERAL PLAN

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Goal 2.3	Yes	The proposed project would preserve natural drainageways and conserve oak trees, and proposed grading and circulation plans would minimize disturbance to natural topography and rock outcroppings.
Objective 2.3.1	Yes	The proposed project would preserve natural drainageways and conserve oak trees, and proposed grading and circulation plans would minimize disturbance to natural topography and rock outcroppings.
Policy 2.3.1.1	Yes	The project proposed grading plan would be consistent with County grading and erosion control standards. In addition, the grading, circulation, and development plan include provisions for conserving trees on the site.
Objective 2.3.2	Yes	The proposed project includes hillside development standards to address potential adverse visual effects of the project site on views from the City of Folsom.
Policy 2.3.2.1	Yes	The proposed project would consist of developing in areas of 40 percent slopes. However, the Specific Plan includes hillside development standards that includes development restrictions on steep slopes, such as restrictions on the amount of site disturbance allowed, restrictions on the use of retaining walls, requiring earth tone colors be used on residential homes, and the conservation of oak trees to minimize visual effects.
Goal 2.4	Yes	The proposed project would be similar in design and land use to existing land uses surrounding the project site, and would complement the character of existing development in the El Dorado Hills area.
Objective 2.4.1	Yes	The proposed project would be similar in design and land use to existing land uses surrounding the project site, which would enhance the existing identity of the El Dorado Hills area. The proposed project would also provide a residential density transition from the City of Folsom and the El Dorado Hills area.

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Policy 2.4.1.2	Yes	Subsequent actions for the proposed project would include the adoption of design guidelines for the project that would address appropriate items identified in this policy.
Goal 2.5	Yes	The residential villages of the proposed project would be semi-rural in nature and the overall design of the project site would incorporate natural elements of the project, such as the natural drainageways and would follow development standards to minimize impacts to hillsides.
Objective 2.5.1	Yes	The proposed project would provide visual and physical separation from the City of Folsom and existing development in the El Dorado Hills area by residential density transitions and landscape areas.
Policy 2.5.1.1	Yes	The proposed project would include lower density residential development, open space, and recreation areas to provide visual and physical separation from the City of Folsom and existing development in the El Dorado Hills area.
Policy 2.5.1.2	Yes	The Specific Plan includes open space corridor areas throughout the project site and two parks.
Policy 2.6.1.5	Yes	The Specific Plan includes development standards for hillside development to limit visual effects.
Goal 2.8	Yes	The Specific Plan provides no discussion on lighting standards, but would be subject to County zoning standards and prudent safety standards.
Objective 2.8.1	Yes	The Specific Plan provides no discussion on lighting standards, but would be subject to County zoning standards and prudent safety standards.
Policy 2.8.1.1	Yes	The Specific Plan provides no discussion on lighting standards, but would be subject to County zoning standards and prudent safety standards.
Policy 7.3.4.1	Yes	The proposed project incorporates two major drainage courses in the project site and would be designated as open space.
Objective 7.4.4	Yes	The proposed project includes hillside development standards that includes development restrictions on steep slopes, such as restrictions on the amount of disturbance allowed and the conservation of oak trees.

City of Folsom General Plan

The City of Folsom General Plan was adopted in October of 1988. Since the project site is not located within the City of Folsom, it is not subject to City of Folsom General Plan. The following Land Use Element Goal is indirectly related to the project site:

Goal 1: This is the key Goal of the Plan and this sets the tone of the Plan.

To retain and enhance Folsom's quality of life, separate identity and sense of community. Folsom's identity and quality of life are defined by:

1. The diverse natural setting, including the American River, its tributary streams, natural vegetation, topography, native wildlife, and other unique features of the landscape (City of Folsom, 1993).

Russell Ranch Specific Plan

As described in Section 4.2, Land Use, the Russell Ranch Specific Plan was adopted by the City of Folsom on December 2, 1992. The Russell Ranch Specific Plan provides for urban level development adjacent to El Dorado County and the project site consisting primarily of residential uses and two golf courses.

There are no development guidelines or regulatory standards specifically addressing the land use "transition" of the Russell Ranch Specific Plan area and the proposed project. However, the Russell Ranch Small Lot Vesting Tentative Subdivision Map has the following condition of approval included in the City's approval to address visual impacts to El Dorado County:

176. Privacy solid wall rear yard fencing shall not be allowed for those lots directly adjacent to the El Dorado County line and south of lot 283. Open fencing and landscaping shall be used to reduce the visual impacts of development. Fencing and landscape screening plans shall be submitted to the Community Development Department for review and approval prior to issuance of any building permit for those lots (City of Folsom, 1992).

4.3.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The California Environmental Quality Act (CEQA) Guidelines Appendix G states that significant effects on the environment include substantial, demonstrable negative aesthetic effects, as well as conflicts with adopted environmental plans and goals of the community. In addition, Appendix I

(Environmental Checklist Form) of the CEQA Guidelines also identifies the evaluation of significant effects to scenic vistas or highways and the creation of light or glare.

This analysis evaluates the project's alteration of the visual character of the project from the sensitive viewsheds (i.e., City of Folsom, U.S. Highway 50, and the El Dorado Hills Area) identified above from public viewing areas. No analysis of private viewsheds was performed as part of this analysis. Subsequent tentative subdivision maps and other approvals are expected to address potential adverse effects to private views.

The evaluation of potential impacts is based on the project's ability to change the visual character of the site as determined by the following criteria:

- obstruction of a scenic view (such as views of Folsom Lake or the lower elevation areas of Sacramento County) from public viewing areas;
- introduction of physical features that are substantially out of character with adjacent residential areas;
- alteration of the natural landscape characteristics of the site of which the scale or degree of change appears as a substantial, obvious, and disharmonious modification of the overall scene, to the extent that it clearly dominates the view;
- creation of substantial daytime glare;
- disruption of adjacent residential areas from new night-time lighting; or
- inconsistency with the El Dorado County General Plan.

IMPACT STATEMENTS AND MITIGATION MEASURES

Impact

4.3.1 As viewed from the City of Folsom, the implementation of the proposed project would substantially alter the existing landscape characteristics of the project site from rural land to a developed urban/suburban uses. This would be a significant impact.

As shown in **Figure 4.3-2**, there are extensive views of the project site from the City of Folsom. Public areas and roadways that would have extensive views of the project site include, but are not limited to, Blue Ravine Road (from the intersection of Blue Ravine Road and Oak Avenue Parkway to the intersection of Blue Ravine Road and Natoma Street); Green Valley Road (from the El Dorado County line to the intersection of Blue Ravine Road and Natoma Street); and the Humbug/Willow Creek

Parkway. **Figure 4.3-5** identifies highly visible areas of the project site as viewed from the City of Folsom. Development of the project site would result in the alteration in the existing appearance of the project site from rural to urban. Alteration of the project site would consist of substantial grading activities for new roadways, residential, commercial and office uses, and schools and park sites.

The Promontory Specific Plan acknowledges the potential visual impact of development of the project site on the City of Folsom, and provides the following measures and standards to reduce the visual effect of the development of the project site.

Hillside Development Standards (areas with slopes greater than 25 percent)

1. Lot sizes controlled by County's minimum lot size and slope standards.

2. Minimum lot frontage requirements:

Slope	Minimum Frontage
25%-30%	120 feet
31%-35%	135 feet
36%-40%	150 feet

3. Subsequent subdivision improvement plans are to identify driveways for all lots with street cuts or fills along the frontage 6 feet or more in elevation difference, or as required by the County.

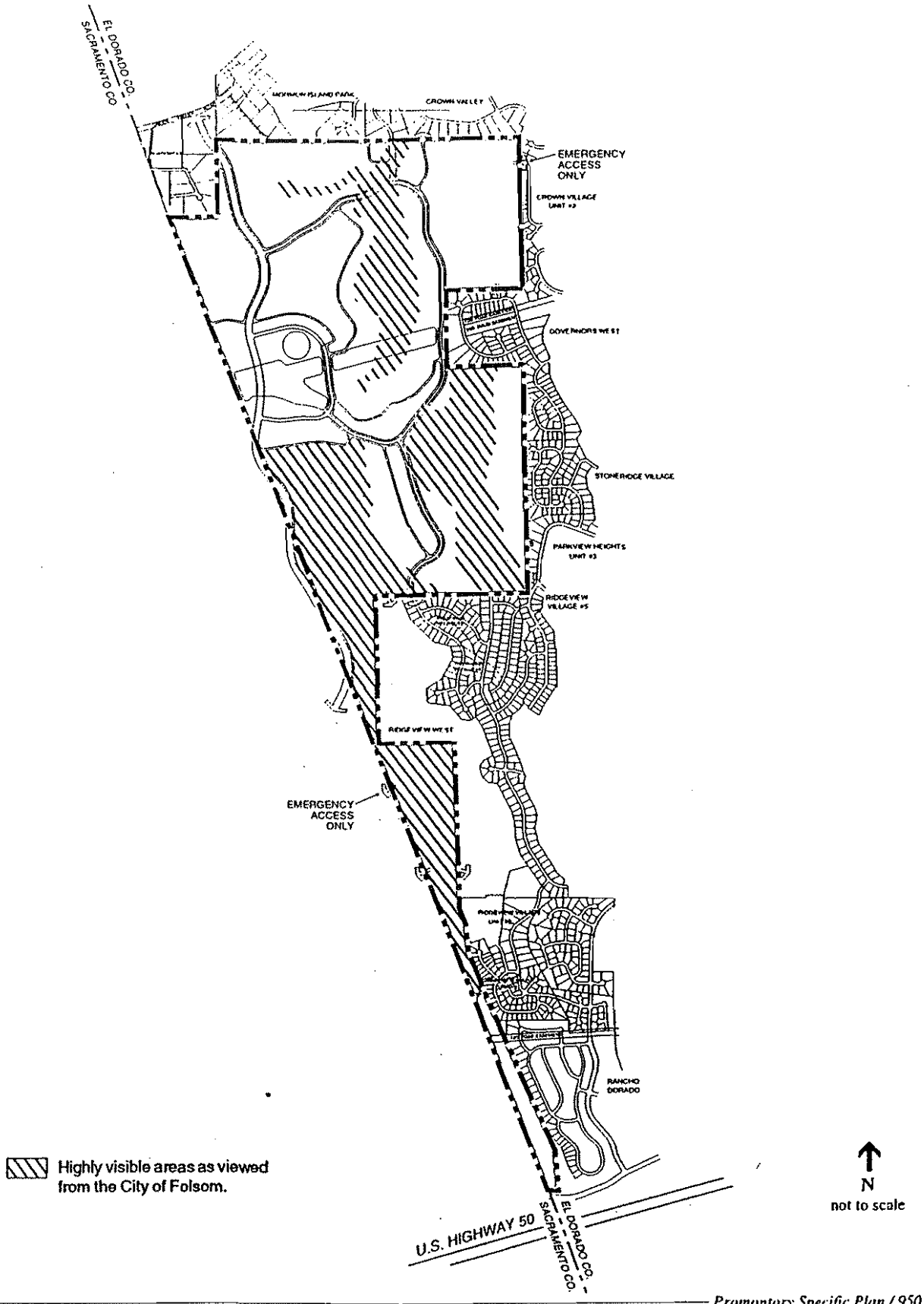
4. A "development envelope" (all areas of a lot to be disturbed) will be identified in the Custom Lot Design Handbook for each lot.

5. A Custom Lot Design Handbook will be prepared for steeply sloped or heavily wooded lots in villages 4, 5, 6, 7, and 8. The handbook will provide design suggestions and requirements to protect the natural features of the project site and avoid the appearance of harsh man-made features.

6. Restriction of the building envelope (consisting of all graded and impermeable surfaces) to 30,000 square feet of the lot area.

7. Maximum building height 35 feet, parallel to the natural grade, and 50 feet from the lowest point of the building foundation.

8. Fencing is restricted to the development envelope and cannot exceed 6 feet in height. Rear yard fencing shall be open view.



SOURCE: Palisades, 1996

Promontory Specific Plan / 950107 ■

Figure 4.3-5
Highly Visible Areas

9. Building colors shall be earth tone. Roof colors shall be dark earth tones, while wall colors are to utilize muted, warm earth tone colors (Promontory Specific Plan, Palisades, 1997).

In addition, the proposed project also identifies additional development standards to minimize alterations of the project site's natural features under the following sections of the Specific Plan:

Development Plan

A perpetual private open space conservation easement will be placed on selected lots as part of subsequent tentative maps. The use of these easements will be limited by deed restrictions, codes, covenants and restrictions (Palisades, 1996).

Circulation Plan

The streets will be designed to follow the natural topography as closely as possible. Streets will generally be curvilinear in design and consistent with the overall design concepts of the Specific Plan. Existing trees and other natural features will be incorporated into the right-of-way landscape design whenever possible (Palisades, 1996).

Grading Plan

The location of roadways will be designed to retain as many of the trees within the right-of-way and follow the existing terrain to reduce grading impacts with the Plan Area. The following general measures will be included as part of project site grading activities:

1. Site development should conform to natural slopes to the maximum extent practicable.

2. Within areas of 20 to 25 percent slopes (Limited Grading Area), roads may be designed with separated grade where necessary to minimize earth work. Dwelling units should be constructed on their natural grade, conforming to the natural topography.

3. Within areas of 10 to 20 percent slopes (Lot Pad Grading Area), contour grading and slope rounding methods will be required in order to provide a pleasing streetscape. Contouring of slopes are to be employed to ensure that the final graded environment approximates the natural topography. Areas of several trees should be limited to house pad grading only.

4. Contouring techniques will be employed to avoid angular flat slopes and distinct edges. Slopes will be rounded and feathered in a natural appearing manner.

5. Streets will be sited in accordance with project site topography in order to retain the slope and natural character of the site.

6. Retaining structures will be encouraged in situations where their use will reduce grading quantities and adverse visual effects.

Although the above measures would reduce the project's impact on views from the City of Folsom, the type and scale of development proposed for the project would still result in a significant visual impact.

Mitigation Measures

4.3.1a Prior to County approval of project site grading plans, the following item shall be included in the grading plans:

- **Project site grading shall avoid disturbing and/or removing rock outcroppings and oak trees to the maximum extent feasible.**

4.3.1b Landscaping plans for the project shall be developed and designed to preserve existing natural features, as feasible. The landscaping plans shall include the use of native species within the project site and along project roadways and frontages to blend with the natural features of the project site. Landscaping plans shall be in conformance with County and El Dorado Hills Community Services District standards.

4.3.1c Project Design Guidelines shall include the following design standards that are identified within highly visible areas (see Figure 4.3-5):

- **All residential structures shall be restricted to earth tone colors and designed to blend with the natural features of the project site. Such earth tone colors may include, but are not limited to, dark ochers, browns, and grays.**

- **Structures and facilities within the Neighborhood Park and Elementary School site shall be restricted to earth tone colors (e.g., dark ochers, browns, and grays) and designed to blend with the natural features of the project site. Landscaping for both sites shall consist of native plant species and will blend with the existing vegetation on the project site.**

- **Proposed lift stations shall be architecturally designed to blend with the surrounding natural features and/or screened with native landscaping in a manner acceptable to the El Dorado Irrigation District.**

4.3.1d **Streetscape features, such as street lights and project entry signage, shall be incorporated into the streetscape landscaping and blend with the natural features of the site.**

4.3.1e **Solid fences and walls shall be avoided to the maximum extent feasible. If solid fences and walls are used, the color and material used will blend with the natural features of the project site. Continuous fences and walls shall be softened with landscaping.**

The above mitigation measures will reduce the alteration of the existing natural features of the project site from urban development. However, the impact to views from the City of Folsom will remain significant and unavoidable.

Significance After Mitigation

Significant and unavoidable.

Impact

4.3.2 **Implementation of the proposed project would not substantially alter the visual characteristics of existing views from U.S. Highway 50. This would be a less than significant impact.**

As shown in **Figure 4.3-4**, views of the project site from U.S. Highway 50 are limited by intervening topography and vegetation. Viewsheds of the project site from U.S. Highway 50 are approximately 0.13 miles in length which provide only approximately seven seconds of view time (traveling at approximately 55 miles per hour). In addition, the southern most portion of the project site adjacent to U.S. Highway 50 is proposed to be designated open space.

Mitigation Measures

4.3.2 Since no significant impact was identified, no mitigation was required.

Impact

4.3.3 **As viewed from existing and planned residential areas in the El Dorado Hills area adjacent to the project site, implementation of the proposed project would substantially alter the existing landscape characteristics of the project site and introduce new public facilities that would appear out of character. This would be a potentially significant impact.**

Development of the project site would result in the alteration of existing rural landscape features of the project site to urban landscape features. Once developed, the project site would generally appear similar and in most cases, less intense, than the

existing surrounding residential development. Thus, the proposed project would blend with surrounding communities in the El Dorado Hills area.

However, development of the project site would include the installation of temporary and permanent sewer lift stations, as well as a water storage tank near existing residential areas. These facilities are likely to be substantial in size and would appear out of character with the existing and planned surrounding low density residential uses. Development of the project site would also include the introduction of roadway facilities, such as the Russell Ranch Boulevard extension, the Village Center Collector, Community Collector, and several village roadways which would result in the alteration of the landscape characteristics of the site.

Mitigation Measures

4.3.3a Prior to final water and sewer system approval, sewer and water improvement plans shall include details for screening sewer lift stations and the two million gallon water storage tank in a manner acceptable to the El Dorado Irrigation District. Methods of screening may include, but are not limited to, the following:

1. **Architectural design of facilities to blend with the surrounding natural features.**

2. **Screen facilities with native landscaping.**

3. **Place facilities partially or completely underground.**

4.3.3b Implement mitigation measures 4.3.1b, 4.3.1d, and 4.3.1e.

Implementation of the above measures would reduce the visual impact of water and sewer facilities on adjacent residents.

Significance After Mitigation

Less than significant.

Impact

4.3.4 As viewed from existing and planned residential areas in the El Dorado Hills area adjacent to the project site, implementation of the proposed project could potentially obstruct public scenic views of Folsom Lake and the lower elevation areas of Sacramento County. This would be a less than significant impact.

Several public roadways within the Governors West and Ridgeview residential projects along the eastern portion of the project site have views of Folsom Lake and the lower elevation areas of Sacramento County. These roadways are generally at a

higher elevation (from 40 to over 100 feet in elevation change) than nearby portions of the project site. Ultimate development of the project site would result in the introduction of urban/suburban uses into the public scenic views of Folsom Lake and the lower elevation areas of Sacramento County, thus altering those views. Based on the elevation difference of the project site to existing public roadways, intervening topography and vegetation, it is not likely that development of the proposed project would result in substantial obstruction of public scenic views. As previously described, only adverse effects to public views was analyzed. However, subsequent tentative subdivision maps and other approvals are expected to address potential adverse effects to private views.

Mitigation Measure

4.3.4 Since no significant impact was identified, no mitigation was required.

Impact

4.3.5 **Implementation of the proposed project, in combination with approved and proposed projects in the El Dorado Hills area and the City of Folsom, would result in the further conversion of the region's rural landscape to urban uses. This would be a cumulative significant impact.**

As described in Chapter 3.0, Project Description, El Dorado County and the City of Folsom have several proposed and approved urban development projects that will result in the further urbanization of the existing rural landscape of the region.

Mitigation Measures

4.3.5 **Implement mitigation measures 4.3.1a through 4.3.1e and 4.3.3a.**

Although implementation of the above identified mitigation measures would reduce the cumulative visual impact of urbanization, the impact would be significant and unavoidable.

Significance After Mitigation

Significant and unavoidable.

Impact

4.3.6 **Daytime glare and reflection resulting from project hillside development would be visible along roadways and other public areas in the City of Folsom. This would be a potentially significant impact.**

Glare from sunlight during the afternoon hours could potentially be reflected from any polished or reflective building material along the project hillsides. This glare would be intermittent and would be dependent on appropriate weather conditions, the angle of

the sun, and the vantage point of the viewer. In addition, the retention of trees along the project hillsides would screen some of the glare for certain viewers in the City of Folsom, depending on the locations of glare sources and the location of viewers. It is anticipated that glare may be visible to motorists traveling along Blue Ravine Road, Green Valley Road and future roadways in the Russell Ranch Specific Plan area.

Mitigation Measures

4.3.6 The use of polished or reflecting building materials shall be minimized on the project site. These materials would include, but are not limited to, reflective glass and polished metal exterior materials and facilities on buildings.

Implementation of the above identified mitigation measure would reduce the visual impact of daytime glare to the City of Folsom, thus reducing the impact level to less than significant.

Significance After Mitigation

Less than significant.

Impact

4.3.7 Implementation of the proposed project would result in the introduction of new nighttime light sources associated with project roadways, residential, and commercial uses that could adverse affect on adjacent residential areas. This would be a significant impact.

Nighttime lighting from the proposed project would introduce a new light source that currently does not exist on the project site. New light sources would include, but are not limited to, street lights, parking lot lights, and security lights. These new light sources could adversely affect adjacent residential areas in the El Dorado Hills area from light "spilling over" into existing residential areas. The Promontory Specific Plan does not provide any development standards regarding lighting.

Mitigation Measures

4.3.7a Outdoor light fixtures for non-residential areas shall be low-intensity, shielded and/or directed away from residential areas, and only used where necessary for safety and security purposes.

4.3.7b Street light fixtures shall not exceed 30 feet in height and limited to the village center and major project roadway intersections.

4.3.7c Native landscaping, such as shrubs and trees, shall be planted in such a manner to shield motor vehicle lights and street lights from adjacent areas.

4.3.7d Lighted park sports fields shall be restricted to the community park in the village center. Light fixtures for the neighborhood park shall be limited to that required for safety purposes.

Implementation of the above mitigation measures would minimize the project's adverse light and glare effects to adjacent existing residents.

Significance After Mitigation

Less than significant.

Impact

4.3.8 Implementation of the proposed project would be generally consistent with visual resource and aesthetic goals, objectives, and policies of the El Dorado County General Plan. This would be a less than significant impact.

As described in **Table 4.3-1**, the proposed project is substantially consistent with the General Plan goals, objectives, and policies related visual and aesthetic considerations. Implementation of the proposed project would result in the designating of existing drainages as open space, consistent with General Plan goals, objectives, and policies related to the retention and conservation of vegetation and minimizing disturbance to natural watercourses. In addition, project proposed hillside development standards and grading plan would retain some natural landscape features of the project site as well as provide a residential density transition from existing residential development in the El Dorado Hills area and planned development in the City of Folsom, consistent with the General Plan.

Mitigation Measures

4.3.8 Since no significant impact was identified, no mitigation was required.

REFERENCES - Aesthetics

City of Folsom, 1993. City of Folsom. *City of Folsom General Plan, January 1993 Update.* Folsom, California. January, 1993.

City of Folsom, 1992. City of Folsom. *Resolution No. 3899, Resolution of the City Council of the City of Folsom Approving a Small Lot Vesting Tentative Map for the Russell Ranch for 3,887 lots.* Folsom, California. December 1, 1992.

El Dorado County, 1996. El Dorado County. *El Dorado County General Plan, Volume II - Background Information.* Placerville, California. January 23, 1996.

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4.4 Population, Housing, and Employment

4.4 POPULATION, HOUSING, AND EMPLOYMENT

4.4.1 SETTING

POPULATION

Regional Population Growth Trends

Sacramento and El Dorado counties have experienced substantial growth since the 1970s and are expected to continue to grow through the year 2020. Between 1980 and 1990, El Dorado County's population increased by approximately 47 percent from 85,794 to 125,995, while the City of Folsom's (Sacramento County) population more than doubled from 11,003 to 29,802 (City of Folsom, 1992; El Dorado County, 1996a). El Dorado County's current estimated population is 148,567 and is anticipated to nearly double its population to 278,800 by the year 2020 (see **Table 4.4-1**), while the City of Folsom is anticipated to reach 75,100 by the year 2020 (SACOG, 1995).

El Dorado Hills Area Population Growth Trends

The unincorporated community of El Dorado Hills is one of the fastest developing communities in the western portion of El Dorado County. The 1995 population of the El Dorado Hills area was 15,614, with an estimated annual growth rate of 5 percent (SACOG, 1995). Population projections for the El Dorado Hills area and the unincorporated communities on the western slope of the County are summarized in **Table 4.4-1**.

TABLE 4.4-1
POPULATION PROJECTIONS FOR THE WESTERN COMMUNITIES OF EL DORADO COUNTY

Area	1995	2000	2005	2010	2015	2020
El Dorado Hills	15,614	23,419	33,578	46,322	58,403	67,396
Cameron Park - Shingle Springs	25,043	29,444	33,222	37,091	40,026	42,714
Pilot Hill	4,470	5,219	6,181	7,347	8,221	9,028
Coloma - Lotus	7,328	8,538	9,285	10,073	10,798	11,485
Diamond Springs	12,120	14,186	15,992	17,852	19,615	21,496
El Dorado County (County-wide)	148,567	172,800	198,950	228,375	255,150	278,800

SOURCE: SACOG, 1995

County Population Characteristics

Persons Per Dwelling Unit

The persons per dwelling unit average varies throughout the County, from 1.94 in the Lake Tahoe Basin to 2.24 in areas within and surrounding the City of Placerville. Several various persons per household averages are used in the El Dorado Hills area. **Table 4.4-2** summarizes the person per dwelling unit averages which are used for the El Dorado Hills area as well as the project site.

TABLE 4.4-2
PERSONS PER DWELLING UNIT AVERAGES USED FOR THE EL DORADO HILLS AREA

Entity	Person Per Dwelling Unit
El Dorado Hills Community Services District /a/	3.30
El Dorado County General Plan /b/	2.80
California Department of Finance /c/	2.78
Sacramento Area Council of Governments	2.95

/a/ El Dorado Hills Community Services District uses this figure for determining parkland dedication.
/b/ General Plan Policy 2.1.4.3.
/c/ California Department of Finance, Demographic Research Unit, persons per dwelling unit for unincorporated portion of El Dorado County.

SOURCE: SACOG, 1995; El Dorado County, 1996b

Income

The median household income County-wide in 1995 was $46,400, while in the El Dorado Hills area the median household income in 1990 was largest in the County at $59,540 (El Dorado County, 1996a; El Dorado County, 1996b).

HOUSING

Housing Stock

Since the 1970s, the number of dwelling units has increased substantially in the City of Folsom and the western slope of El Dorado County. The estimated number of dwelling units in El Dorado County for 1996 was 68,675, while the estimated number of dwelling units in the City of Folsom was 13,450 (California Department of Finance, 1996). **Table 4.4-3** summarizes the estimated housing stock in El Dorado County and the City of Folsom.

TABLE 4.4-3
ESTIMATED HOUSING STOCK FOR THE CITY OF FOLSOM AND EL DORADO COUNTY

Jurisdiction	Single Family	Multi Family	Mobile Homes	Total	Vacancy Rate
City of Folsom (Sacramento County) /a/	10,175	2,392	883	13,450	7.02%
El Dorado County /a/	54,547	8,794	5,334	68,675	23.13%
El Dorado Hills Area (El Dorado County) /b/	5,006	86	197	5,289	7.35%

/a/ California Dept. of Finance, Demographic Research Unit, 1996 Population and Housing Estimates.
/b/ SACOG Housing and Population Projections for El Dorado County, 1995.

As shown in **Table 4.4-3**, there are approximately 5,289 housing units in the El Dorado Hills area, with a resulting housing breakdown of 95 percent single family, 2 percent multi-family, and 3 percent mobile home. Based on Sacramento Area Council of Government's estimates, the general mix of housing units in the El Dorado Hills area will remain substantially the same through the year 2020.

Housing Prices and Availability

The estimated median housing price of the El Dorado Hills area is $279,046, with a vacancy rate of approximately 7.35 percent (El Dorado County, 1996a). City of Folsom's median housing price is estimated to be $193,169, with a vacancy rate of approximately 7.02 percent (Martkin, 1996). The high vacancy rates identified in **Table 4.4-3** for El Dorado County is attributed to the large number of seasonal and vacation residences in the County. A vacancy rate of 5 percent is often identified as the socially desirable vacancy rate for combined sale and rental housing.

EMPLOYMENT

Employment Growth

Currently, the largest employment sectors in the County consist of retail, service, and government. Of the 34,155 total jobs in the County in 1990, 63 percent (21,500 jobs) were from the retail, service, government sectors (El Dorado County, 1996). Based on County estimates, employment will continue to increase in these sectors to 66 percent of the total jobs in the year 2010 (see **Table 4.4-4**).

Jobs/Housing Balance

The jobs/housing balance is defined as a measure of an area's total employment to total residents and is often given in a "jobs to employed residents ratio". When the jobs to employed residents ratio is 1.0, the area is considered in balance (i.e., one job per resident). When the ratio exceeds

TABLE 4.4-4
EMPLOYMENT PROJECTIONS WITHIN EL DORADO COUNTY 1990-2010

Industry	1990		2000		2010	
	Number of Employees /a/	Percentage of Total Employees	Number of Employees /a/	Percentage of Total Employees	Number of Employees /a/	Percentage of Total Employees
BASELINE FORECAST /b/						
Agriculture	300	0.9	300	0.6	300	0.4
Mining	300	0.9	446	0.9	663	1.0
Construction	2,700	7.9	4,019	8.4	5,984	8.6
Manufacturing	2,000	5.8	3,233	6.8	5,227	7.5
T.C.P.U. /c/	800	2.3	916	1.9	1,049	1.5
Wholesale Trade	600	1.7	857	1.8	1,226	1.7
Retail	7,600	22.3	11,034	23.2	16,020	23.0
F.I.R.E. /d/	1,500	4.4	2,101	4.4	2,944	4.2
Services	7,600	22.3	12,084	25.6	19,213	27.6
Government	6,300	18.4	8,222	17.3	10,731	15.4
Self-Employment /e/	4,455	13.1	4,321	9.1	6,336	9.1
Total	**34,155**	**100**	**47,533**	**100**	**69,693**	**100**

/a/ El Dorado County General Plan, 1996.
/b/ Based on Employment Development Department projected growth rates for the 1989 to 1996 period.
/c/ Transportation, Communication, Public Utilities.
/d/ Finance, Insurance, Real Estate.
/e/ Self-employed is assumed to be 15% of total wage and salary employment in 1990 and forecast to be 10% in future years.

SOURCE: El Dorado County, 1996.

1.0, the area is considered to have an excess of jobs, and when the ratio is below 1.0, the area is considered to have a job deficit.

El Dorado County's jobs to employed residents ratio in 1990 was estimated at 0.59, with the unincorporated area of the County at a ratio of 0.41 (El Dorado County, 1996a). Thus, over half of the residents living in the unincorporated area were commuting to employment outside of the County. The County anticipates that by the year 2010, the jobs to employed residents ratio for the unincorporated area will improve to 0.57 and County-wide to 0.64 (El Dorado County, 1996a).

PLANS AND POLICIES

El Dorado County General Plan Goals, Objectives, and Policies

Relevant El Dorado County General Plan goals, objectives, and policies related to the proposed project are identified below. **Table 4.4-5** summarizes the project's consistency with the General Plan Housing and Economic elements.

TABLE 4.4-5
PROJECT CONSISTENCY WITH THE GENERAL PLAN

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Policy 4.1.1.3	Yes	Although the Specific Plan does not specifically address affordable housing, the proposed village center would include high density residential development areas which could promote affordable housing development.
Objective 4.2.4	Yes	The proposed project includes a mix of residential densities, ranging from one dwelling unit per acre to eight dwelling units per acre.
Policy 4.2.4.1	Yes	The proposed project includes a mix of residential densities, ranging from one dwelling unit per acre to eight dwelling units per acre. In addition, the proposed village center would consist of up to 103,670 square feet of commercial and office uses.
Policy 10.1.5.5	Yes	The proposed village center would consist of up to 103,670 square feet of commercial and office uses.
Policy 10.1.9.2	Yes	The proposed project includes a mix of residential densities, ranging from one dwelling unit per acre to eight dwelling units per acre, which could provide housing opportunities for a variety of income levels.

Policy 4.1.1.3: Specific plans need to address and provide for affordable housing.

Objective 4.2.4: Planned Developments For Planned Communities - Development of planned communities containing a mix of housing types.

Policy 4.2.4.1: Boundaries delineating the location of Planned Communities (-PC) shall be shown on the General Plan Land Use Map. It is intended that these -PC areas will contain a variety of high-intensity residential uses and housing types. Planned Communities shall be planned and developed through the specific plan process to ensure a variety of housing types and mixed uses.

Policy 10.1.5.5: Recognize and promote the need to create greater opportunities for El Dorado County residents to satisfy retail shopping demands in El Dorado County.

Policy 10.1.9.2: Encourage specific plans and large planned developments in Community Regions and Rural Centers to include a mix of housing types and relate it to local wage structures to achieve balance with existing and forecasted resident household needs.

Regional Housing Allocation Plan for Sierra Planning Organization

The Sierra Planning Organization (SPO) jurisdiction covers a four county area composed of portions of Placer and El Dorado Counties, and the entire counties of Nevada and Sierra. The SPO has prepared the Regional Housing Allocation Plan for projected housing needs from 1990 to 1997, which allocates 17,336 dwelling units to the unincorporated portion of El Dorado County and is to be distributed as follows:

1. 3,937 units affordable to very-low-income households;
2. 3,234 units affordable to low-income households;
3. 4,043 units affordable to moderate-income households; and
4. 6,122 units affordable to above-moderate-income households. (El Dorado County, 1996a)

Policy 4.1.1.1 of the El Dorado General Plan identifies that a total of 7,162 units (537 units very low income and 6,592 above moderate income) of the 17,336 units identified have been built as of 1994 (El Dorado County, 1996b).

Housing that costs no more than 25 percent of a household's gross income is considered affordable (El Dorado County, 1996a). The 1995 area median income for El Dorado County, based on a family of four, was $46,400 (El Dorado County, 1996b). Based on the affordability index of 25 percent, monthly housing costs of up to $967 would be considered affordable to residents earning the median income.

4.4.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

CEQA Guidelines, Section 15131, identifies that economic and social effects are not considered significant environmental impacts. However, physical impacts to the environment as a result of social and economic effects may be considered significant. Environmental effects (such as air quality and noise) related to the project's generation of additional population and employment are discussed in the relevant chapters.

The following criteria were used to determine the level of significance:

- Induce substantial growth or the concentration of population or displace a large number of people inconsistent with the El Dorado County General Plan.
- Inconsistency with the El Dorado County General Plan.
- Contribute to the further imbalance of the El Dorado County's jobs to employed resident ratio.

Assumptions Used

The following assumptions were used in the evaluation of population, housing, and employment impacts:

- 2.80 persons per dwelling unit was used to determine the projected project population at buildout.
- 400 square feet of commercial per employee was used to estimate the number of permanent employees generated by the proposed project.
- 20-year buildout of the project site was assumed.

IMPACT STATEMENTS AND MITIGATION MEASURES

Impact

4.4.1 Implementation of the proposed project would increase the population in the El Dorado Hills area of El Dorado County. This would be a less than significant impact.

Implementation of the proposed project would result in approximately 3,884 new residents in the El Dorado Hills area. Based on a 20 year build-out of the project site, the project's population would consist of 6 percent of the El Dorado Hills area's 2020

population and 2 percent of the 2020 population of the unincorporated area of the County (SACOG, 1995). This increase in population would result in direct and indirect environmental effects (such as noise, public services, and traffic) which are discussed in the relevant chapters of this EIR and in the El Dorado County General Plan EIR.

Although the proposed project would result in population growth in the El Dorado Hills area, the project site is designated for such growth as a designated planned community under the County General Plan.

Mitigation Measures

4.4.1 Since no significant impact was identified, no mitigation is required.

Impact

4.4.2 Implementation of the proposed project would result in the increase of housing units in the County. This would be a less than significant impact.

Build-out of the project site would result in the construction of 1,387 residential dwelling units in the El Dorado Hills area. Assuming a 20 year build-out of the project site with 70 dwelling units built per year, the project would have approximately 910 dwelling units by the year 2010. These dwelling units would make up approximately 6 percent of the El Dorado Hills area 2010 housing and 1 percent of the 2010 housing for the unincorporated area of the County (SACOG, 1995; El Dorado, 1996a). Thus, build-out of the project site would be within and consistent with the County's housing projections and growth for the unincorporated area.

Mitigation Measures

4.4.2 Since no significant impact was identified, no mitigation was required.

Impact

4.4.3 Implementation of the proposed project would result in a jobs to employed resident ratio of approximately 0.07 at the project site, resulting in an imbalance of jobs to employed resident ratio. This would be a less than significant impact.

The proposed village center would consist of 103,670 square feet of commercial and office uses that would likely generate approximately 259 permanent jobs for 3,884 project residents, with a resulting 0.07 jobs to employed resident ratio. In addition to the commercial and office uses, the project site would generate some additional permanent employment from the proposed elementary school site and park sites, as well as temporary employment from project construction activities. However, these additional employment sources would not likely generate the additional permanent employment to minimize the ratio imbalance.

However, the project's jobs and housing generation was generally included the County's overall jobs to employed resident ratio projections. Development of the proposed project would not substantially alter the County's 2010 anticipated jobs to employed resident ratio of 0.57 for the unincorporated area, but would not assist the County in improving this ratio either. Transportation and circulation, air quality, and noise impacts of project residents commuting for employment outside the County are discussed in the relevant sections of this EIR.

Mitigation Measures

4.4.3 Since no significant impact was identified, no mitigation was required.

Impact

4.4.4 The proposed project would be generally consistent with the General Plan, including goals, objectives, and policies related to affordable housing. This would be a less than significant impact.

As described in **Table 4.4-5**, the proposed project would be consistent with Housing Element and Economic Element objectives and policies related to the proposed project. Although not specifically identified by the Specific Plan, the proposed village center would provide opportunities for affordable high density single family and multi-family development, consistent with the General Plan.

Mitigation Measures

4.4.4 Since no significant impact was identified, no mitigation was required.

REFERENCES - Population, Housing, and Employment

California Department of Finance, 1996. California Department of Finance, Demographic Research Unit. *1996 Population and Housing Estimates.* 1996.

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El Dorado County, 1996b. El Dorado County. *El Dorado County General Plan, Volume I Goals, Objectives, and Policies.* Placerville, California. January 23, 1996

Martkin, 1996. Martkin, Janet, Sacramento Association of Realtors. *Personal Correspondence.* December 30, 1996.

SACOG, 1995. Sacramento Area Council of Governments, Regional Data Center. *Housing and Population Projections by RAD for El Dorado County.* Sacramento, California. September 26, 1995.

4.5 TRANSPORTATION AND CIRCULATION

4.5 TRANSPORTATION AND CIRCULATION

4.5.1 SETTING

Access to the project site will be provided from existing and new roads as shown in **Figure 4.5-1**. Existing major roads that will be used by project traffic include U.S. Highway 50, El Dorado Hills Boulevard, Latrobe Road, Green Valley Road, Francisco Drive, Governor Drive, Olson Lane, Wilson Boulevard, East Natoma Street (Folsom), and Blue Ravine Road (Folsom). Other existing minor residential roadways that will provide direct access to the project site include Suffolk Way at Hensley Circle, Gillett Drive, Olson Lane, Julie Ann Way, Ridgeview Drive, Powers Drive, and Weststar Lane.

As the project develops, new roads planned in El Dorado County and the City of Folsom will be constructed providing additional access to the project. The most significant of these new roads is Russell Ranch Boulevard in Folsom between East Natoma Street and U.S. Highway 50. Russell Ranch Boulevard will have four to six lanes and an interchange with U.S. Highway 50.

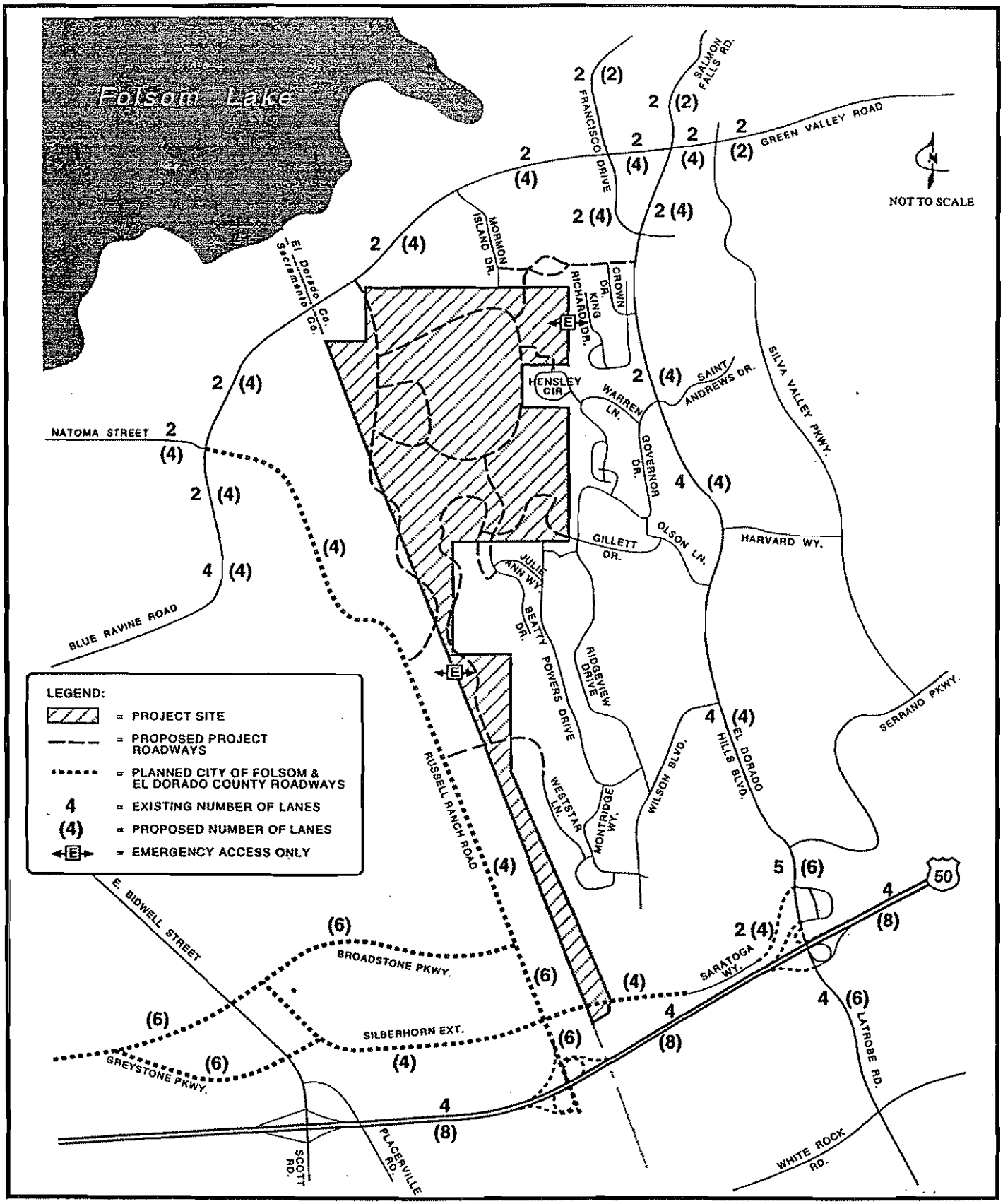
In El Dorado County, a four-lane extension of Russell Ranch Boulevard is planned through the Promontory intersecting with Green Valley Road. Other new roads include a proposed connection between proposed village 8 of the project site and Russell Ranch Boulevard and the extension of Saratoga Way to meet the Silberhorn Extension in Folsom. In addition, development of the approved Crown Valley project would provide access to the project site from Green Valley Road and El Dorado Hills Boulevard. Crown Valley roadways shown in **Figure 4.5-1** were identified by the project applicant who is also the current owner of the Crown Valley project site.

EXISTING TRANSPORTATION SYSTEM

Automobiles are the primary travel mode for most trips in the study area although the area is also accessible by bus transit and to a lesser degree by walking or bicycling. Recent travel survey data, indicates that about 90 percent of all trips in western El Dorado County are made by automobile (SACOG, 1992). With most trips in El Dorado County being made by automobiles, the roadway system is the primary focus of this analysis although the analysis also includes the transit, bikeway, and pedestrian components of the overall transportation system.

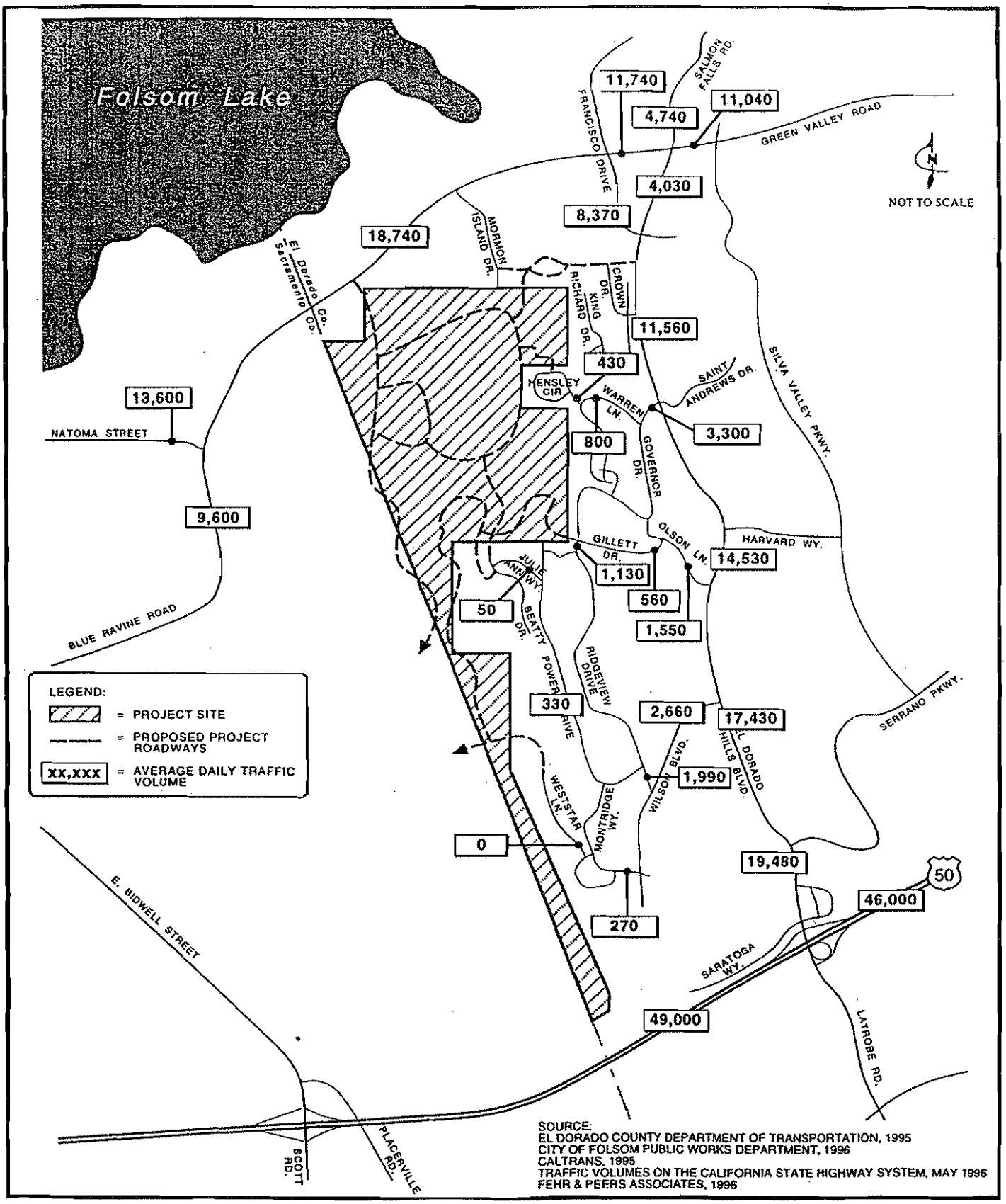
Roadway System

As an introduction to the County's roadway system, **Figure 4.5-2** contains existing average daily traffic volumes for key roads in the study area. El Dorado Hills Boulevard and Green Valley Road are the primary roadways providing access to the project site. El Dorado Hills Boulevard also



SOURCE: Fehr & Peers Associates, Inc., 1997

Figure 4.5-1
Existing, Planned, and Proposed Roadways



SOURCE: Fehr & Peer Associates

Figure 4.5-2

Existing Average Daily Traffic Volumes

provides direct access to U.S. Highway 50 while Green Valley Road provides a parallel route to U.S. Highway 50. Geometric characteristics of these and other study roadways are described below.

U.S. Highway 50

This four-lane freeway is the primary transportation corridor in El Dorado County. It spans centrally through the County in an east-west direction and it connects most of the urbanized communities in the County. U.S. Highway 50 serves commute traffic, interregional traffic, and local traffic in those areas of the County where parallel local roads are not available due to topography or other constraints.

El Dorado Hills Boulevard

El Dorado Hills Boulevard is a major north/south arterial that connects U.S. Highway 50 and Green Valley Road within the El Dorado Hills area. The northern end of El Dorado Hills Boulevard is two lanes wide from Green Valley Road to Governor Drive while four travel lanes are provided between Governor Drive and Serrano Parkway. A five-lane section (three northbound and two southbound travel lanes) extends between Serrano Parkway and Saratoga Way before transitioning to four lanes between Saratoga Way and the U.S. Highway 50 eastbound ramps.

Green Valley Road

Green Valley Road provides a two-lane major east-west connection between El Dorado Hills area and Folsom. East-west access between El Dorado Hills and the City of Folsom or other locations to the west are only available using Green Valley Road, U.S. Highway 50, and White Rock Road. Green Valley Road is the northern most connection.

Francisco Drive

Francisco Drive serves as a two-lane connector between Green Valley Road and El Dorado Hills Boulevard especially for traffic traveling eastbound to southbound and northbound to westbound through this area.

Local Residential Streets

A number of local two-lane residential streets will provide direct access to the proposed project, which include Hensley Circle, Gillett Drive, Olson Lane, Julie Ann Way, Ridgeview Drive, Powers Drive, and Weststar Lane. Existing homes front along all of these roadways, which makes them subject to El Dorado County's residential roadway design standard that limits daily traffic volumes to less than 4,000 per day. As shown on **Figure 4.5-2**, none of the roadways currently exceed the 4,000 daily volume limit.

To measure and evaluate operating conditions of the roadway system, the following intersections and U.S. Highway 50 ramp junctions were selected for analysis by the El Dorado County Department of Transportation (DOT).

1. Latrobe Road/U.S. Highway 50 Eastbound (EB) Ramps
2. El Dorado Hills Boulevard/U.S. Highway 50 Westbound (WB) Ramps
3. El Dorado Hills Boulevard/Wilson Boulevard
4. El Dorado Hills Boulevard/Olson Lane
5. El Dorado Hills Boulevard/Governor Drive
6. El Dorado Hills Boulevard/Francisco Drive
7. Green Valley Road/Salmon Falls Road
8. Green Valley Road/Francisco Drive
9. Green Valley Road/Mormon Island Drive
10. Blue Ravine Road/East Natoma Street (City of Folsom)
11. El Dorado Hills Boulevard/East-West (EW) Collector (Future Crown Valley Intersection)
12. Green Valley Road/North-South (NS) Collector (Project Created Intersection)
13. Russell Ranch Boulevard/U.S. Highway 50 WB and EB Ramps (City of Folsom Future Intersection)
14. U.S. Highway 50 WB Off-Ramp Diverge to El Dorado Hills Blvd.
15. U.S. Highway 50 WB On-Ramp Merge from El Dorado Hills Blvd.
16. U.S. Highway 50 EB Off-Ramp Diverge to Latrobe Road
17. U.S. Highway 50 EB On-Ramp Merge from Latrobe Road

The specific analysis procedures for these intersections rely on qualitative levels of service (LOS) to describe operating performance. Service levels vary from "A" (the best) to "F" (the worst). Both unsignalized and signalized intersections were analyzed using the methodology described in the Highway Capacity Manual, Special Report 209, Third Edition, Transportation Research Board, 1994. **Table 4.5-1** and **Table 4.5-2** relate the LOS letter designation to a general description of traffic operations.

TABLE 4.5-1
SIGNALIZED INTERSECTION LEVEL OF SERVICE CRITERIA

LOS	Stopped Delay (seconds/vehicle)	Description
A	< 5.0	Very low delay. Most vehicles do not stop.
B	5.1 to 15.0	Generally good progression of vehicles. Slight delays.
C	15.1 to 25.0	Fair progression. Increased number of stopped vehicles.
D	25.1 to 40.0	Noticeable congestion. Large portion of vehicles stopped.
E	40.1 to 60.0	Poor progression. High delays and frequent cycle failure.
F	> 60	Oversaturation. Force flow. Extensive queuing.

SOURCE: Highway Capacity Manual, Special Report 209, Third Edition, Transportation Research Board, 1994.

TABLE 4.5-2
TWO-WAY STOP CONTROLLED INTERSECTION LEVEL OF SERVICE CRITERIA

LOS	Stopped Delay (seconds/vehicle)	Description
A	< 5.0	Little or no conflicting traffic for minor street approach.
B	> 5 and < 10	Minor street approach begins to notice presence of available gaps.
C	> 10 and < 20	Minor street approach begins experiencing delay for available gaps.
D	> 20 and < 30	Minor street approach experiences queuing due to a reduction in available gaps.
E	> 30 and < 45	Extensive minor street queuing due to insufficient gaps.
F	> 45	Insufficient gaps of suitable size to allow minor street traffic demand to cross safety through a major traffic stream.

SOURCE: Highway Capacity Manual, Special Report 209, Third Edition, Transportation Research Board, 1994. Fehr & Peers Associates, Inc., 1995.

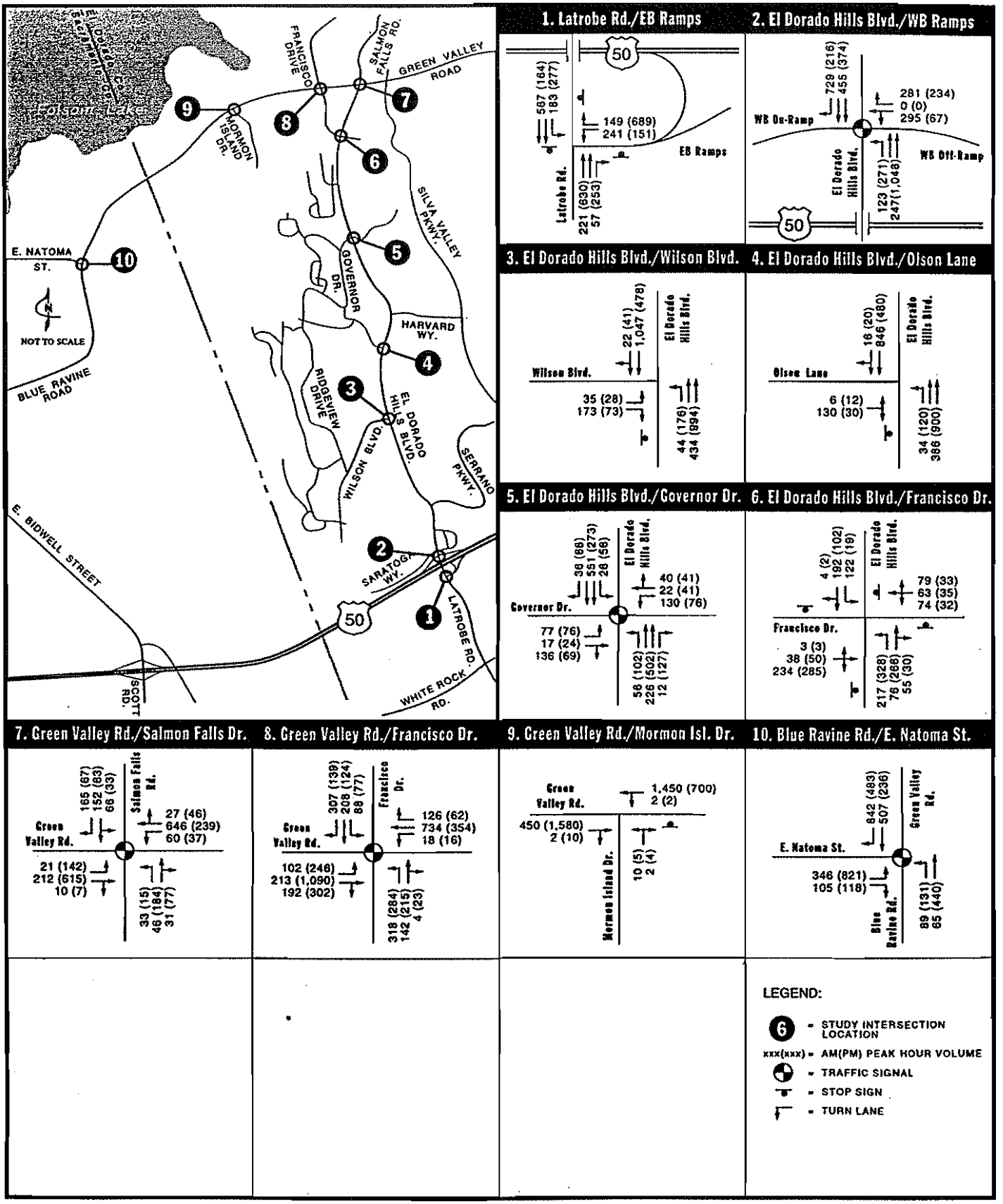
In addition to the intersections listed above, peak-hour traffic operations analysis also was conducted for the U.S. Highway 50 ramp junctions at the El Dorado Hills Boulevard/Latrobe Road interchange. Specific LOS criteria for ramp junctions is provided in **Table 4.5-3** below.

TABLE 4.5-3
RAMP JUNCTION LEVEL OF SERVICE DESCRIPTION

LOS	Criteria (passenger cars/mile/lane)	Description
A	10	Unrestricted operation. Merging and diverging vehicles have little effect on other freeway flows.
B	20	Merging and diverging maneuvers become noticeable to through drivers, and minimal levels of turbulence exist.
C	28	Average speed within the ramp influence area begins to decline as the level of merging or diverging turbulence becomes noticeable.
D	35	Turbulence levels become intrusive, and virtually all vehicles slow to accommodate merging or diverging maneuvers.
E	>35 and operating speeds of 42 miles per hour or greater	Represents conditions approaching and reaching capacity operation. Speeds reduce to the low 40s (mph), and the turbulence of merging and diverging maneuvers becomes intrusive to all drivers in the influence area.
F	*	Represents breakdown, or unstable, operation. At this level, approach demand flow exceed the discharge capacity of the downstream freeway (and ramp, in the case of diverge areas).

* Demand flows exceed capacity.
SOURCE: Highway Capacity Manual (HCM) - Special Report 209, Third Edition, Transportation Research Board, 1994.

Figure 4.5-3 shows existing geometrics and peak-hour traffic counts at each intersection and for the ramp junctions of the El Dorado Hills Boulevard/Latrobe Road interchange with U.S. Highway 50 (traffic counts were conducted during the week of November 12, 1996). The



SOURCE: Fehr & Peers Associates, Inc., 1997

Figure 4.5-3

Existing Conditions Intersection Peak-Hour Volumes and Geometrics

traffic counts were used to calculate existing a.m. and p.m. peak-hour intersection and ramp junction levels of service, which are shown in **Table 4.5-4**.

TABLE 4.5-4
EXISTING A.M. AND P.M. PEAK-HOUR INTERSECTION AND RAMP JUNCTION LEVELS OF SERVICE

	Peak-Hour Level of Service /b/	
Analysis Location /c/	A.M.	P.M.
1. Latrobe Road/U.S. Highway 50 EB Ramps	D	F
2. El Dorado Hills Boulevard/U.S. Highway 50 WB Ramps	C	B
3. El Dorado Hills Boulevard/Wilson Boulevard	A	A
4. El Dorado Hills Boulevard/Olson Lane	A	A
5. El Dorado Hills Boulevard/Governor Drive	B	B
6. El Dorado Hills Boulevard/Francisco Drive	C	E
7. Green Valley Road/Salmon Falls Road	B	B
8. Green Valley Road/Francisco Drive	E	F
9. Green Valley Road/Mormon Island Drive	A	A
10. Blue Ravine Road/East Natoma Street /a/	D	E
14. U.S. Highway 50 WB Off-Ramp Diverge to El Dorado Hills Boulevard	F	B
15. U.S. Highway 50 WB On-Ramp Merge from El Dorado Hills Boulevard	F	B
16. U.S. Highway 50 EB Off-Ramp Diverge to Latrobe Road	B	F
17. U.S. Highway 50 EB On-Ramp Merge from Latrobe Road	B	F

/a/ This intersection is located in the City of Folsom, all other analysis locations are within El Dorado County.
/b/ Shaded cells denote locations that exceed El Dorado County's LOS "E" standard as defined in policy 3.5.1.1 of the El Dorado County General Plan, 1996 or the City of Folsom's LOS "C" standard as defined in Policy 17.17 of the City of Folsom General Plan, 1993.
/c/ Intersection 11, 12, and 13 are analyzed under existing plus project and/or cumulative conditions.

The analysis results show that four intersections exceed LOS standards established by General Plan policies of El Dorado County and the City of Folsom. Level of service "F" conditions occur during at least one peak hour for three El Dorado County intersections, while LOS "D" and "E" conditions occur during the a.m. and p.m. peak hours, respectively, at the Blue Ravine Road/East Natoma Street intersection in Folsom. The El Dorado Hills Boulevard/Wilson Boulevard intersection and the Latrobe Road/U.S. Highway 50 Eastbound Ramps intersection warrants signalization based on the peak-hour traffic volume warrant contained in the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, 1988. Signalization of these intersections would improve peak-hour operations to LOS "E" or better while additional capacity improvements would be needed for the Green Valley Road/Francisco Drive intersection and the Blue Ravine Road/East Natoma Street intersection in Folsom to obtain acceptable operations.

At the El Dorado Hills Boulevard/Latrobe Road/U.S. Highway 50 interchange, both eastbound ramps operate at LOS "F" during the p.m. peak hour, while both westbound ramps operate at LOS "F" in the a.m. peak hour. This is characteristic of the heavy peak commute demand to and from the Sacramento area. To address the operational problems at the interchange, El Dorado County is completing a Project Study Report/Project Report (PSR/PR). The PSR/PR contains interim (2010) and future (2020) recommended interchange configurations. The PSR/PR will be completed in 1997, followed by the final design of the interim year interchange configuration by the end of 1998. This design schedule allows for a construction start date in 1999 or 2000. Interchange improvements will be funded through the El Dorado Hills Road Improvement Fund (RIF) program (Porter, 1997).

Transit System

El Dorado County's public transit system consists of fixed-route bus service, dial-a-ride bus service, and commuter bus service. Public transit service is provided by the El Dorado County Transit Authority (EDCTA). EDCTA is responsible for scheduled fixed-route service, daily commute service to Sacramento, and dial-a-ride service in Placerville and outlying communities, as well as chartered social service routes. Fixed-route service and park-and-ride lots within the transportation study area for this project are shown on **Figure 4.5-4**. Specific route information for EDCTA is listed in **Table 4.5-5**.

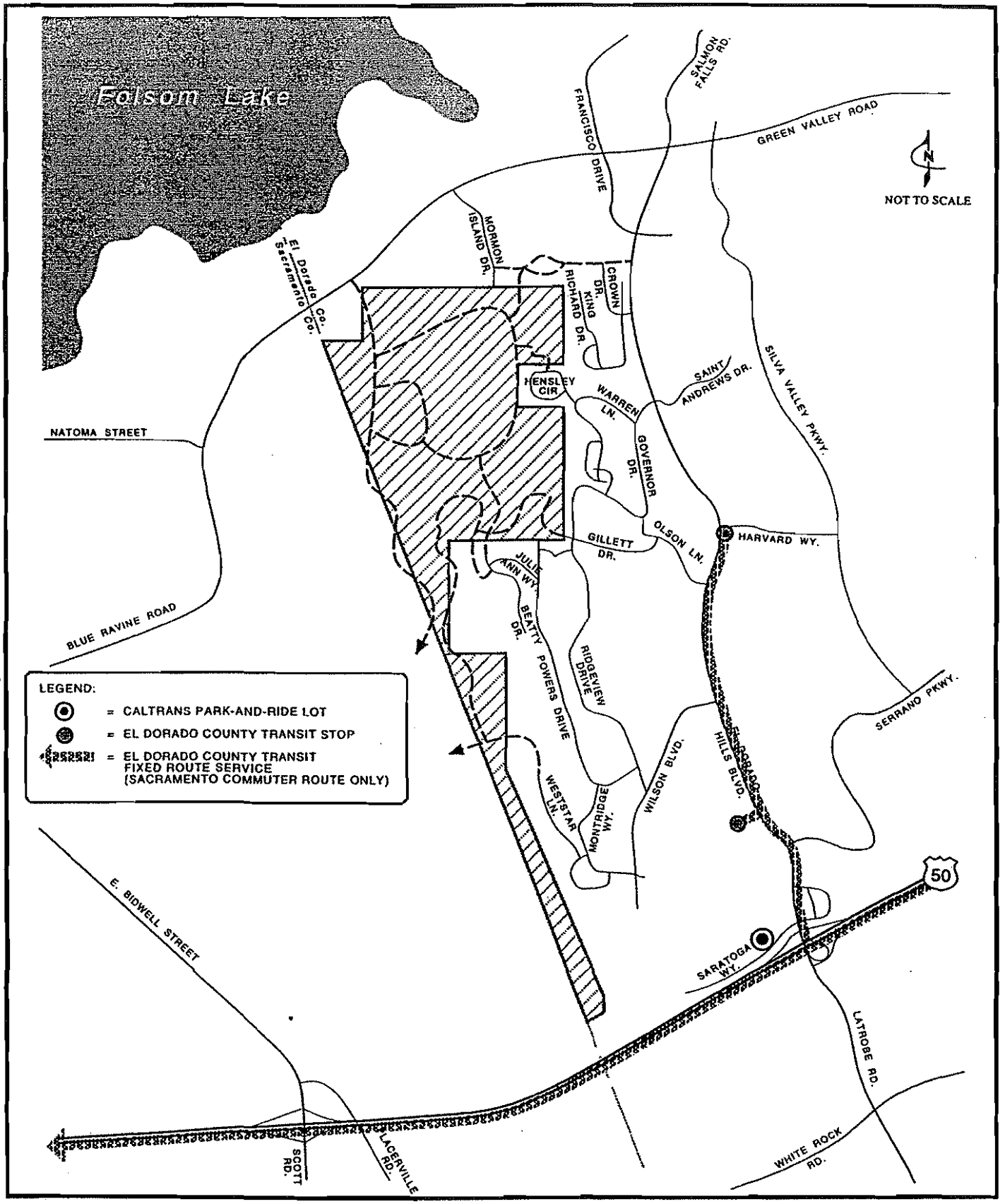
TABLE 4.5-5
EL DORADO TRANSIT AUTHORITY ROUTE INFORMATION

Service Type	Route Location	Trips per Weekday (Each Way)	Days of Service
Fixed Route	Placerville Area Shuttle Service	22	Monday-Saturday/a/
	Placerville - Diamond Springs - El Dorado - Shingle Springs - Cameron Park	10	Monday-Friday
	Placerville - Camino - Pollock Pines	14	Monday-Saturday/a/
	Placerville - Sacramento Commute	14	Monday-Friday
Dial-A-Ride	Zone 1 - within 15 min. of Placerville	Varies	Monday-Friday
	Zone 2 - 15 to 30 min. from Placerville	Varies	Monday-Friday
	Zone 3 - more than 30 min. from Placerville	Varies	Monday-Friday

/a/ Fewer trips and stops are provided on Saturdays.

SOURCE: El Dorado County, El Dorado County General Plan Update Draft Environmental Impact Report, December 1994.

As illustrated in **Figure 4.5-4**, only the Downtown Sacramento Commuter Route currently operates in the study area. It picks up passengers at the Baptist church just north of the U.S. Highway 50 interchange with El Dorado Hills Boulevard. Commuter Route 5 stops at the



SOURCE: Fehr & Peers Associates, Inc., 1997

Figure 4.5-4
Existing Transit Routes and Facilities

El Dorado Hills Community Services District office further north near Harvard Way. Transit routes will be modified in the near future to serve a new multi-modal station that will be constructed in the northeast quadrant of the Latrobe Road/White Rock Road intersection. This location will also serve as a park-and-ride location.

Bicycle and Pedestrian System

According to the El Dorado County General Plan Update Draft Environmental Impact Report, December 1994, bicycling and walking have not been widely used as transportation modes in El Dorado County with the exception of students commuting to school and recreational trips. However, evidence of both walking and bicycling activity were observed in the study area along El Dorado Hills Boulevard and Green Valley Road. Higher concentrations of activity were specifically noted on the Class I bike trail along the east side of El Dorado Hills Boulevard between Serrano Parkway and Governor Drive and near Harvard Way. Other existing bikeway facilities in the study area are shown in **Figure 4.5-5**.

4.5.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

For the purposes of this transportation impacts analysis, the criteria listed below was developed to determine the significance of identified impacts.

Roadway System

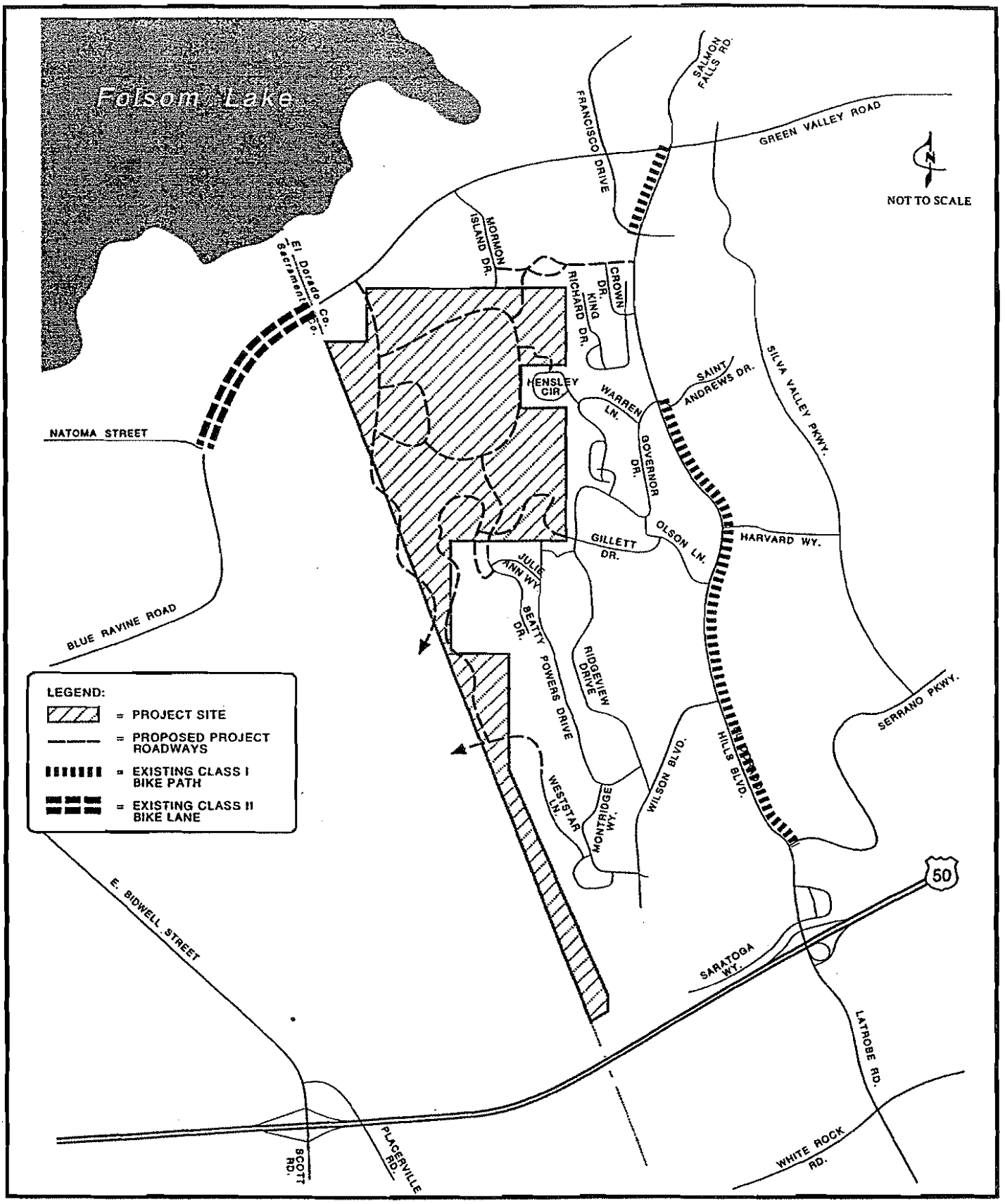
1. Project generated traffic changes the existing level of service at an analysis location in El Dorado County from LOS A, B, C, D, or E to LOS F.

2. Project generated traffic changes the level of service at an analysis location projected in the El Dorado County General Plan to be operating at LOS A, B or C in year 2015 to LOS D, E, or F.

3. Project generated traffic changes the level of service at an analysis location projected in the El Dorado County General Plan to be operating at LOS A, B, C, D, or E in year 2015 to LOS F.

4. Project generated traffic changes the level of service at an analysis location projected in the El Dorado County General Plan to be operating at LOS A, B, C, or D in year 2015 to LOS E or F.

5. Project generated traffic changes the existing level of service at an analysis location in the City of Folsom from LOS A, B, or C to LOS D, E, or F.



SOURCE: Fehr & Peers Associates, Inc., 1997

Figure 4.5-5
Existing Bikeways

6. Project generated traffic exacerbates conditions that are at an unsatisfactory level as defined in the criteria above.

7. Project generated traffic causes an increase in traffic volumes above 4,000 per day on a local residential street with direct driveway access to homes.

(Note: Roadway system significance criteria are based on Policy 3.5.1.1 of the El Dorado County General Plan, Volume I: Goals, Objectives and Policies, Chapter 3 - Circulation, January 23, 1996; Design and Improvement Standards Manual, County of El Dorado, Revised May 18, 1990; and Policy 17.17 of the City of Folsom General Plan Update, January 1993.)

Transit System

1. Implementation of the project disrupts existing transit service of the El Dorado County Transit Authority (EDCTA) or interferes with implementation of planned facilities or services of EDCTA.

2. Implementation of the project conflicts with public transportation related goals, objectives, and policies of the El Dorado County General Plan, Volume I: Goals, Objectives and Policies, Chapter 3 - Circulation. January 1996.

Bicycle and Pedestrian System

1. Implementation of the project disrupts existing bicycle or pedestrian facilities or interferes with the implementation of facilities contained in the El Dorado County *Bikeway Master Plan,* 1979.

2. Implementation of the project conflicts with bicycle and pedestrian related goals, objectives, and policies of the El Dorado County General Plan, Volume I: Goals, Objectives and Policies, Chapter 3 - Circulation. January 1996.

ANALYSIS METHODOLOGY

The discussion below describes the steps that were followed in estimating the number of project trips, determining the distribution of project trips, assigning the project trips to the roadway network, and analyzing traffic operations under existing plus project and cumulative conditions. Each step was prepared with input and approval from the El Dorado County DOT.

Existing Plus Project Conditions

For existing plus project conditions, the specific plan area was assumed to be completely developed under 1997 conditions. Trips generated by the project under this scenario were added to the existing roadway system. This approach provides a worst-case evaluation of the project's

potential impact on existing traffic operations because the existing roadway system does not include many of the planned connections to the City of Folsom.

Trip Generation

The amount of traffic generated by the proposed project was determined using trip generation rates published in Trip Generation, Institute of Transportation Engineers (ITE), 5th Edition, September 1991. **Table 4.5-6** displays the project trip generation, which consists of all motorized vehicle trips anticipated to be generated by the project. No internalization (i.e., trips occurring entirely within the project site) of trips was considered, pursuant to a worst-case scenario consistent with CEQA and El Dorado County DOT procedures. Thus, **Table 4.5-6** identifies worse case project trip generation.

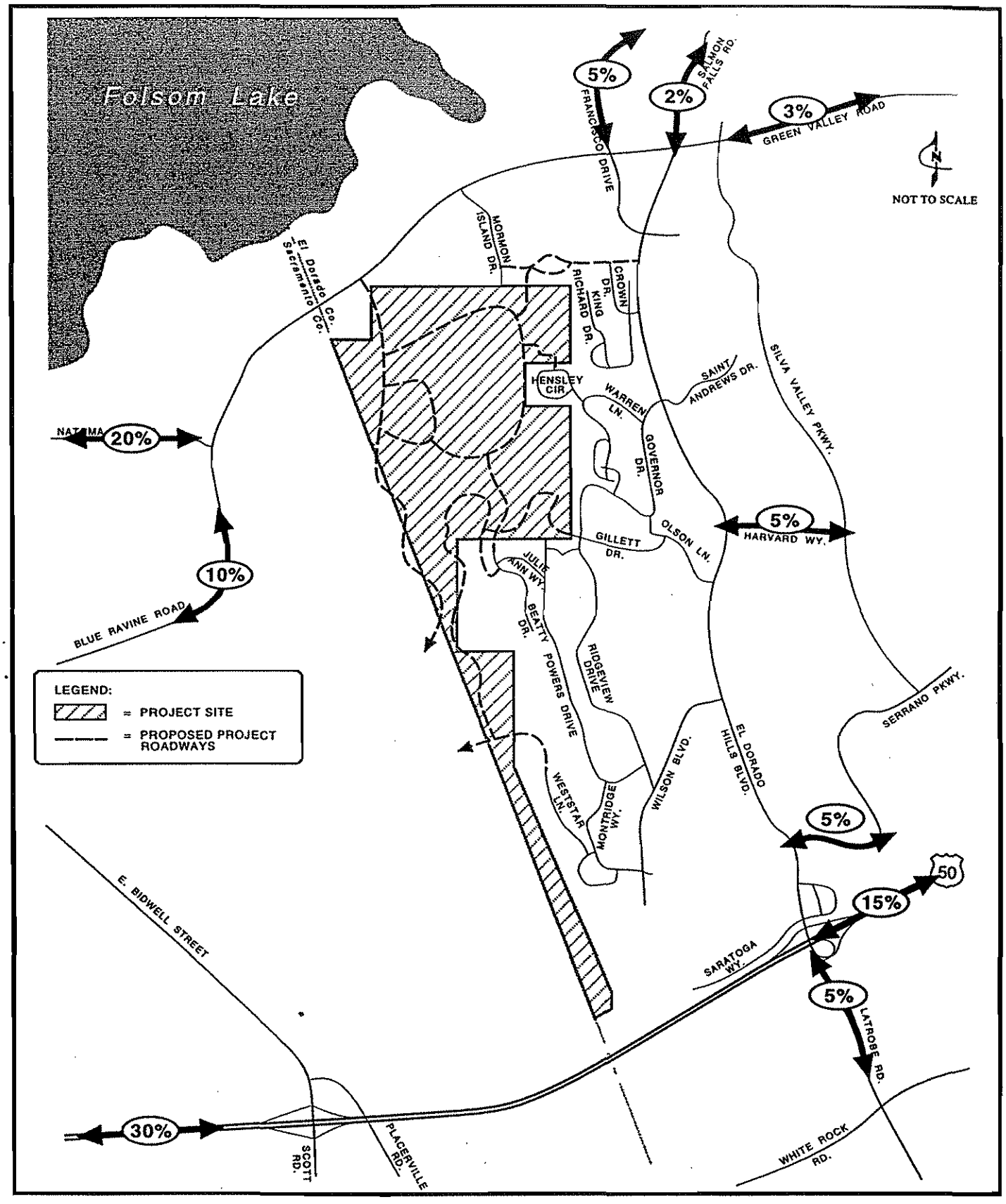
TABLE 4.5-6
PROJECT TRIP GENERATION SUMMARY

			Trip Rates			Trips		
Land Use	**Units**	**Amount**	**Daily**	**AM**	**PM**	**Daily**	**AM**	**PM**
Residential Villages	Dwelling Units	1,059	9.55	0.74	1.01	10,112	783	1,069
Village Center								
Commercial	1,000 Sq. Ft.	103.670	70.08	1.61	6.51	7,265	167	675
Residential	Dwelling Units	328	9.55	0.74	1.01	3,132	243	331
Community Park	Acres	10	35.00	2.87	3.14	350	29	31
	Subtotal	**N/A**	**N/A**	**N/A**	**N/A**	**10,747**	**439**	**1,037**
Public								
Elementary School	Students	800	1.09	0.30	0.25	872	240	200
Neighborhood Park	Acres	3.6	35.00	2.87	3.14	126	10	11
	Subtotal	**N/A**	**N/A**	**N/A**	**N/A**	**998**	**250**	**211**
					Total Trips	**21,857**	**1,472**	**2,317**

N/A = Not applicable.
AM and PM peak-hour rates are for the peak hour of the adjacent street.
SOURCE: ITE, Trip Generation, 5th Edition, 1991.

Project Traffic Distribution

The directional distribution of project traffic onto the surrounding road network was based on the travel patterns reflected in existing traffic counts and the traffic model developed for the U.S. Highway 50 Interchange Planning Study through Folsom and Western El Dorado County, City of Folsom and El Dorado County, November 1, 1995. This model contains all of western El Dorado County and most of the Sacramento metropolitan region. The resulting distribution is shown in **Figure 4.5-6**. As expected, traffic distribution under existing conditions favors areas to the west in Sacramento County where the amount and density of urban development is higher than other areas of western El Dorado County.



SOURCE: Fehr & Peers Associates, Inc., 1997

Figure 4.5-6

Project Trip Distribution Existing Plus Project Conditions

Project Traffic Assignment

The project trips were manually added to the existing traffic counts based on the trip distribution percentages in **Figure 4.5-6**. The resulting daily and peak-hour volumes are shown on **Figures 4.5-7** and **4.5-8**, respectively. These volumes represent a worst-case scenario under existing conditions since all project traffic was assigned to the existing roadway network. Realistically, this project will develop over a number of years and new roadway connections will be constructed in El Dorado County and the City of Folsom that will affect the specific travel paths of trips to and from the project site.

Traffic Operations Analysis

Based on the traffic volumes shown in **Figure 4.5-8**, operations analysis was performed for the study intersections and ramp junctions (technical calculations are contained in **Appendix E**). **Table 4.5-7** compares the a.m. and p.m. peak-hour intersection and ramp junction levels of service for existing and existing plus project conditions.

According to the results in **Table 4.5-7**, 10 of the 16 analysis locations are projected to operate at levels worse than considered acceptable by the General Plan policies of the City of Folsom and El Dorado County under existing plus project conditions. In addition, two of the local residential streets are projected to have daily volumes in excess of 4,000. Specific impact statements and mitigation measures for these intersections are presented after the next subsection regarding traffic operations under cumulative conditions

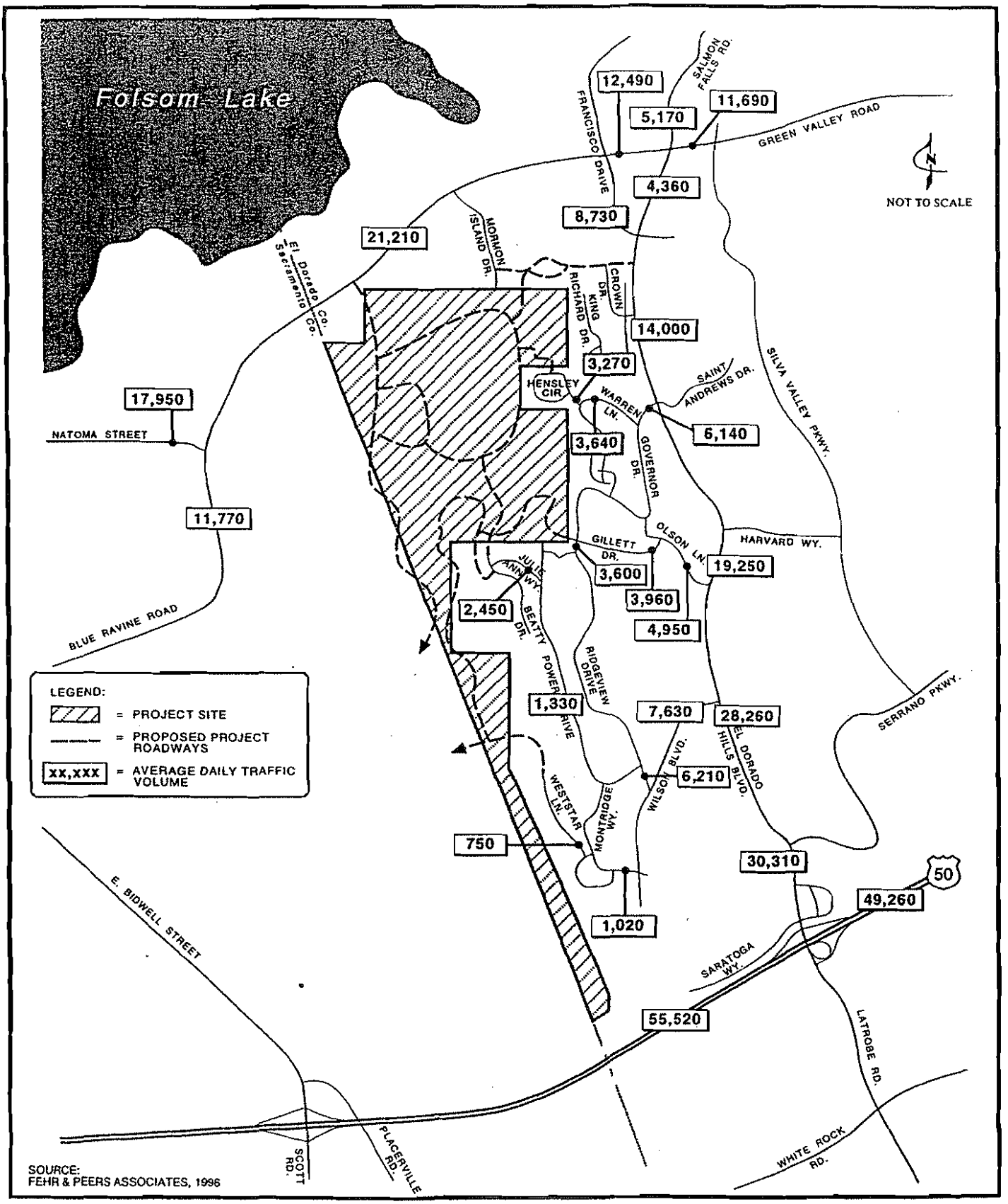
Cumulative Conditions

The purpose of the cumulative transportation impact analysis is to determine if implementation of the Promontory Specific Plan in addition to planned cumulative growth will adversely affect the planned transportation system. The El Dorado County General Plan proposed circulation system for the year 2015 contains the planned widening of existing roads or the construction of new roads listed below and also shown in **Figure 4.5-1**.

- Widening El Dorado Hills Boulevard/Latrobe Road to six lanes between White Rock Road and Serrano Parkway.

- Widening El Dorado Hills Boulevard to four lanes between Governor Drive and Francisco Drive and signalizing the El Dorado Hills Boulevard/Francisco Drive intersection.

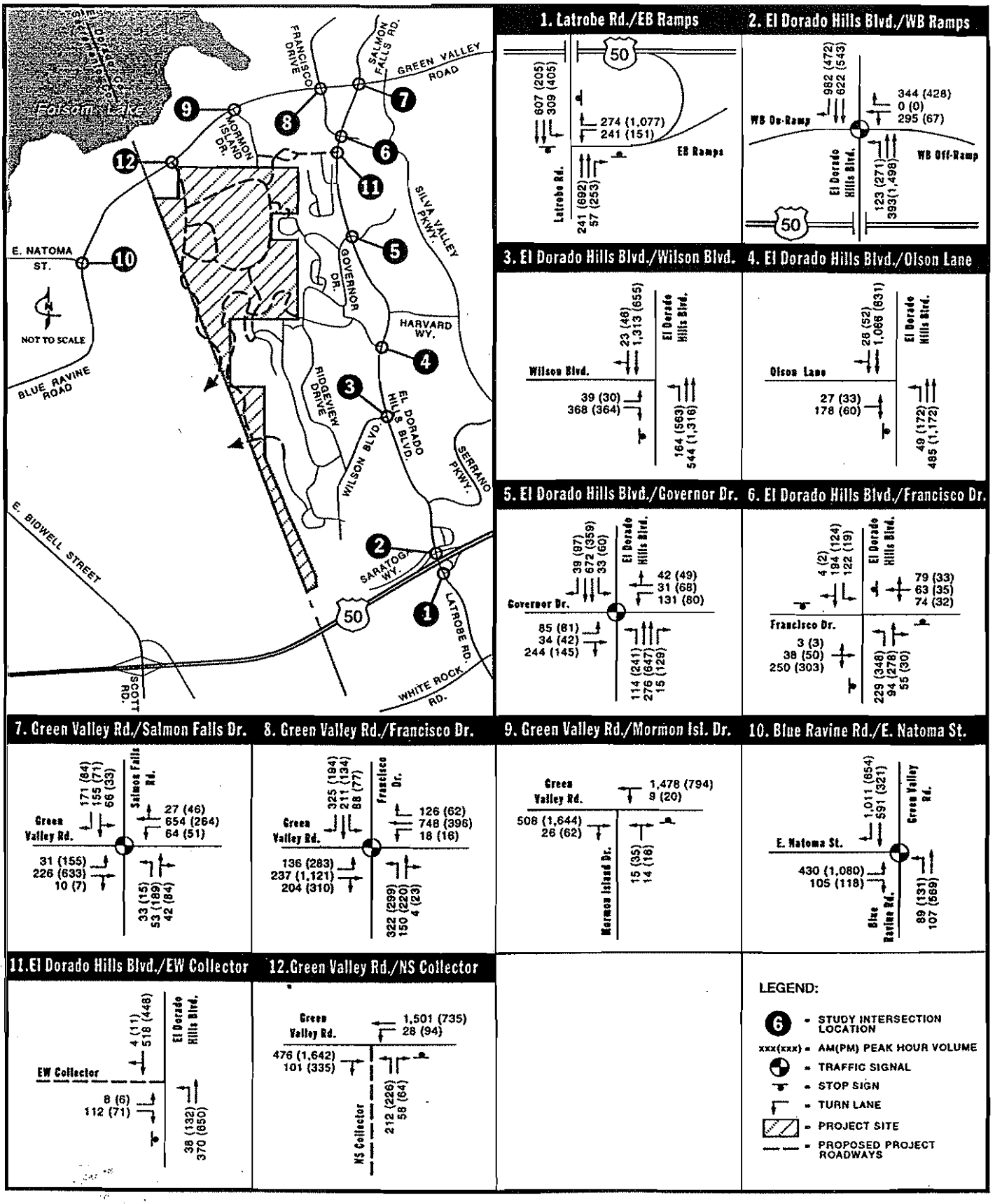
- Widening Francisco Drive to four lanes between El Dorado Hills Boulevard and Green Valley Road.



SOURCE: Fehr & Peer Associates

Figure 4.5-7

Existing Plus Project Average Daily Traffic Volumes



SOURCE: Fehr & Peers Associates, Inc., 1997

Figure 4.5-8

Existing Plus Project Conditions Intersection Peak-Hour Volumes and Geometrics

- Widening Green Valley Road to four lanes between the Sacramento County line and Silva Valley Parkway.

- Extending Saratoga Way west as a four-lane roadway to connect with Silberhorn Extension in Folsom.

- Reconstructing the El Dorado Hills Boulevard interchange with U.S. Highway 50 to include a new two-lane westbound loop off-ramp, a new two-lane eastbound diagonal off-ramp, and one additional lane on the existing eastbound loop off-ramp, eastbound diagonal on-ramp, and westbound diagonal on-ramp. Reconstruction would also require the realignment of Saratoga Way and the elimination of the existing westbound diagonal off-ramp.

- Widening U.S. Highway 50 to eight lanes between South Shingle Road and the Sacramento County line.

TABLE 4.5-7
EXISTING AND EXISTING PLUS PROJECT A.M. AND P.M. PEAK HOUR INTERSECTION AND RAMP JUNCTION LEVELS OF SERVICE

	Existing LOS /b/		Existing Plus Project LOS /b/	
Analysis Location /c/	**A.M.**	**P.M.**	**A.M.**	**P.M.**
1. Latrobe Road/U.S. Highway 50 EB Ramps	D	F	D	F
2. El Dorado Hills Boulevard/U.S. Highway 50 WB Ramps	C	B	E	C
3. El Dorado Hills Boulevard/Wilson Boulevard	A	A	F	F
4. El Dorado Hills Boulevard/Olson Lane	A	A	A	B
5. El Dorado Hills Boulevard/Governor Drive	B	B	B	B
6. El Dorado Hills Boulevard/Francisco Drive	C	E	C	F
7. Green Valley Road/Salmon Falls Road	B	B	B	B
8. Green Valley Road/Francisco Drive	E	F	E	F
9. Green Valley Road/Mormon Island Drive	A	A	C	D
10. Blue Ravine Road/East Natoma Street/a/	D	E	F	F
11. El Dorado Hills Boulevard/EW Collector/d/	N/A	N/A	A	A
12. Green Valley Road/NS Collector	N/A	N/A	F	F
14. U.S. Highway 50 WB Off-Ramp Diverge to El Dorado Hills Boulevard	F	B	F	B
15. U.S. Highway 50 WB On-Ramp Merge from El Dorado Hills Boulevard	F	B	F	B
16. U.S. Highway 50 EB Off-Ramp Diverge to Latrobe Road	B	F	B	F
17. U.S. Highway 50 EB On-Ramp Merge from Latrobe Road	B	F	B	F

N/A = not applicable.
/a/ This intersection is located in the City of Folsom, all other analysis locations are within El Dorado County.
/b/ Shaded cells denote locations that exceed identified significance criteria.
/c/ Analysis intersection 13 is analyzed under cumulative conditions.
/d/ The Existing Plus Project analysis assumes that the Crown Valley roadway system will be developed.

In addition to the projected El Dorado County General Plan circulation improvements, the following roadway improvements were included in the cumulative analysis:

- Signalization of Latrobe Road/U.S. Highway 50 EB Ramps intersection and El Dorado Hills/Francisco Drive intersection.

According to the El Dorado County DOT, the planned widening of El Dorado Hills Boulevard, Latrobe Road, Francisco Drive, as well as the extension of Saratoga Way and the reconstruction of the El Dorado Hills Boulevard/Latrobe Road interchange will be funded entirely by the El Dorado Hills Road Improvement Fund (RIF) program (Porter, 1997). Partial funding for widening Green Valley Road will also be provided by the RIF. Approximately 69 percent of the widening cost for Green Valley Road will be funded through the RIF while the remaining 31 percent of the cost for widening Green Valley Road will come from the West Slope Traffic Impact Mitigation (TIM) fee program.

The State System Capacity & Interchange Traffic Impact Mitigation fee program established by the County in 1996 will be used to partially fund the widening of U.S. Highway 50 to eight lanes through the study area. A specific percentage contribution is not known at this time.

In addition to the El Dorado County projects, the City of Folsom will be constructing new roadways to serve developments near the El Dorado County line such as the Russell Ranch and Broadstone projects. Planned new roadways are shown on **Figure 4.5-1** and include Russell Ranch Boulevard (four lanes), Broadstone Parkway (six lanes), Silberhorn Extension (four lanes), and a new interchange with U.S. Highway 50 at Russell Ranch Boulevard. In addition to the planned new roadways, the Blue Ravine Road/East Natoma Street intersection will be expanded into a full four-way intersection (see **Figure 4.5-10**).

Traffic Operations Analysis

Assuming the planned improvements were in place, the cumulative no project and cumulative plus project traffic volumes were analyzed to determine future operations. Cumulative no project traffic forecasts were generated using the traffic model developed for the U.S. Highway 50 Interchange Planning Study through Folsom and Western El Dorado County, City of Folsom and El Dorado County, November 1, 1995. **Figures 4.5-9** and **4.5-10** show the cumulative no project daily and peak-hour traffic forecasts.

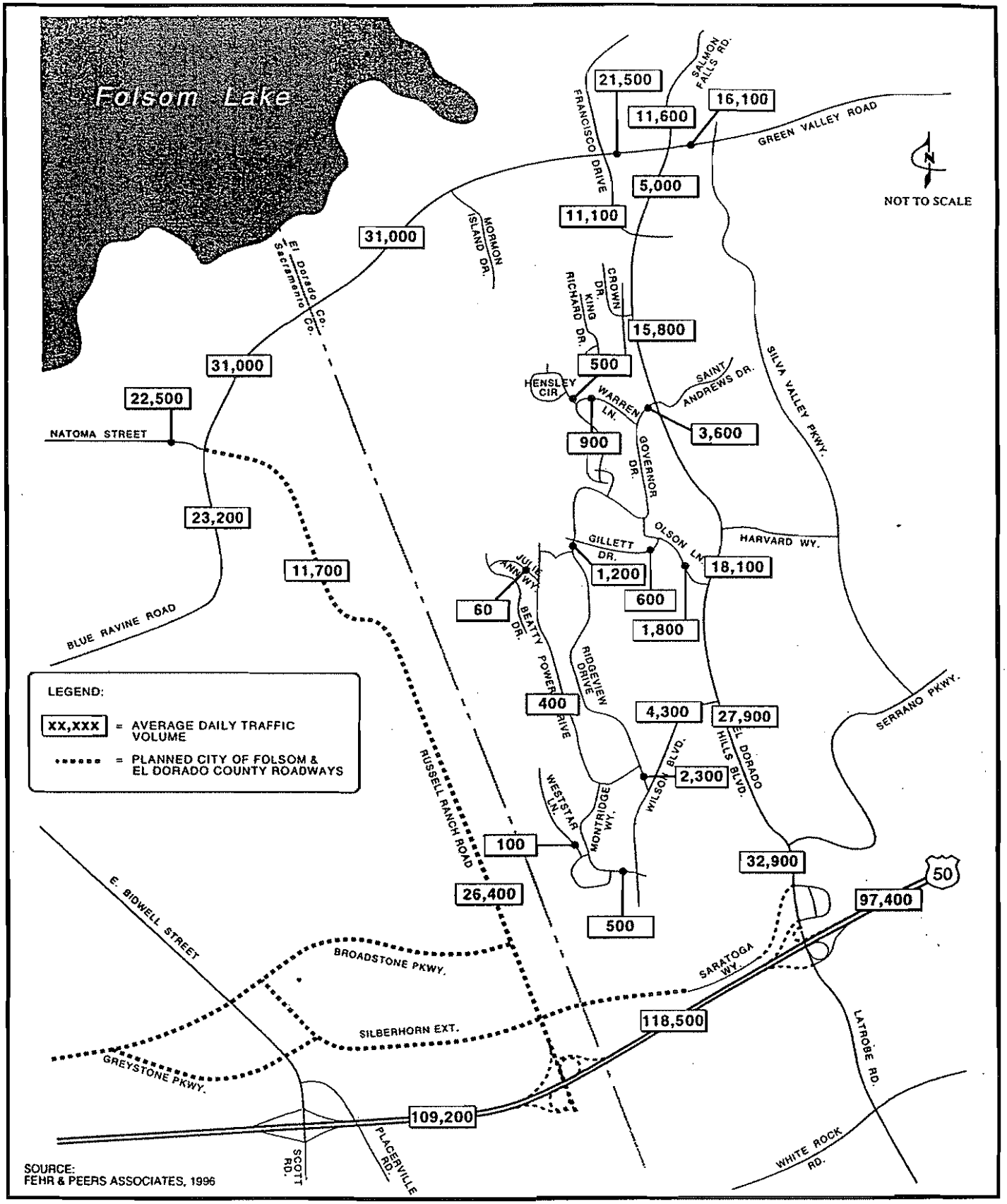
Cumulative plus project traffic forecasts were generated by adding project trips manually to the "no project" forecasts. The addition of project trips was based on the cumulative project trip distribution shown in **Figure 4.5-11**, which was developed using the traffic model described

above. **Figures 4.5-12** and **4.5-13** show the cumulative plus project daily and peak-hour traffic forecasts.

The traffic forecasts in **Figures 4.5-12** and **4.5-13** were used to determine impacts to local residential streets and the study intersections and ramp junctions. Based on the daily traffic volumes in **Figure 4.5-12**, none of the local residential streets providing access to the project site would experience daily traffic volumes in excess of 4,000 under cumulative conditions. This is a different conclusion than what was reached under existing conditions where the addition of project trips increased daily traffic volumes in excess of 4,000 on two local residential streets. The reason this does not occur under cumulative conditions is that additional roadway connections to the City of Folsom are assumed in place. Under existing conditions, all project trips were assumed to access El Dorado Hills roadways, which overwhelms some local residential streets. By 2015, additional roadways connecting to the City of Folsom will be constructed, which allows for a more balanced distribution of project trips and results in fewer project trips on local residential streets in El Dorado Hills.

The peak-hour forecasts in **Figure 4.5-13** were used to conduct peak-hour traffic operations analysis for the study intersections and ramp junctions under cumulative conditions. **Table 4.5-8** compares the analysis results for cumulative no project and cumulative plus project conditions (technical calculations are contained in **Appendix E**). Note that the cumulative analysis results also contain the planned U.S. Highway 50 Westbound Ramps/Russell Ranch Boulevard intersection. The eastbound ramp terminal intersection was not included because the planned interchange configuration, which only provides access to the north (i.e., no development is planned south of interchange that would require interchange access), does not include a controlled intersection for eastbound off-ramp or on-ramp traffic.

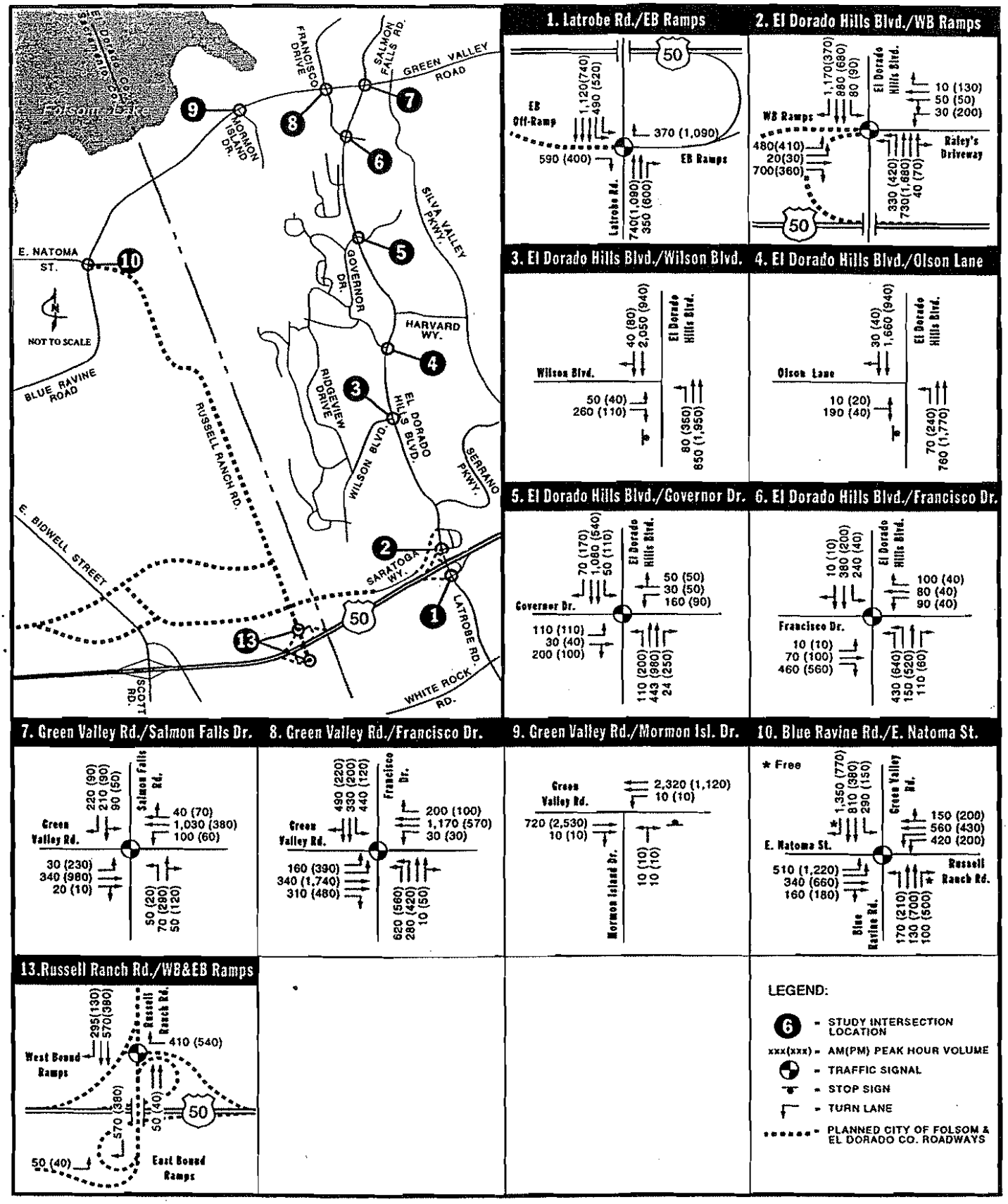
According to the results in **Table 4.5-8**, five of the 17 analysis locations are projected to operate at levels worse than considered acceptable by the General Plan policies of the City of Folsom and El Dorado County under cumulative plus project conditions. Specific impact statements and mitigation measures for these problem locations are presented below.



SOURCE: Fehr & Peer Associates

Figure 4.5-9

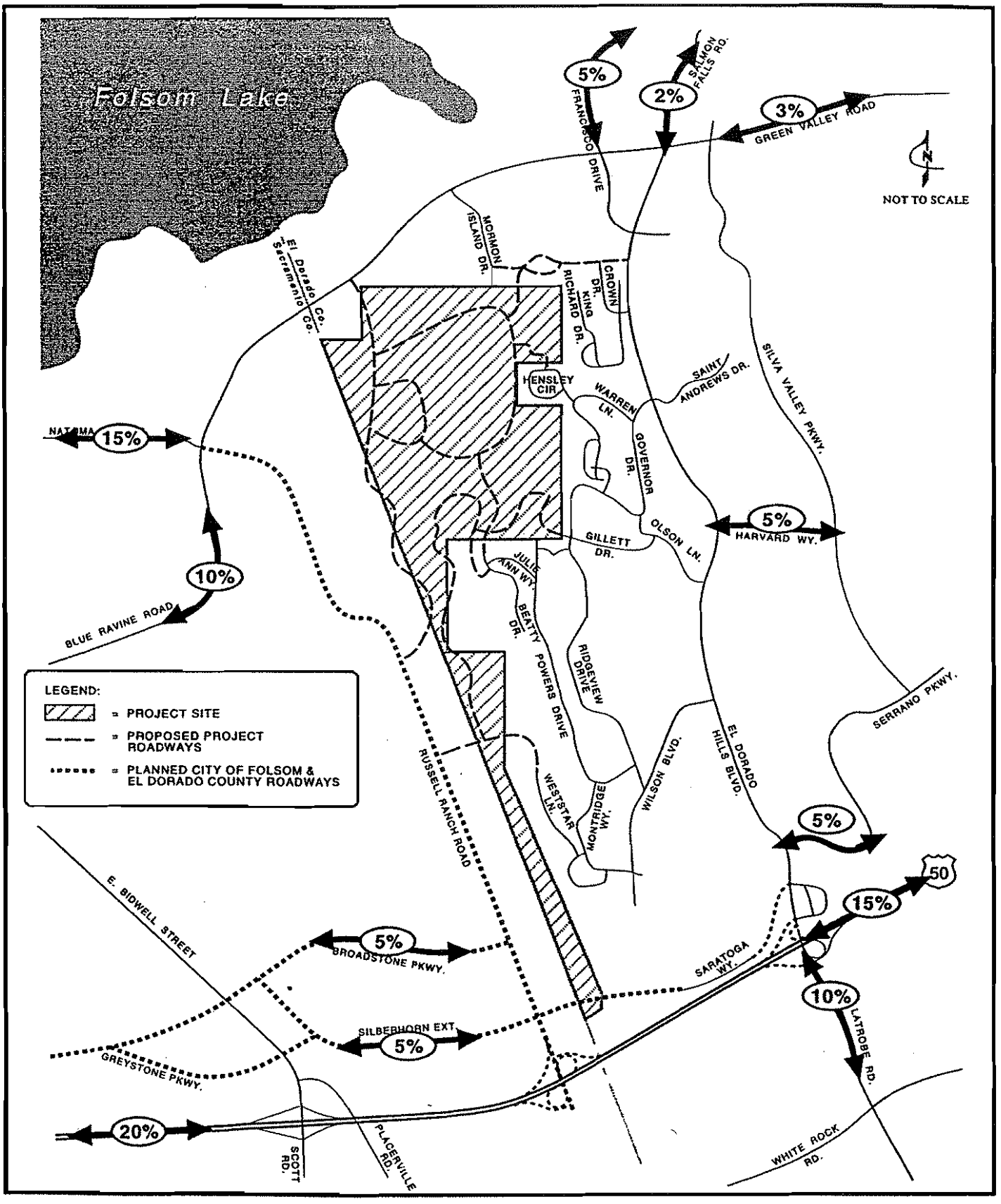
Cumulative No Project Average Daily Traffic Volumes



SOURCE: Fehr & Peers Associates, Inc., 1997

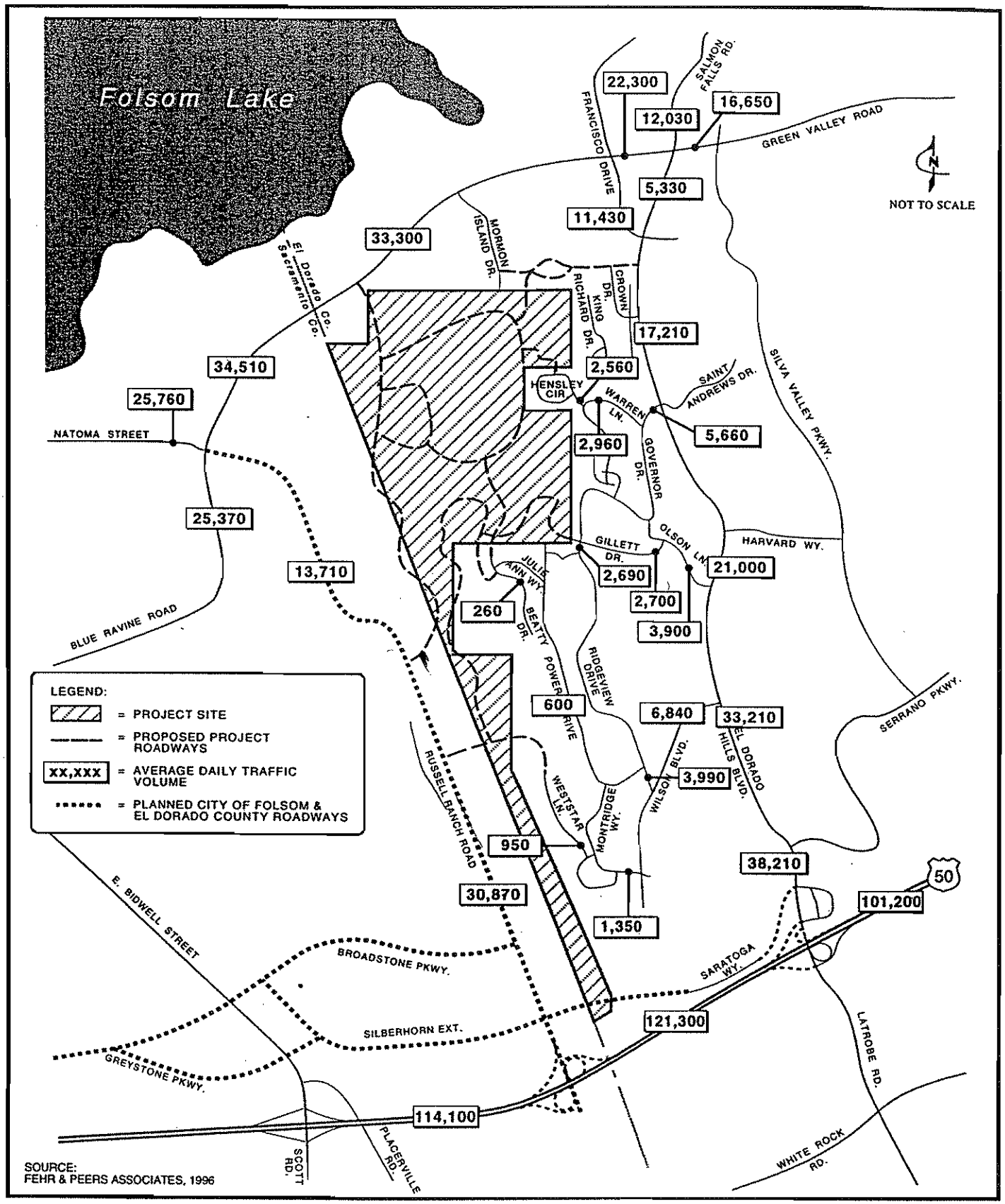
Figure 4.5-10

Cumulative No Project Conditions Intersection Peak Hour-Volumes and Geometrics



SOURCE: Fehr & Peers Associates, Inc., 1997

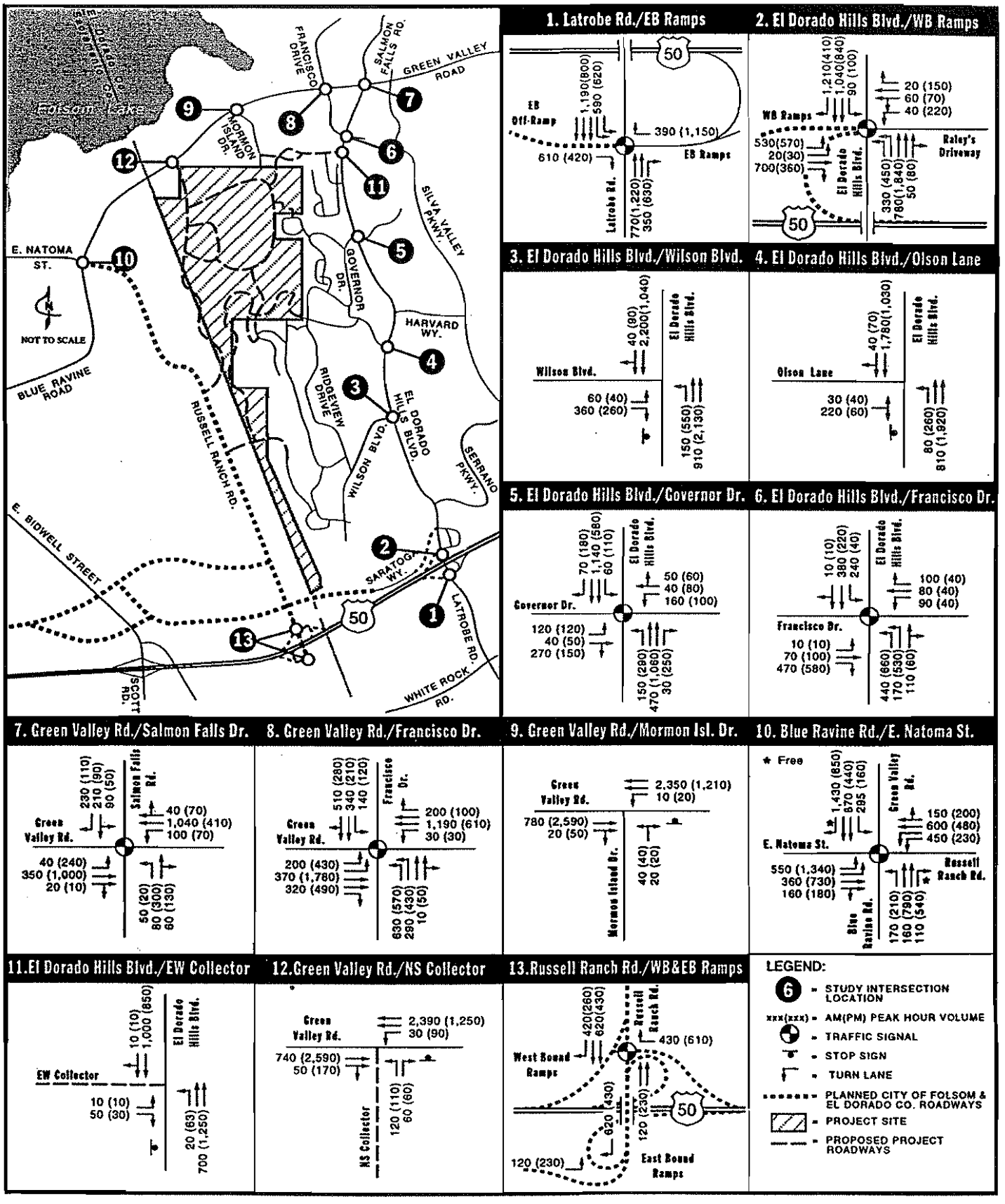
Figure 4.5-11
Project Trip Distribution Cumulative Plus Project Conditions



SOURCE: Fehr & Peer Associates

Figure 4.5-12

Cumulative Plus Project Average Daily Traffic Volumes



SOURCE: Fehr & Peers Associates, Inc., 1997

Figure 4.5-13

Cumulative Plus Project Conditions Intersection Peak-Hour Volumes and Geometrics

TABLE 4.5-8
CUMULATIVE A.M. AND P.M. PEAK-HOUR INTERSECTION AND RAMP JUNCTION LEVELS OF SERVICE

	Cumulative No Project LOS /b/		Cumulative Plus Project LOS /b/	
Analysis Location	**A.M.**	**P.M.**	**A.M.**	**P.M.**
1. Latrobe Road/U.S. Highway 50 EB Ramps	A	B	A	B
2. El Dorado Hills Boulevard/U.S. Highway 50 WB Ramps	B	C	B	C
3. El Dorado Hills Boulevard/Wilson Boulevard	F	F	F	F
4. El Dorado Hills Boulevard/Olson Lane	F	F	F	F
5. El Dorado Hills Boulevard/Governor Drive	B	B	C	B
6. El Dorado Hills Boulevard/Francisco Drive	C	C	C	C
7. Green Valley Road/Salmon Falls Road	B	B	B	B
8. Green Valley Road/Francisco Drive	E	D	E	E
9. Green Valley Road/Mormon Island Drive	B	C	F	F
10. Blue Ravine Road/East Natoma Street /a/	D	E	D	F
11. El Dorado Hills Boulevard/EW Collector /c/	N/A	N/A	A	A
12. Green Valley Road/NS Collector	N/A	N/A	F	F
13. Russell Ranch Boulevard/U.S. Highway 50 WB and EB Ramps	B	B	B	B
14. U.S. Highway 50 WB Off-Ramp Diverge to El Dorado Hills Boulevard	B	A	B	A
15. U.S. Highway 50 WB On-Ramp Merge from El Dorado Hills Boulevard	B	A	B	B
16. U.S. Highway 50 EB Off-Ramp Diverge to Latrobe Road	A	B	A	B
17. U.S. Highway 50 EB On-Ramp Merge to Latrobe Road	A	B	A	B

N/A= not applicable.
/a/ This intersection is located in the City of Folsom, all other analysis locations are within El Dorado County.
/b/ Shaded cells denote locations that exceed identified significance criteria.
/c/ This analysis assumes that the Crown Valley roadway system will be developed.

4.5.2 IMPACT STATEMENTS AND MITIGATION MEASURES

EXISTING PLUS PROJECT CONDITIONS

Roadway System Impacts

According to the results in **Table 4.5-7**, 10 of the 16 analysis locations are projected to operate at levels worse than considered acceptable by the significance criteria under existing plus project conditions. As a result, the following adverse impacts were identified. **Table 4.5-9** identifies the resulting levels of service for impacted analysis locations after implementation of identified mitigation measures.

Impact

4.5.1 Implementation of the proposed project will increase traffic volumes in excess of 4,000 per day on sections of Olson Lane and Ridgeview Drive. This would be a significant impact.

All project traffic was assigned to the local residential streets in El Dorado Hills under existing plus project conditions because connections to new roadways in the City of Folsom are not yet constructed.

Mitigation Measure

4.5.1 During the review of tentative maps for each phase of the Promontory Specific Plan, a traffic study shall be performed to determine the amount of project traffic that will be added to the local streets in El Dorado Hills. If any local residential streets would experience a total daily volume in excess of 4,000 as a result of implementing a particular phase of the Promontory Specific Plan, then the tentative map for that phase shall not be approved unless traffic circulation measures are implemented which will prevent the total daily traffic volume on local residential streets from reaching 4,000 average daily trips.

Traffic circulation measures would include, but are not limited to: additional connections to other local residential streets (temporarily or permanently); elimination of connections to local residential streets (temporarily or permanently); construction of Russell Ranch Boulevard Extension to Green Valley Road; construction of Russell Ranch Boulevard to the City of Folsom's East Natoma Street Extension (and/or connection to U.S. Highway 50); modification of project phasing; construction of new roads to serve the project site (through the Crown Valley, Ridgeview Village Unit 3, and/or Ridgeview Village Unit 9 approved tentative maps); delay of tentative map approval; and/or reduction in the number of dwelling units.

Significance After Mitigation

Less than significant.

Impact

4.5.2 Implementation of the proposed project would increase traffic volumes at the Blue Ravine Road/East Natoma Street/Green Valley Road intersection resulting in a deterioration of LOS from "D" to "F" during the a.m. peak hour and LOS "E" to "F" during the p.m. peak hour. This would be a significant impact.

About 25 percent of the project trips are expected to have origins and destinations in the City of Folsom or Sacramento County that would require travel through the Blue Ravine Road/East Natoma Street intersection. Attractions within the City of Folsom

include major commercial areas such as the East Bidwell Street Shopping Area and employment centers such as Intel. In addition, the Blue Ravine Road/East Natoma Street intersection is part of major travel routes across the American River using either the Folsom Dam Road or Rainbow Bridge.

Mitigation Measure

4.5.2a Widen Green Valley Road from two lanes to four lanes from El Dorado Hills Boulevard in El Dorado County to the East Natoma Street/Blue Ravine Road/Green Valley Road intersection in the City of Folsom.

4.5.2b Construct a free-flow right-turn lane from westbound Green Valley Road to northbound East Natoma Street and widen northbound East Natoma Street to include two departing lanes for a minimum of 1,000 feet.

4.5.2c Widen southbound East Natoma Street to include dual left-turn lanes and one exclusive right-turn lane.

Implementation of these mitigation measures will reduce this impact to a less-than-significant level because the a.m. and p.m. peak-hour operations would improve to LOS "B" under existing plus project conditions.

The widening of Green Valley Road to four lanes between the Sacramento County line and Silva Valley Parkway is included in the El Dorado Hills RIF and West Slope TIM programs. Therefore, the project will be subject to the RIF as its fair-share contribution to the widening of Green Valley Road in El Dorado County. The fees are paid concurrently with the issuance of building permits, although the applicant may construct the improvements in lieu of fee payments.

The remainder of the improvements are located in the City of Folsom, over which El Dorado County does not have jurisdiction. The mitigation measures therefore require a finding prior to project approval, in accordance with CEQA Guidelines Section 15091(a)(2), that the mitigation is within the responsibility and jurisdiction of another public agency and not the agency making the finding. The finding also must state whether the other agency has adopted, or can and should adopt the mitigation measures.

Currently, the City of Folsom has not adopted this mitigation measure and, therefore, the City should recommend, or adopt, an implementation procedure for the mitigation, which should be included in the City's comments on this Draft EIR. The implementation procedure should include the method to determine the project's fair-share contribution for the improvements. The implementation procedure would then be incorporated into the Final EIR, and El Dorado County decision makers would then

benefit from the additional information in determining the feasibility of the mitigation, in accordance with CEQA Guidelines Section 15091(a)(3).

It should be noted that the City of Folsom's East Area Facilities Plan Final EIR identified two mitigation measures (4.2.3a and 4.2.3b) for the improvement of Green Valley Road (in the City and El Dorado County) and El Dorado Hills Boulevard (City of Folsom, 1991). However, as indicated in the findings for the East Area Facilities Plan EIR, the City of Folsom does not have authority to adopt measures that would be implemented by El Dorado County. In addition, El Dorado County has not required Folsom development to install improvements or pay mitigation fees for El Dorado County roadways. Similarly, El Dorado County can only recommend that the City of Folsom implement improvements to Green Valley Road within the City of Folsom. Since the findings for the East Area Facilities Plan includes improvements to mitigate roadways and intersections in the City of Folsom, these measures are considered to be potentially implementable.

Significance After Mitigation

Less than significant.

Impact

4.5.3 Implementation of the proposed project will increase traffic volumes at the Green Valley Road/Francisco Drive intersection resulting in the exacerbation the of LOS "F" conditions during the p.m. peak hour. This would be a significant impact.

Project trips will increase traffic volume on all four approaches to the Green Valley Road/Francisco Drive intersection. This intersection serves as a gateway to most land uses east of the project.

Mitigation Measures

4.5.3a Implement Mitigation Measure 4.5.2a.

4.5.3b The project applicant shall be responsible for their fair-share cost of the following improvements:

- **widen the northbound Francisco Drive approach to include dual left-turn lanes, one exclusive through lane, and one exclusive right-turn lane;**
- **widen the westbound Green Valley Road approach to include one exclusive left-turn lane, two exclusive through lanes, and one exclusive right-turn lane;**
- **widen the eastbound Green Valley Road approach to include dual left-turn lanes, two exclusive through lanes, and one exclusive right-turn lane; and**

- **modify the existing traffic signal equipment as necessary to accommodate the intersection widening.**

Since these improvements are contained in the El Dorado Hills RIF and the West Slope TIM programs, the project will be subject to the RIF concurrently with the issuance of building permits.

These improvements should be constructed prior to the issuance of occupancy permits. Implementation of these mitigation measures will reduce this impact to a less-than-significant level because the a.m. and p.m. peak-hour operations would improve to LOS "B" under existing plus project conditions.

Significance After Mitigation

Less than significant.

Impact

4.5.4 Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Francisco Drive intersection resulting in a deterioration of the LOS from "E" to "F" during the p.m. peak hour. This would be a significant impact.

This intersection warrants signalization under existing conditions according to the peak-hour volume warrant contained in the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, 1988. The addition of project trips will exacerbate this need and would result in a p.m. peak-hour LOS to "F".

Mitigation Measure

4.5.4 Install a traffic signal at the El Dorado Hills Boulevard/Francisco Drive intersection. Since signalization of the intersection is included in the El Dorado Hills RIF, the project will be subject to the RIF concurrently with the issuance of building permits.

Signalization of this intersection is included in the El Dorado Hills RIF. Therefore, the project applicant will pay the RIF fee concurrently with the issuance of building permits or construct the improvements and negotiate with the County Department of Transportation for reimbursement or credit towards the RIF. Implementation of this mitigation measure will reduce this impact to a less-than-significant level because the a.m. and p.m. peak-hour operations would improve to LOS "C" under existing plus project conditions.

Significance After Mitigation

Less than significant.

Impact

4.5.5 Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Wilson Boulevard intersection resulting in a deterioration of the LOS from "A" to "F" during the a.m. and p.m. peak hours. This would be a significant impact.

Although Wilson Boulevard operates at LOS "A" under existing conditions, a substantial increase in traffic volumes is expected from project traffic that is attracted to U.S. Highway 50 or commercial and employment centers further south on El Dorado Hills Boulevard.

Mitigation Measures

4.5.5 During the review of tentative maps for each phase of the Promontory Specific Plan, a traffic study shall be performed to determine the amount of project traffic that will be added to the El Dorado Hills Boulevard/Wilson Boulevard intersection. When the intersection warrants signalization, as determined by the El Dorado County Department of Transportation, or if the intersection is projected to operate at LOS "D", "E", or "F", as a result of implementing a particular phase of the Promontory Specific Plan, then the tentative map for that phase shall not be approved unless the intersection is signalized.

The signalization of the intersection is not currently in the El Dorado Hills RIF. Should the intersection be added to the RIF program, and the applicant signalizes the intersection, the applicant may be eligible for reimbursement or credit towards the RIF. Implementation of this mitigation measure will reduce this impact to a less-than-significant level because the a.m. and p.m. peak-hour operations would improve to LOS "C" under existing plus project conditions.

Significance After Mitigation

Less than significant.

Impact

4.5.6 Implementation of the proposed project will increase traffic volumes at the Latrobe Road/U.S. Highway 50 Eastbound Ramps intersection resulting in the exacerbation of the LOS "F" conditions during the p.m. peak hour. This would be a significant impact.

As discussed under existing conditions, this intersection warrants installation of a signal based on peak-hour traffic volumes. The addition of project traffic will exacerbate this need.

Mitigation Measure

4.5.6 Install a traffic signal at the Latrobe Road/U.S. Highway 50 Eastbound Ramps intersection. Since signalization of the intersection is included in the El Dorado Hills RIF, the project will be subject to the RIF concurrently with the issuance of building permits.

This improvement project is included in the El Dorado Hills RIF as part of the improvements for the El Dorado Hills Boulevard/Latrobe Road interchange with U.S. Highway 50. Therefore, the project applicant will pay the RIF fee concurrently with the issuance of building permits or construct the improvements in lieu of the fee payment. Implementation of this mitigation measure will reduce this impact to a less-than-significant level because the a.m. and p.m. peak-hour operations would improve to LOS "B" under existing plus project conditions.

Significance After Mitigation

Less than significant.

Impact

4.5.7 Implementation of the proposed project will create a new intersection with Green Valley Road. This intersection would operate at LOS "F" during both a.m. and p.m. peak hours under existing plus project conditions. This would be a significant impact.

The new North-South Collector Road (Russell Ranch Boulevard Extension) intersection with Green Valley Road was assumed to operate under stop control for existing plus project conditions. This intersection will warrant signalization according to the peak-hour volume warrant contained in the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, 1988. Signalization will also be necessary to improve peak-hour traffic operations to acceptable levels.

Mitigation Measures

4.5.7a Implement Mitigation Measure 4.5.2a.

4.5.7b Install a traffic signal and turn lane improvements at the Green Valley Road/North-South Project Collector Road (Russell Ranch Boulevard Extension) intersection. The turn lane improvements shall include an exclusive westbound left-turn lane and an exclusive eastbound right-turn lane on Green Valley Road. In addition, the North-South Collector Road approach shall include a dual left-

turn lane and an exclusive right-turn lane. The timing of these improvements will be predicated on the phasing of the project and the results of the traffic studies submitted with each tentative subdivision map.

The signalization and lane improvements are not currently in the El Dorado Hills RIF or West Slope TIM. Should the improvements be added to the RIF or TIM programs, and the applicant signalizes the intersection, the applicant may be eligible for reimbursement or credit towards the RIF.

Implementation of these mitigation measures will reduce this impact to a less-than-significant level because the a.m. and p.m. peak-hour operations would improve to LOS "A" and "B", respectively, under existing plus project conditions.

Significance After Mitigation

Less than significant.

Impact

4.5.8 Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Latrobe Road eastbound and westbound on- and off-ramp junctions with U.S. Highway 50 resulting in the exacerbation of the LOS "F" conditions during both a.m. and p.m. peak hours. This would be a significant impact.

El Dorado County is completing a PSR for the design of interchange improvements that will alleviate existing problems and accommodate future traffic levels. The project applicant will contribute to the interchange improvement as stated in Mitigation Measure 4.5.8.

Mitigation Measure

4.5.8 The project applicant shall be responsible for contributing their fair-share of the cost to reconstruct the El Dorado Hills Boulevard/Latrobe Road interchange with U.S. Highway 50. Since reconstruction of the interchange is included in the El Dorado Hills RIF and the County's State System Capacity and Interchange Traffic Impact Mitigation program, the project will be subject to the RIF and State System Capacity TIM fee concurrently with the issuance of building permits.

Reconstruction of the interchange is included in the El Dorado Hills RIF program. Therefore, the project applicant will pay the RIF fee concurrently with the issuance of building permits. A separate impact fee program known as the State System Capacity and Interchange Traffic Impact Mitigation program has been established to fund the mainline widening of U.S. Highway 50 through the western portion of El Dorado

County. This fee will also be paid by the project applicant concurrently with the issuance of building permits. Implementation of this mitigation measure will reduce this impact to a less-than-significant level because the ramp junction operations will improve to LOS "D" or better under existing plus project conditions as listed below.

- U.S. Highway 50 Eastbound Diagonal On-Ramp - LOS "B" during the a.m. peak hour and LOS "C" during the p.m. peak hour;
- U.S. Highway 50 Eastbound Off-Ramp to El Dorado Hills Boulevard and Latrobe Road - LOS "B" during the a.m. peak hour and LOS "D" during the p.m. peak hour;
- U.S. Highway 50 Westbound Diagonal On-Ramp - LOS "D" during the a.m. peak hour and LOS "B" during the p.m. peak hour; and
- U.S. Highway 50 Westbound Loop Off-Ramp - LOS "D" during the a.m. peak hour and LOS "B" during the p.m. peak hour.

Significance After Mitigation

Less than significant.

TABLE 4.5-9
EXISTING PLUS PROJECT A.M. AND P.M. PEAK HOUR
INTERSECTION AND RAMP JUNCTION LEVELS OF SERVICE
BEFORE AND AFTER MITIGATION

	Existing Plus Project LOS Prior To Mitigation		Existing Plus Project LOS After Mitigation Implementation	
Analysis Location /b/	**A.M.**	**P.M.**	**A.M.**	**P.M.**
1. Latrobe Road/U.S. Highway 50 EB Ramps	D	F	B	B
3. El Dorado Hills Boulevard/Wilson Boulevard	F	F	C	C
6. El Dorado Hills Boulevard/Francisco Drive	C	F	C	C
8. Green Valley Road/Francisco Drive	E	F	B	B
10. Blue Ravine Road/East Natoma Street/a/	F	F	B	B
12. Green Valley Road/NS Collector	F	F	A	B
14. U.S. Highway 50 WB Off-Ramp Diverge to El Dorado Hills Boulevard	F	B	D	B
15. U.S. Highway 50 WB On-Ramp Merge El Dorado Hills Boulevard	F	B	D	B
16. U.S. Highway 50 EB Off-Ramp Diverge Latrobe Road	B	F	B	D
17. U.S. Highway 50 EB On-Ramp Merge Latrobe Road	B	F	B	C

/a/ This intersection is located in the City of Folsom, all other analysis locations are within El Dorado County.
/b/ All other analysis locations identified in Table 4.5-8 were not significantly impacted by the proposed project.
SOURCE: Fehr and Peers Associates, 1997.

Transit Impacts

Transit impacts under existing plus project conditions were determined by comparing the Promontory Specific Plan for compatibility with existing and planned transit facilities or routes and consistency with goals, objectives, and policies of the El Dorado County General Plan. Based on the transit evaluation, the following transit impact was identified.

Impact

4.5.9 Implementation of the proposed project will increase demand for public transit service and facilities including fixed route service, commuter service, dial-a-ride service, and park-and-ride lot spaces. In order to accommodate these trips, Policies 3.11.2.3, 3.13.2.2, 3.11.2.1 of the El Dorado County General Plan require new development to install bus turnouts, bus shelters, and other public transportation-related improvements where appropriate. Since the Promontory Specific Plan does not identify bus turnouts, bus shelters, or other public transportation related improvements, this impact is considered significant.

The El Dorado County General Plan contains a number of policies similar to Policy 3.11.2.3 that require new development to construct or install bus turnouts, bus shelters, and transportation related improvements to accommodate travel demand created by the implementation of new land uses. This policy applies to the project's frontage on existing roadways as well as proposed public roadways within the project site.

Mitigation Measure

4.5.9 The project developer shall be responsible for their fair-share cost of bus turnouts and transit shelters located within the project site. Bus turnouts and transit shelters will be placed along the proposed community and village center collectors, as well as the village center. The specific location of these facilities shall be determined jointly by the El Dorado County DOT and El Dorado Transit Authority. The project applicant's fair-share cost shall be determined by the El Dorado County DOT. Construction of these improvements should occur when transit service is extended to the project.

Implementation of this mitigation measure will reduce this impact to a less-than-significant level because the project would become consistent with Policies 3.11.2.3, 3.13.2.2, 3.11.2.1 of the El Dorado County General Plan.

Significance After Mitigation

Less than significant.

Bicycle and Pedestrian System Impacts

Impact

4.5.10 Implementation of the proposed project will increase demand for bicycle and pedestrian facilities. However, the Promontory Specific Plan includes bikeways and pedestrian facilities as part of the circulation plan. This would be a less than significant impact.

Bicycle and pedestrian impacts under existing plus project conditions were determined by comparing the Promontory Specific Plan for compatibility with existing and planned bikeway and pedestrian facilities as well as consistency with the goals, objectives, and policies of the El Dorado County General Plan. **Figure 4.5-5** shows existing bikeways in the vicinity of the project. Implementation of the Promontory Specific Plan will not disrupt these facilities or interfere with the construction of planned Class II bike lanes along El Dorado Hills Boulevard, Green Valley Road, or Francisco Drive identified in the El Dorado County Bikeway Master Plan.

In addition, the specific plan is consistent with El Dorado County General Plan Policies 3.10.1.6, 3.10.1.7, 3.14.2.3, and 3.14.2.4, which require new development projects to be responsible for providing pedestrian/bicycle facilities to better accommodate alternative transportation modes. Specific facilities identified in the project site include sidewalks and Class II bike lanes on Russell Ranch Boulevard, sidewalks along the village center and community collectors, and a separate pedestrian trail system through designated open space and park areas. Proposed Class II bike lanes would provide a connection with planned bikeways along Russell Ranch Boulevard in the City of Folsom.

Although no significant impact was identified, the project applicant and El Dorado County should coordinate with the City of Folsom to ensure that planned bikeways in the Promontory create logical connections to the City of Folsom's Bikeway Master Plan. In particular, the proposed pedestrian trail system (see **Figure 3-5**) in the village center should also include Class I bikeways that will link directly with planned Class I bikeways from the Russell Ranch Specific Plan area in Folsom. The Class I bikeway should parallel the proposed pedestrian trail system to the maximum extent feasible.

Mitigation Measure

4.5.10 Since no significant impacts were identified, no mitigation measures are required.

CUMULATIVE CONDITIONS

According to the results in **Table 4.5-8**, five of the 17 analysis locations are projected to operate at levels worse than considered acceptable by the General Plan policies of the City of Folsom and El Dorado County under existing plus project conditions. As a result, the following adverse

impacts were identified. **Table 4.5-10** identifies the resulting levels of service for impacted analysis locations after implementation of identified mitigation measures.

Roadway System Impacts

Impact

4.5.11 Implementation of the proposed project will increase cumulative traffic volumes at the Green Valley Road/Mormon Island Drive intersection resulting in LOS "F" conditions during the a.m. and p.m. peak hours. This would be a cumulative significant impact.

The left-turn movement from Mormon Island Drive to westbound Green Valley Road will experience substantial delay because of the limited number of gaps in the vehicle flow on Green Valley Road. As a result, this one movement will cause the overall intersection delay to exceed the LOS "F" threshold.

Mitigation Measures

4.5.11a The project applicant shall construct a barrier to prevent private vehicle access to Mormon Island Drive. This barrier shall be passable by emergency vehicles only. The specific barrier design shall be determined by the El Dorado County DOT and El Dorado Hills Fire Department.

Implementation of this mitigation measure will reduce this impact to a less-than-significant level for the following reasons.

- The Green Valley Road/Mormon Island Drive intersection would operate at LOS "B" and "D" during the a.m. and p.m. peak hours, respectively.
- The Green Valley Road/North-South Collector Road (Russell Ranch Boulevard Extension) intersection would continue to operate at LOS "B" and "D" during the a.m. and p.m. peak hours, respectively.
- The El Dorado Hills Boulevard/East-West Collector Road intersection would continue to operate at LOS "A" during the a.m. and p.m. peak hours.

The LOS information for the Green Valley Road/North-South Collector Road and El Dorado Hills Boulevard/East-West Collector is presented here because elimination of project access to Mormon Island Drive will shift project traffic to these other project access roads.

Or

4.5.11b As an alternative, the intersection may be signalized to maintain a LOS "B" in the a.m. and LOS "C" in the p.m.

The signalization and lane improvements are not currently in the El Dorado Hills RIF or West Slope TIM. Should the improvements be added to the RIF or TIM programs, and the applicant signalizes the intersection, the applicant may be eligible for reimbursement or credit towards the RIF.

Significance After Mitigation

Less than significant.

Impact

4.5.12 Implementation of the proposed project will increase cumulative traffic volumes at the Blue Ravine Road/East Natoma Street intersection resulting in the exacerbation of LOS "D" conditions during the a.m. peak hour and a deterioration in LOS from "E" to "F" during the p.m. peak hour. This would be a cumulative significant impact.

This intersection is not projected to operate within the City of Folsom's LOS "C" threshold even under cumulative no project conditions. Past traffic impact studies for projects in the City of Folsom such as the Russell Ranch Specific Plan have not shown this intersection to operate below the City's LOS threshold under cumulative conditions. For example, the Russell Ranch Specific Plan Environmental Impact Report, January 14, 1991, shows that this intersection will operate at LOS "C" or better during a.m. and p.m. peak hours under cumulative conditions. Interestingly, the traffic forecasts for the Russell Ranch EIR were prepared using the City of Folsom East Area Traffic Model, which included land use assumptions for the Promontory Specific Plan and the rest of El Dorado Hills. The reason that this intersection operates worse than LOS "C" in this study, is that the planned roadway assumptions used in this study are different from those used in previous City of Folsom studies.

At the beginning of this study, the City of Folsom was contacted to determine what assumptions should be used for City roadways under cumulative conditions. City officials stated that Blue Ravine Road and Green Valley would be a total of four lanes (two lanes in each direction) instead of six, which was shown in the City of Folsom General Plan (1988) and used in studies for projects such as Russell Ranch, the Parkway, and the Folsom East Area (Maguire, 1997). As a result, the intersection fails to operate within the City of Folsom's LOS "C" threshold even under cumulative no project conditions.

Mitigation Measures

4.5.12 No feasible mitigation.

According to the City of Folsom Public Works Department, the intersection geometrics contained in **Figures 4.5-10** and **4.5-13** are consistent with available right-of-way at this intersection, but any additional widening could cause undesirable environmental impacts (Maguire, 1997). To obtain LOS "C" operations at this intersection would require substantial widening, which would include the following:

- Widen the Green Valley Road approach to include dual left-turn lanes, three exclusive through lanes, and a free-flow right-turn lane. The three through lanes should extend a minimum of 1,000 feet prior to the intersection.

- Widen the Blue Ravine Road approach to include dual left-turn lanes, three exclusive through lanes, and a free-flow right-turn lane. The three through lanes should extend a minimum of 1,000 feet prior to the intersection.

- Widen the East Natoma Street approach to include dual left-turn lanes, three exclusive through lanes, and an exclusive right-turn lane. The three through lanes should extend a minimum of 1,000 feet prior to the intersection.

- Widen the Russell Ranch Boulevard approach to include dual left-turn lanes, two exclusive through lanes, and an exclusive right-turn lane.

Since these improvements are not considered feasible by the City of Folsom, this impact will be significant and unavoidable.

Significance After Mitigation

Significant and unavoidable.

Impact

4.5.13 Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Olson Lane intersection resulting in the exacerbation of LOS "F" conditions during both peak hours. The roadway plan prepared for the El Dorado County General Plan projected this section of El Dorado Hills Boulevard to operate at LOS "E" under year 2015 conditions. This would be a cumulative significant impact.

This intersection warrants signalization under cumulative no project conditions according to the peak-hour volume warrant contained in the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, 1988. The addition of project trips will exacerbate this need and push the a.m. and p.m. peak-hour LOS to "F".

Mitigation Measures

4.5.13 The project applicant shall install a traffic signal at the El Dorado Hills Boulevard/Olson Lane intersection and construct exclusive left- and right-turn lanes on the Olson Lane approach.

El Dorado County DOT, at the next update of the El Dorado Hills RIF, will determine the cost of signalization and turn lane improvements and determine the fair-share cost of the project applicant. The RIF will reimburse the project applicant the difference between the cost of the improvements and the project applicant's fair-share portion. Implementation of this mitigation measure will reduce this impact to a less-than-significant level because the a.m. and p.m. peak-hour operations would improve to LOS "B" under cumulative plus project conditions.

Significance After Mitigation

Less than significant.

Impact

4.5.14 Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Wilson Boulevard intersection resulting in the exacerbation of LOS "F" conditions during both peak hours. The roadway plan prepared for the El Dorado County General Plan projected this section of El Dorado Hills Boulevard to operate at LOS "E" under year 2015 conditions. This would be a cumulative significant impact.

Similar to the Olson Lane intersection with El Dorado Hills Boulevard, this intersection warrants signalization under cumulative no project conditions according to the peak-hour volume warrant contained in the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, 1988. The addition of project trips will exacerbate this need and push the a.m. and p.m. peak hour LOS to "F".

Mitigation Measures

4.5.14 Implement Mitigation Measure 4.5.5.

The signalization required by Mitigation Measure 4.5.5 would improve the a.m. and p.m. peak-hour operations to LOS "D" under cumulative plus project conditions.

Significance After Mitigation

Less than significant.

Impact

4.5.15 Implementation of the proposed project will create a new intersection with Green Valley Road. This intersection would operate at LOS "F" under cumulative plus project conditions. This would be a cumulative significant impact.

The new North-South Collector Road (Russell Ranch Boulevard Extension) intersection with Green Valley Road was assumed to operate under stop control for cumulative plus project conditions. This intersection will warrant signalization according to the peak-hour volume warrant contained in the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, 1988. Signalization will also be necessary to improve peak-hour traffic operations to acceptable levels.

Mitigation Measures

4.5.15 Implement mitigation measures 4.5.7a and 4.5.7b.

The signalization and turn lane improvements required by Mitigation Measures 4.5.7a and 4.5.7b would improve the a.m. and p.m. peak-hour operations to LOS "B" and "D", respectively, under cumulative plus project conditions.

Significance After Mitigation

Less than significant.

TABLE 4.5-10
CUMULATIVE PLUS PROJECT A.M. AND P.M. PEAK-HOUR INTERSECTION LEVELS OF SERVICE BEFORE AND AFTER MITIGATION

	Cumulative Plus Project LOS Prior To Mitigation		Cumulative Plus Project LOS After Mitigation Implementation	
Analysis Location /b/	**A.M.**	**P.M.**	**A.M.**	**P.M.**
3. El Dorado Hills Boulevard/Wilson Boulevard	F	F	D	D
4. El Dorado Hills Boulevard/Olson Lane	F	F	B	B
9. Green Valley Road/Mormon Island Drive	F	F	B	D
10. Blue Ravine Road/East Natoma Street/a/	D	F	D	F
12. Green Valley Road/NS Collector	F	F	B	D

/a/ This intersection is located in the City of Folsom, all other analysis locations are within El Dorado County. The impact to this intersection is considered significant and unavoidable.

/b/ All other analysis locations identified in Table 4.5-9 were not significantly impacted by the proposed project.

SOURCE: Fehr and Peers Associates, 1997.

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4.6 AIR QUALITY

4.6 AIR QUALITY

This section addresses project impacts on ambient air quality, and the exposure of people (especially sensitive individuals) to unhealthy pollutant concentrations. Air pollutants of concern for the western El Dorado County area include ozone (O_3), carbon monoxide (CO), and particulate matter (PM_{10}). This section analyzes the type and quantity of emissions that would be generated by construction and operation of the proposed project.

4.6.1 SETTING

CLIMATE

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions including wind speed, wind direction and air temperature, in combination with local surface topography (i.e., geographic features such as mountains and valleys), determine the effect of air pollutant emissions on local air quality.

The project is within the Mountain Counties Air Basin (MCAB). The climate of the MCAB is influenced by the foothill and mountainous terrain unique to the counties included in the MCAB. El Dorado County is bordered by the Sacramento Valley to the west and the Nevada State line to the east with the western portion of the County consisting of the rolling Sierra Nevada foothills and the central and eastern portion of the County consisting of granite peaks reaching up to 10,000 feet. The climate of El Dorado County is characterized by hot dry summers and cool moist winters. The western portion of the County is characterized by higher temperatures and lower annual rainfall, and the central and eastern portions are characterized by lower temperatures and higher annual rainfall. In summer months, average high temperatures in the project site vicinity are about 92 degrees Fahrenheit (°F), while average lows are about 57 °F. In winter, average low temperatures are about 36 °F, while the average highs are about 57 °F. Average annual precipitation measured between 1941 and 1970 at Placerville was 39.8 inches per year.

Vertical and horizontal movement of air are important atmospheric components involved in the dispersion of air pollutants. Movement of air allows for the dispersion and subsequent dilution of air pollutants. Without movement, air pollutants can collect and concentrate in a single area, increasing the health hazards associated with air pollutants. For instance, in the winter months, the western portion of El Dorado County experiences a high percentage of calm atmospheric conditions. These calm conditions result in stagnation of air and increased air pollution. As a result, persistent inversions occur frequently, especially during late fall and early spring, which act to restrict vertical dispersion of pollutants released near ground level.

Although movement of air is generally considered an effective means of diluting air pollution and subsequently attenuating the pollution's unhealthy effects, predominant westerly winds during the summer season move urban air pollution from the west and southwest, which contributes to the region's inability to attain mandated air quality goals. In fact, the movement of urban pollution from the San Francisco Bay area to the foothills of the Sierra Nevada by means of the Carquinez Straits has been documented by University of California researchers. As a consequence, this interbasin transport of pollutants is thought to possibly account for a sizable portion of regional foothill O_3 pollution.

AIR QUALITY REGULATIONS

On both the federal and state levels, a distinction is made for regulatory purposes between criteria air pollutants and toxic air pollutants. Criteria air pollutants are those for which health-based concentration standards were first promulgated under the 1970 Amendments to the Federal Clean Air Act (FCAA). Regulation of criteria air pollutants is achieved through federal and state ambient air quality (concentration) standards (AAQS) and emission limits for individual sources. Air toxics are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects (i.e., injury or illness), but for which ambient air quality standards have not been set.

The FCAA required the state Air Resources Board (ARB) to divide the state into air basins based upon similar meteorological and geographical features, and with consideration of political boundaries. The nine county MCAB encompasses the vast majority of El Dorado County; a portion of the county is covered by the Lake Tahoe Air Basin. The ARB's primary responsibility is to implement regulations controlling mobile sources and oversee the local and regional air quality agencies. On a regional level, the El Dorado County Air Pollution Control District (District or EDCAPCD) is responsible for air quality regulation in the El Dorado County portion of the MCAB.

Local

In addition to state and federal powers to regulate criteria air pollutants, El Dorado County has outlined its responsibilities regarding air quality issues in the County's General Plan. Although the County has no direct regulatory authority, through the General Plan the County lists policy goals and plans intended to reduce air quality impacts, primarily through regional land use and transportation decisions.

CRITERIA AIR POLLUTANTS

Federal

As required by the Federal Clean Air Act (FCAA), the U.S. Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS) for the original six "criteria" air pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), suspended particulate matter (PM_{10}), and lead (Pb). Standards for these pollutants are listed in **Table 4.6-1**. These standards represent the levels of air quality necessary, with an adequate margin of safety, to protect the public health and welfare.

TABLE 4.6-1
STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	SAAQS /a/	NAAQS /b/
Ozone	1 hour	0.09 ppm /c/	0.12 ppm
Carbon Monoxide	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide	1 hour	0.25 ppm	NA
	Annual	NA	0.053 ppm
Sulfur Dioxide	1 hour	0.25 ppm	NA
	3 hour	NA	0.5 ppm
	24 hour	0.04 ppm	0.14 ppm
	Annual	NA	0.03 ppm
Respirable Particulate Matter	24 hour	50 ug/m^3/c/	150 ug/m^3
	Annual	30 ug/m^3	50 ug/m^3
Sulfates	24 hour	25 ug/m^3	NA
Lead	30 day	1.5 ug/m^3	NA
	Calendar Quarter	NA	1.5 ug/m^3
Hydrogen Sulfide	1 hour	0.03 ppm	NA
Vinyl Chloride	24 hour	0.010 ppm	NA

/a/ SAAQS (i.e., California standards) for ozone, carbon monoxide, sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, respirable particulate matter are values that are not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

/b/ NAAQS (i.e., national standards), other than ozone and those based on annual averages, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

/c/ ppm = parts per million by volume; ug/m^3 = micrograms per cubic meter.

NA: Not Applicable.

SOURCE: California Air Resources Board, *California Air Quality Data Summary*, 1992.

The Federal Environmental Protection Agency (EPA) has proposed changes to the O_3 and PM_{10} federal standards. In place of the current O_3 standard, the EPA has proposed an 8-hour standard of 0.08 ppm (rather than the current 1-hour standard of 0.12 ppm). In addition to the current PM_{10} standard, the EPA has proposed an additional standard for suspended particulate matter less than 2.5 microns ($PM_{2.5}$). Although these changes have not yet been adopted, a final decision is expected in mid to late 1997. Evaluation of air quality impacts in this section referred only to the current standards outlined in **Table 4.6-1**.

The FCAA required the states to classify basins (or portions thereof) as either "attainment" or "non-attainment" with respect to the criteria air pollutants, based on whether or not the NAAQS had been achieved, and to prepare air quality plans containing emission reduction strategies for those areas designated as "non-attainment." The District that includes the project site is designated as non-attainment for the NAAQS for O_3 and PM_{10} (CARB, 1995).

State

The State of California has established its own ambient standards for the criteria pollutants (**Table 4.6-1**). These standards are referred to as State Ambient Air Quality Standards (SAAQS), and are equal to or more stringent than their NAAQS counterparts. SAAQS have also been established for certain pollutants not covered by the NAAQS, such as hydrogen sulfide and vinyl chloride. In 1988, California passed the California Clean Air Act (CCAA) which, like its federal counterpart, called for designations of areas as attainment or non-attainment (but in reference to SAAQS rather than NAAQS). In addition, a region can be designated non-attainment transitional or unclassified. The transitional designation recognizes a region's improving air quality, but still maintains some regulatory restrictions and obligations. The unclassified designation is given for a region where data is absent or too limited for designation. El Dorado County has been designated by the state as non-attainment for O_3 and PM_{10}, and unclassified for CO (CARB, 1995). El Dorado County is designated attainment or unclassified for all other criteria pollutants.

The CCAA also requires non-attainment areas (for O_3 and CO) to develop air quality plans that contain strategies for achieving attainment. For this purpose, Air Quality Attainment Plans (AQAP) were developed for the regions of non-attainment by the Districts with encompassing jurisdiction. The AQAPs discuss policy goals for achieving air quality standards.

TOXIC AIR CONTAMINANTS

The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB2588) provides for the regulation of over 200 air toxics and is the primary toxic air contaminant legislation in the State of California. Under the act, sources emitting more than 10 tons per year of any criteria air pollutant must estimate and report their toxic air emissions to the local air districts. The local air districts

then prioritize facilities on the basis of emissions, and high-priority facilities are required to submit a health risk assessment and communicate the results to the affected public if their health risk potential exceeds a specified threshold. The purpose of AB 2588 is to identify and inventory toxic air emissions, and to communicate the potential for adverse health effects to the public.

HEALTH EFFECTS ASSOCIATED WITH CRITERIA POLLUTANTS

Ozone (O_3)

Ozone is not emitted directly, but rather is a secondary pollutant produced in the lower atmosphere through a series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_x), which are themselves directly emitted. Ozone is primarily a summer and fall pollution problem. Ozone control involves limiting ozone precursors (i.e., ROGs and NO_x). In relatively low concentrations, ozone can damage vegetation and crack rubber. At higher concentrations, ozone can affect public health by directly affecting the lungs, causing respiratory irritation and impacts on lung function. Ozone remains in the atmosphere for approximately one or two days, and is then eliminated through chemical reaction with plants (reacts with chemicals on leaves usually resulting in damaging vegetation, rainout (attaches to rain droplets), and washout (absorbs to water molecules in clouds and later falls to earth) (SMAQMD, 1994).

Carbon Monoxide (CO)

Carbon monoxide is generated in all forms of organic combustion (i.e., wood stoves, gas stoves etc.), but is primarily from gasoline fuel motor vehicles. Carbon monoxide is a colorless, odorless, non-reactive pollutant. Ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic and also are influenced by meteorological factors such as wind speed and atmospheric mixing. When strong surface inversions formed on winter nights are coupled with near-calm winds, CO from automobile exhaust becomes concentrated. Carbon monoxide interferes with oxygen transport in the blood. It may cause dizziness and fatigue and can impair central nervous system functions. Carbon monoxide remains in the atmosphere for approximately 30-35 days, and is eliminated through rainout, washout and chemical reaction with exposed soil (SMAQMD, 1994).

Particulate Matter (PM_{10})

Inhalable particulate matter is less than 10 microns (one one-millionth of a meter) in diameter. These airborne particles in the air are small enough to be inhaled deep within the lung, potentially resulting in lung irritation and associated impacts. Particulates within the atmosphere result from many kinds of dust and fume-producing industrial and agricultural operations, combustion, and atmospheric photochemical reactions. Very small particulates of certain substances can cause

direct lung damage, or can contain absorbed gasses that may be injurious. Inhalable particulate matter can also be comprised of liquids in the form of aerosols and mists. In fact, a major component of PM_{10} emissions are from compounds that can create ozone, specifically ROG and NO_x. These ozone precursors can react in the air to form inhalable aerosols. Particulate matter can remain in the atmosphere up to seven days. The exact residence time of particulates in the air is dependent on many factors including particulate size, mass, and atmospheric conditions. Particulates are removed by gravitational settling, rainout, and washout (SMAQMD, 1994).

EXISTING AIR QUALITY

Criteria Air Pollutants

The California Air Resources Board (CARB) collects ambient air quality data through a network of air monitoring stations. This data is summarized annually and published in the CARB's California Air Quality Data Summaries. **Table 4.6-2** is a four-year summary listing the highest annual concentration observed in the project area for ozone, carbon monoxide, particulate matter criteria pollutants for the years 1992-1995, and includes the corresponding SAAQS. This data was collected at the monitoring stations located in Folsom, Citrus Heights, and Sacramento. These stations were selected because of their relative proximity to the project site. It should be noted that these locations, although relatively close in proximity (3-15 miles), do not specifically represent the ambient conditions of the project site. For example, all stations are located in a different air basin (Sacramento Valley Air Basin) and are influenced by the predominant local source. As a consequence, the values given in **Table 4.6-2** are most representative of congested suburban communities of the Sacramento Metropolitan Area.

Toxic Air Contaminates

In the region surrounding the project site, ambient air quality is affected by relatively few toxic air contaminant (TAC) sources. The primary TAC sources in the region include existing gasoline stations and dry cleaners. Individual emitters of TAC's are required by AB2588 to prepare Toxic Emission Inventory Plans and Reports, allowing the District to identify and inventory toxic emissions.

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Land uses such as schools, hospitals, and convalescent homes are considered to be sensitive to poor air quality because the young, the old, and the infirm are more susceptible to respiratory infections and other air-quality-related health problems than the general public. Residential areas are also considered to be sensitive to air pollution because

residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present.

Sensitive receptors include local residents and schools adjacent to and surrounding the project site. Local schools located near the project site include:

Oak Ridge High School	1120 Harvard Way
Jackson Elementary	2561 Francisco Drive
Silva Valley Elementary	3001 Golden Eagle Lane
William Brooks Elementary	3610 Park Drive

TABLE 4.6-2
AIR QUALITY DATA SUMMARY (1992-1995) FOR THE PROJECT AREA

Pollutant	Std./b/	Monitoring Data by Year /a/			
		1992	1993	1994	1995
Ozone (O_3):					
Highest 1-hour average, ppm /c/	0.09	0.15	0.15	0.14	0.16
Days/Hours /d/		9/18	24/67	31/104	33/144
Carbon Monoxide (CO)					
Highest 1-hour average, ppm /c/	20.0	9	7	closed	closed
Days/Hours /d/		0/0	0/0	closed	closed
Highest 8-hour average, ppm /c/	9.0	5.1	5.6	closed	closed
Days/Hours /d/		0/0	0/0	closed	closed
Particulate Matter (PM_{10}):					
Highest 24-hour average, ug/m^3 /c/	50	84	118	104	60
Days/Samples /e/		5/46	7/60	6/59	3/58
Annual Geometric Mean, ug/m^3 /c/	30	24.4	23.2	22.5	18.0

Underlined values are in excess of applicable standard.

/a/ Ozone data was collected from the Folsom monitoring station located at the City of Folsom Corporation Yard. Carbon monoxide data was collected from the Citrus Heights monitoring station (closed 3/93) on Sunrise Boulevard. Particulate matter data was collected from the Sacramento monitoring station at Del Paso Manor.

/b/ State standard, not to be exceeded.

/c/ ppm = parts per million; ug/m^3 = micrograms per cubic meter.

/d/ Days/Hours refers to the number of days during which excesses of the state standard were recorded in a given year and the total number of hours in which the standard was exceeded during that year.

/e/ Particulate is usually measured every sixth day (rather than continuously like the other pollutants). "Days/Samples" indicates the number of excesses of the state standard that occurred in a given year and the total number of samples that were taken that year, respectively.

SOURCE: California Air Resources Board, *California Air Quality Data Summaries*, 1992, 1993, 1994, 1995.

4.6.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines states that a project would normally have a significant air quality impact if it would violate air quality standards, contribute substantially to existing or projected air quality violations, or expose sensitive receptors to substantial amounts of air pollutants.

Criteria Pollutants

The El Dorado County Air Pollution Control District currently has not published District CEQA significance thresholds. In the absence of these thresholds, the District recommends using the New Source Review (NSR) offset thresholds outlined in the District's Rules and Regulations handbook (Donnelly, 1997). As recommended by the District, the following stationary source NSR standards outlined in Rule 523.3 shall serve as significance thresholds for both construction and operational air quality impacts, including mobile, point, and area sources.

ROG	10 lbs/day
NO_x	10 lbs/day
SO_x	80 lbs/day
PM_{10}	80 lbs/day
CO	550 lbs/day

CO "hot spots" shall be considered significant if CO levels meet or exceed SAAQ hourly or 8-hour average standards.

Toxic Air Contaminants

Neither ambient air quality standards nor emission control standards have been established for most toxic air contaminants. In lieu of ambient air quality standards, operational toxic air contaminant emissions would be considered significant if they exceed or contribute to the exceedance of air quality significance thresholds outlined in the CEQA Guidelines.

Odor

The District does not currently have an odor plan. Complaints concerning offensive odors are handled on a per complaint basis under the District's Nuisance Rule (Rule 205) (Donnelly, 1997). Potential odor impacts will be considered significant if they could potentially trigger a complaint qualified as a nuisance per Rule 205.

METHODOLOGY

Project-related air quality impacts fall into two categories: short-term impacts due to construction, and long-term impacts due to project operation. Impacts in each category can be classified as having effects on a regional or local scale. Construction activities resulting in the generation of particulate matter pollution would be the primary short term source of additional air pollutants resulting from project construction. Motor vehicle use resulting in the generation of ozone and carbon monoxide pollution would be the primary long-term source of additional air pollutants resulting from project operation.

Accurate quantification of construction related emissions can not be estimated due to the lengthy project buildout period (i.e., the number of acres under construction per year is variable and undetermined). Construction activity would generate criteria air pollutants. Because construction activity would potentially affect efforts to achieve criteria air pollutant compliance within the MCAB, construction-related impacts and mitigation measures will be discussed without quantification of emissions.

Project operation impacts were analyzed using the ARB's emissions estimating program URBEMIS5. The data for project related vehicle trip generation were obtained from the traffic analysis performed for the project. Modeling outputs are contained in **Appendix C**.

Local micro-scale operational CO concentrations at impacted intersections were quantified using the CALINE 4 model and the traffic figures provided in the traffic analysis conducted by Fehr and Peers Associates (see **Appendix E** and Section 4.5). Roadside carbon monoxide concentrations were modeled at four intersections in the project area using the traffic figures predicted for the "existing plus project" and "cumulative plus project" conditions. Modeling outputs are contained in **Appendix C**.

Air toxics and odor impacts were evaluated qualitatively since exact sources of these air pollutants have not been identified in the specific plan.

Construction Impacts

Impact

4.6.1 Fugitive dust generated by construction activities could potentially add to ambient PM_{10} concentrations. This would be a significant impact.

Construction activities related to project area buildout could potentially generate substantial quantities of fugitive dust/PM_{10}. Fugitive dust/PM_{10} emissions would vary from day to day, depending on the level of construction activity, silt content of the

soil, and prevailing weather. A large portion of the dust emissions associated with a particular stage of project development would result from equipment traffic over temporary dirt roads at the construction site. Other sources of dust emissions associated with project development would include excavation, earth moving, grading, and wind erosion from exposed surfaces.

Since the specifications and timing of individual development projects are not known, an effort was not made to quantify construction related dust emissions. The MCAB as a whole is currently non-attainment for PM_{10}. As a consequence, air pollution-sensitive receptors adjacent to the construction sites may be exposed more frequently to ambient dust concentrations that exceed the NAAQS and SAAQS. Additionally, development of the proposed project would incrementally introduce additional receptors to the project site that could be significantly affected by construction-related PM_{10} emissions. Therefore, project construction impacts related to fugitive dust/PM_{10} impacts would be significant.

Mitigation Measures

4.6.1 Prior to approval of subsequent development, project applicants shall demonstrate to the County and District their compliance with Rule 223 of the El Dorado Air Pollution Control District's Rules and Regulations handbook in written report form. This fugitive dust prevention and control plan shall briefly list all Best Management Practices (BMP) to be implemented for the control of fugitive dust emissions throughout the construction phase.

The District regulates fugitive dust emissions through its Regulation II guidelines concerning fugitive dust/PM_{10} emissions related to construction, demolition, excavation, and extraction construction activities (Regulation II, Rule 223). The guidelines require implementation of Best Management Practices (BMP) for the suppression of fugitive dusts, including regular wetting of exposed earth. Implementation of the rules included in Regulation II would reduce the project's PM_{10} impacts to a less than significant level. In addition, this potential impact would cease upon completion of the project, and would not create a long-term significant impact or contribute to the further degradation of ambient air quality.

Significance After Mitigation

Less than significant.

Impact

4.6.2 Construction of the project would increase criteria air pollutant emissions from construction equipment exhaust systems during the construction phase of the project. This would be a significant unavoidable impact.

Motor vehicles emit exhaust fumes that adversely affect ambient air quality. Exhaust emissions would include CO and O_3 precursors (ROG and NO_x). Most construction equipment is diesel powered, which generates substantial amounts of NO_x. Exhaust emissions during construction of individual development projects would result from construction-related on-site vehicular traffic, such as construction equipment and machinery operations, material haul operations, and automobiles transporting construction workers to and from each site. Exhaust emissions from construction vehicles would vary depending on the type of equipment, duration of use, and the number of people and material transport trips involved.

Since the specifications and timing of individual development projects are not known, construction-related criteria air pollutant exhaust emissions were not quantified. Criteria air pollutant emissions associated with project construction are short-term and intermittent impacts, and would cease upon completion of construction activity. Although construction equipment emissions are short-term impacts, construction equipment can generate significant quantities of air pollutants. Daily emissions from construction equipment and associated vehicle trips would likely, at times, exceed the EDCAPCD significance thresholds. It can be expected given the nature of project buildout, that significant construction activity would take place within the first years of project development, including the placement of infrastructure and land clearing/preparation. During this period, simultaneous daily emissions from numerous construction vehicles and equipment would likely exceed the significance thresholds set by the EDCAPCD. These significance of these exceedences and the number of daily exceedences would likely decline towards the end of the construction buildout period, coincident with the decline in construction. Although it is likely that the number of daily emission exceedences over the whole project buildout period (approximately 20 years) would be relatively few, exceedences would indeed occur. Therefore, construction emissions would be significant

Mitigation Measures

4.6.2a The County shall encourage subsequent site development to incorporate the use of Best Available Control Technologies (BACT) for the control of construction exhaust emissions. The EDCAPCD shall be consulted to determine the appropriate BACT measures available (regular tune-ups, cleaner burning conventional fuels, alternative fueled vehicles and equipment).

4.6.2b Prior to future final map approvals, the project applicant shall consult the County and the EDCAPCD concerning feasible transportation alternatives in order to reduce construction worker vehicle trips and associated vehicle exhaust emissions.

Although these mitigation measures would help reduce project related construction vehicle and equipment exhaust emissions, exceedences would, although few in number, likely continue to occur.

Significance After Mitigation

Significant unavoidable

Impact

4.6.3 Project-related construction activities would generate fugitive hydrocarbon emissions during construction. This would be a significant impact.

Hydrocarbons (HC) would be emitted by asphalt and oil-based architectural coatings (paints, preservatives, etc.) used in construction. The proposed project would result in roadway improvements and new roadway construction. Asphalt and other paving operations on these roads would generate HC emissions. New structures might use oil-based architectural coatings, with the potential for HC emissions.

Because asphalt paving likely would occur within a short time period at the beginning of construction, fugitive HC emissions could potentially exceed the EDCAPCD significance threshold for ROG. To the contrary, fugitive HC emissions from architectural coatings likely would occur spread out over the entire construction period of the proposed project and, as a consequence, most likely would not contribute to and exceedance of the EDCAPCD significance threshold for ROG.

Mitigation Measures

4.6.3 Prior to future final map approvals, the project applicant shall demonstrate to the County and the EDCAPCD their compliance with Rules 215 and 224 of the EDCAPCD's Rules and Regulations handbook for the control of ROG emissions from architectural and asphalt coatings.

The purpose of Rules 215 and 224 is to limit HC emissions from architectural coating and asphalt used for painting, paving, and maintenance operations. All users and manufacturers of architectural coatings and asphalt are required to conform with Rules 215 and 224.

Significance After Mitigation

Less than significant.

Impact

4.6.4 Construction of infrastructure improvements will require the removal of vegetation and trees. This cleared slash could potentially be burned and disposed of on site. Any burning of slash would produce smoke containing primarily PM_{10} and CO and possibly be a nuisance to existing residents. This would be a significant impact.

Project implementation would require the construction of roads and public utilities throughout the project site. During this initial phase of construction, trees and vegetation would be cleared and potentially burned on site as a disposal option. Smoke from slash fires would contain relatively high amounts of PM_{10} and CO, and could potentially be a nuisance to nearby residents. Therefore, burning of slash would be a significant impact.

Mitigation Measures

4.6.4 Prior to future final map approvals, the project applicant shall demonstrate complete compliance with the El Dorado Air Pollution Control District's open burning rules contained in Regulation III.

Regulation III outlines the requirements of land development burning within the jurisdiction of the District. Requirements include acquisition of a burn permit, designated burn days, smoke management, and a minimum drying time.

Significance After Mitigation

Less than significant.

Operational Impacts

Impact

4.6.5 Operation of the project would generate both mobile source and area source criteria air pollutants and would increase total criteria air pollutant emissions in the region. This would be a significant unavoidable impact.

Mobile Source Emissions

Long-term air quality would be adversely affected by criteria air pollutant emissions from mobile sources. Upon total buildout of the proposed project, increased vehicular trips and associated air pollutant emissions would be generated. Trip generation rates would vary by land use in the project area.

Mobile source criteria air pollutant emissions associated with buildout of the proposed project were calculated using the ARB's URBEMIS5 emissions estimating software program, and were based on the trip generation rates presented in Section 4.5, Transportation and Circulation. **Table 4.6-3** lists the air pollutant emissions estimated for the vehicle trips generated at the project site under buildout conditions in terms of both summer and winter seasons. Only emissions from anticipated project related mobile sources were calculated. It is assumed that existing emissions (1997) are zero.

Table 4.6-3 shows that buildout vehicular traffic alone would generate 1,242 lbs/day of CO in the summer season. **Table 4.5-3** further shows that vehicular traffic would generate 142 lbs/day of ROGs and 253 lbs/day of NO_x in the winter.

TABLE 4.6-3
VEHICLE EMISSIONS ASSOCIATED WITH PROJECT - SUMMER AND WINTER SEASONS (LBS/DAY)

Parameter /a/	Summer Buildout /c/	Winter Buildout /c/	Annual Average tons/year /d/
ROG /a/	127.33	141.54	23.86
NO_x	217.75	253.19	41.48
CO	1,241.67	1,010.16	210.40
PM_{10} /b/	1,010.52	1,010.52	184.42
SO_x	30.66	30.66	5.60
Fuel (gallons/day)	9,539	9,539	3,481,735

/a/ TOG on the URBEMIS5 model output was converted to ROG using a 0.928 conversion factor.
/b/ PM_{10} includes re-entrained road dust factor of 0.0046 lbs/mile.
/c/ Summer and winter buildout emissions were generated using the existing land uses and assumptions as outlined in the traffic study conducted by Fehr and Peers Associates.
/d/ Annual emissions are a weighted mean representing eight months of summer conditions and 4 months of winter conditions (total of 365 days).

SOURCE: Environmental Science Associates

Total vehicle miles traveled (VMT) was estimated on the basis of the traffic data generated for the transportation analysis. Total VMT at project buildout was estimated to be approximately 209,827 miles per day, which would generate, in contribution with those pollutants discussed above, 1,011 lbs/day of PM_{10} in the winter and summer. PM_{10} was calculated using the URBEMIS5 model and includes re-entrained road dust (0.0046 lbs/mile)[1]. Predicted SO_x emissions would be approximately 31 lbs/day

Area Source Emissions

The proposed Promontory Specific Plan includes provisions for an estimated 1,387 residential homes. Each home would likely consume natural gas for heating and home appliances. In addition, each home could potentially have a woodburning stove and/or fireplace. Woodburning and combustion of natural gas would emit criteria air pollutants. **Table 4.6-4** lists the estimated project emissions from residential stationary sources of criteria air pollutants. Emissions from the commercial center were not calculated since the exact commercial uses have not been specified. It is assumed, given the relatively small size of the commercial center, that any stationary source

[1] Re-entrained road dust was calculated for the project by determining total miles traveled (average trip mileage multiplied by total trips) multiplied by PM_{10} generated per mile (0.0046 lbs/mile).

contribution from the proposed commercial center would be marginal and insignificant.

TABLE 4.6-4
CRITERIA AIR POLLUTANT EMISSIONS TOTALS FOR RESIDENTIAL STATIONARY SOURCES (TONS/YEAR)

Parameter	Contribution From Woodburning /a/	Contribution From Natural Gas Combustion /b/	Total Contribution
ROG	10.3	0.32	10.6
NO_x	1.97	4.2	6.1
SO_x	0.30	0.03	0.33
CO	142.0	1.8	143.8
PM_{10}	21.5	0.52	22.0

/a/ Methodology from Air Resources Board, Methods for Assessing Area Source Emissions, September, 1995.
/b/ Methodology from Environmental Protection Agency, AP-42, Section 1.4, January, 1995. Assumed that the average residence consumed 64,000 cubic feet of natural gas per year (PG&E 1991 annual report).

Results are expressed in significant figures

SOURCE: Environmental Science Associates

Summary

Total operational mobile and area source criteria air pollutant emissions as a consequence of project implementation are summarized in **Table 4.6-5**. As shown in **Table 4.6-5**, ROG, NO_x, CO, and PM_{10} would exceed EDCAPCD significance thresholds. Therefore, these emissions are considered significant. Project-related SO_x emissions would not exceed the EDCAPCD significance thresholds, and therefore, would be considered less than significant.

Although annualized average daily emissions would exceed the EDCAPCD's significance thresholds for ROG, NO_x, CO, and PM_{10}, it should be noted that these emissions only represent an average emission rate over a 365 day calendar year. The daily emission rates presented in **Table 4.6-5** do not account for temporal distributions such as seasonal changes in project operation. For instance, residential woodburning likely would occur only between the months of October through April and only for a limited number of hours per day. Because emissions of ROG and NO_x from residential woodburning would occur outside of the summer ozone season, these seasonal emissions likely would not significantly contribute to ozone AAQS exceedences. However, for the purposes of comparing project operational emissions with EDCAPCD significance thresholds, average daily emissions were used.

TABLE 4.6-5
CRITERIA AIR POLLUTANT EMISSIONS TOTALS FOR MOBILE AND AREA SOURCES

Parameter	Annual Average in Tons/year	Annualized Average Daily Emissions in Pounds/day
ROG	34.5	189
NO_x	47.6	261
SO_x	5.93	32.5
CO	354.2	1,941
PM_{10}	206.4	1,131

Results are expressed in significant figures

SOURCE: Environmental Science Associates

Mitigation Measures

4.6.5 Implementation of the following measures would reduce, but not eliminate, the significant air quality impacts:

- **The project applicant shall encourage the location of neighborhood-serving shops and services in or adjacent to the Promontory Specific Plan area. By providing these shops and services within the planned commercial center (those facilities to locate in the commercial center are currently unspecified), residential shopping travel distances will be reduced, subsequently reducing mobile source criteria air pollutant emissions. Effectiveness of measure is estimated at a 1-4 percent reduction in total emissions (BAAQMD, 1996).**

- **Public transit system improvements within the project to include: expansion of routes and schedules servicing the project, convenient access to existing or future public transportation system (i.e., possible Regional Transit light rail system extension servicing the Highway 50 corridor), and incorporation of convenient transit stops in project design (i.e., bus turnouts, benches with shelters). Effectiveness of measure is estimated at a 0.2-2 percent reduction in total emissions (BAAQMD, 1996).**

- **All major surface streets are proposed to accommodate Class II bikeways and pedestrian sidewalks. These project proposed bicycle lanes in addition to the sidewalks shall be linked to the commercial center and local area network. Planned bikeways and sidewalks from the City of Folsom in the Russell Ranch Specific Plan shall be extended to connect to the proposed village center. Effectiveness of measure is estimated at a 0.1-2 percent reduction in total emissions (BAAQMD, 1996).**

- **Prior to future final map approvals, the project applicant shall demonstrate that only EPA certified wood stoves and fireplaces inserts are installed in homes. Standard masonry fireplaces, uncertifiable by the EPA, shall not be constructed. EPA certified stoves and fireplace inserts have a 70 to 90 percent lower particulate emission rate than conventional stoves and fireplaces.**

The land use and transportation patterns established through the County General Plan, as well as state, federal and regional regulations and transportation systems, determine to a large extent the severity and location of mobile source air quality impacts. Implementation of the preceding mitigation measures could potentially reduce mobile and area source criteria air pollutant emissions by an estimated 8 percent. However, due to the significance of criteria air pollutant emissions, the impact would remain significant.

Significance After Mitigation

Significant and unavoidable.

Impact

4.6.6 Implementation of the project would increase roadside CO concentrations along heavily traveled roadways at congested intersections. This would be a significant unavoidable impact under existing plus project conditions.

Addition of mobile source CO emissions, as a consequence of project implementation, would create CO "hot spots" at congested intersections. Increased vehicular traffic throughout the region would affect existing intersections, lowering their level of service (LOS) and increasing vehicular idle times. In addition, more vehicles would be delayed between traffic signal light cycles. Under these traffic conditions, CO "hot spots" would occur and potentially exceed the State ambient one-hour and eight-hour air quality standards.

To estimate concentrations of CO at congested intersections, the micro-scaling air quality model CALINE4 was used to predict existing and cumulative condition CO concentrations. To maximize CO emissions, worst case environmental conditions were assumed. Because vehicular CO emissions are highest when a vehicle is in the cold start stage of operation, A.M. peak-hour traffic data was used. This allowed for a high cold start percentage since the majority of vehicles in the vicinity of the project affecting local intersections would still be in their cold start stage of operation during the morning commute period. A cold start percentage of 21 percent cold starts and 27 percent hot starts was assumed for modeling of CO emission factors. Emission factors were modeled using the EMFAC7 emissions modeling program. Vehicular CO emissions fall dramatically between the existing conditions and buildout due to improvements in vehicular emission controls, which subsequently leads to lower CO concentrations at project buildout. Assumptions and model parameters used in

CALINE4 and EMFAC7 programming are listed on model outputs attached as **Appendix C**.

Four intersections were selected for CO modeling based on the traffic analysis. The intersections were selected on the basis of their LOS. Intersections that experienced a diverse change in LOS as a consequence of project implementation were selected as well as intersections with high traffic volumes and a low LOS during the A.M. peak-hour.

TABLE 4.6-6
WORST-CASE ONE-HOUR CO CONCENTRATIONS AT SELECTED INTERSECTIONS

	Concentration (ppm)					
	Background		Existing Conditions /b/		Cumulative Conditions /c/	
Intersection	1997 /a/	2010 /a/	Existing No Project	Existing Plus Project	Cumulative No Project	Cumulative Plus Project
El Dorado & Governor	5.2	2.6	8.6	8.4	4.6	5.4
Green Valley & Francisco	5.2	2.6	16.1	16.6	7.5	7.1
E. Natoma & Blue Ravine	5.2	2.6	18.7	19.5	10.8	10.8
WB U.S. 50 On-ramp	5.2	2.6	12.7	13.9	6.6	12.7

/a/ Average second high one-hour concentration for the years 1991-1993 at the Citrus Heights CO monitoring station rollback concentration value.
/b/ Existing conditions used EMFAC7 generated CO emission factors of 22.72 grams/mile at intersection speed of 16 mph, and 5.53 grams/minute for vehicle idle. Concentration values include 1997 rollback background concentration of 5.2 ppm.
/c/ Cumulative conditions used EMFAC7 generated CO emission factors of 6.57 grams/mile at intersection speed of 16 mph, and 1.45 grams/minute for vehicle idle. Concentration values include 2010 rollback background concentration of 2.6 ppm.
NOTE: Bold values denote exceedance of SAAQS of 20 ppm.
SOURCE: Environmental Science Associates

The intersections of Governor Drive and El Dorado Hills Boulevard, Francisco Drive and Green Valley Road, East Natoma Street and Blue Ravine Road, and El Dorado Hills Boulevard and the WB on-ramp to U.S. Highway 50 were modeled because of their LOS condition.

CO concentrations were estimated fifty feet from each road segment in order to predict CO concentrations in an area likely to be occupied by a pedestrian (the most likely sensitive receptor). Four receptors at each corner of the intersection were modeled for CO exposure in parts per million (ppm). Results of CALINE4 modeling are summarized in **Table 4.6-6** and represent the highest receptor concentration as a consequence of vehicular traffic plus the regional background concentration for worst-case one-hour conditions. The regional background concentration was determined using the Sacramento Metropolitan Air Quality Management District's (SMAQMD) CO background methodology contained in the Air Quality Thresholds of Significance

(SMAQMD, 1994). The average second high one-hour concentration for the years 1991-1993 at the Citrus Heights CO monitoring station was used as the base-year concentration and was subsequently modified to estimate the appropriate rollback concentration for 1997 and 2010 (the latest year in which the methodology interpolates background concentration).

Implementation of the proposed project would not result in any exceedences of the 1-hour SAAQS of 20 ppm under existing or cumulative conditions. This would be a less than significant impact.

Eight-Hour Standard

The four modeled intersections were similarly evaluated for exceedance of the eight-hour SAAQS. Peak-hour CO emissions would significantly contribute to eight-hour concentrations.

The eight-hour average CO concentration would be approximately 70 percent of the local component of the one-hour concentration predicted for the intersections plus a background eight-hour CO concentration representative of the region. The background eight-hour concentration was assumed using an average of the second highest recorded eight-hour concentration between the years 1991-1993 at the Citrus Heights CO monitoring station operated by the ARB and subsequently rolled back to represent estimated 1997 and 2010 background CO concentrations. Resultant eight-hour CO concentrations plus the background are summarized in **Table 4.6-7**

TABLE 4.6-7
WORST-CASE EIGHT-HOUR CO CONCENTRATIONS AT SELECTED INTERSECTIONS

			Concentration (ppm)			
	Background		Existing Conditions /b/		Cumulative Conditions /c/	
Intersection	1997 /a/	2010 /a/	Existing No Project	Existing Plus Project	Cumulative No Project	Cumulative Plus Project
El Dorado & Governor	3.5	1.7	5.9	5.7	3.1	3.7
Green Valley & Francisco	3.5	1.7	**11.1**	**11.5**	5.1	4.9
E. Natoma & Blue Ravine	3.5	1.7	**13.0**	**13.5**	7.4	7.4
WB U.S. 50 On-ramp	3.5	1.7	8.8	**9.6**	4.5	8.8

/a/ Average second high eight-hour concentration for the years 1991-1993 at the Citrus Heights CO monitoring station rollback concentration value.
/b/ Existing conditions used EMFAC7 generated CO emission factors of 22.72 grams/mile at intersection speed of 16 mph, and 5.53 grams/minute for vehicle idle. Concentration values include 1997 rollback background concentration value of 3.5 ppm.
/c/ Cumulative conditions used EMFAC7 generated CO emission factors of 6.57 grams/mile at intersection speed of 16 mph, and 1.45 grams/minute for vehicle idle. Concentration values include 2010 rollback background concentration value of 1.7 ppm.
NOTE: Bold values denote exceedance of SAAQS of 9.0 ppm.
SOURCE: Environmental Science Associates

Implementation of the proposed project would exceed the 8-hour SAAQS of 9.0 ppm at the intersection of Green Valley Road and Francisco Drive, the intersection of East Natoma Street and Blue Ravine Road and the intersection of El Dorado Hills Boulevard and the WB U.S. Highway 50 on-ramp under existing plus project conditions. This would be considered a significant impact.

Implementation of the proposed project would not contribute to an exceedance of the 8-hour SAAQS for CO of 9.0 ppm at any of the four intersections under cumulative conditions. This would be a less than significant impact.

Summary

Project implementation would not contribute to an exceedance of the one-hour SAAQS for CO of 20.0 ppm at any of the four modeled intersections under existing or cumulative conditions. However, the intersections of Green Valley Road and Francisco Drive, East Natoma Street and Blue Ravine Road and the El Dorado Hills Boulevard and the WB U.S. Highway 50 on-ramp would exceed the 8-hour SAAQS for CO of 9.0 ppm under existing plus project conditions. Although the proposed project would have an impact under existing conditions using 1997 emission rates, implementation of the project would not contribute to any SAAQS CO exceedences at any of the four modeled intersections under future cumulative conditions using 2010 emission rates.

Mitigation Measures

4.6.6 Implement Mitigation Measure 4.6.5.

Although implementation of Mitigation Measure 4.6.5 and roadway and intersection improvement mitigation measures identified in Section 4.5, Transportation and Circulation, will reduce CO emissions at the modeled intersections, they will not reduce the CO "hot spots" impacts under existing plus project conditions to a level of less than significant.

Significance After Mitigation

Significant and unavoidable.

Impact

4.6.7 Implementation of the project could result in emissions of toxic air contaminants (TAC). This is a less than significant impact.

TAC emissions could occur from stationary sources such as gas stations, dry cleaners, and printing shops. Although these sources of TAC emissions have currently not been specified under the Specific Plan, the proposed commercial center could be a prime location for such sources.

TAC emissions from stationary sources would be subject to monitoring by the District through its permitting authority as well as the AB 2588 program. New stationary sources would have to meet strict air pollution control requirements under the air quality permit process. Under the AB 2588 program, facilities using toxic substances would be required to quantify potential toxic emissions, and high priority facilities would have to perform a health risk assessment. The AB 2588 process would enable the District to regulate and control TAC stationary source emissions. The District may require that a screening level health risk assessment be performed for any stationary source TAC emission proposed for location on the project site.

Through the District's permitting authority and the AB 2588 program, stationary sources emitting TAC's can be prioritized and regulated. Therefore, any potential TAC emission impacts from implementation of the project are considered less than significant.

Mitigation Measures

4.6.7 Since no significant impacts were identified, no mitigation is required.

Significance After Mitigation

Less than significant.

Impact

4.6.8 Implementation of the proposed project could result in an increase in odorous emissions. This would be a potentially significant impact.

Odorous emissions could occur from sewage pump/lift stations required throughout the site to convey project generated wastewater over the locally steep topography to the existing wastewater treatment plant. Depending on the proximity of odor emitting pump/lift stations and wind conditions, sensitive receptors could be adversely affected by odorous emissions.

The El Dorado County Air Pollution Control District currently does not have an odor plan. However, the District handles odor complaints on a case by case basis and through the District's Nuisance Rule (Rule 205). Because there is a potential for odorous emissions, odorous emission impacts would be potentially significant.

Mitigation Measures

4.6.8 As a part of the improvement plans review and approval process, the County shall require project applicants to consult with the El Dorado County Air Pollution Control District and the El Dorado County Irrigation District (EID) regarding sewage pump/lift station odor control technologies. In the event that

odor impacts occur, odor control measures shall be required by the County, District, and EID.

Significance After Mitigation

Less than significant.

Impact

4.6.9 Implementation of the proposed project, by incrementally adding to regional air pollution, would contribute to a cumulative air quality impact. This would be a cumulative significant impact.

New development induced by the proposed project will generate substantial quantities of ROG, NO_x, PM_{10}, and CO. The District's AQAP outlines feasible measures to be undertaken in order to achieve mandated emission reductions. Because emissions associated with the proposed project would limit the District's ability to achieve the AQAP emission reductions, the proposed project could affect the ability of the District to reduce emissions contributing to current O_3 and PM_{10} violations, and could potentially contribute to future violations of the CO standards. Therefore, this would be a cumulatively significant impact.

Mitigation Measures

4.6.9 Implement mitigation measures 4.6.1, 4.6.2a, 4.6.2b, 4.6.3, 4.6.4, and 4.6.5.

Implementation of the above mitigation measures would help reduce the project's contribution to regional air pollution, but not to a less-than-significant level.

Significance After Mitigation

Significant and unavoidable.

REFERENCES - Air Quality

Bay Area Air Quality Management District (BAAQMD), 1996. BAAQMD CEQA Guidelines - Assessing the Air Quality Impacts of Projects and Plans. San Francisco, California. April 1996.

California Air Resources Board (CARB), 1992-95. *California Air Quality Data Summaries*, 1992, 1993, 1994, and 1995.

California Air Resources Board (CARB), 1995. *Proposed Amendments to the Designation Criteria and to the Area Designations for State Ambient Air Quality Standards, Proposed*

Amendments to the San Joaquin Valley and Southeast Desert Air Basin Boundaries, and Maps of Area Designations for the State and National Ambient Air Quality Standards. September, 1995.

Donnelly, 1997. Donnelly, Michael, El Dorado County Air Pollution Control District. *Personal Communication.* January 14, 1997.

Sacramento Metropolitan Air Quality Management District (SMAQMD), 1994. *Air Quality Threshold of Significance.* Sacramento, California. 1994.

4.7 NOISE

4.7 NOISE

4.7.1 SETTING

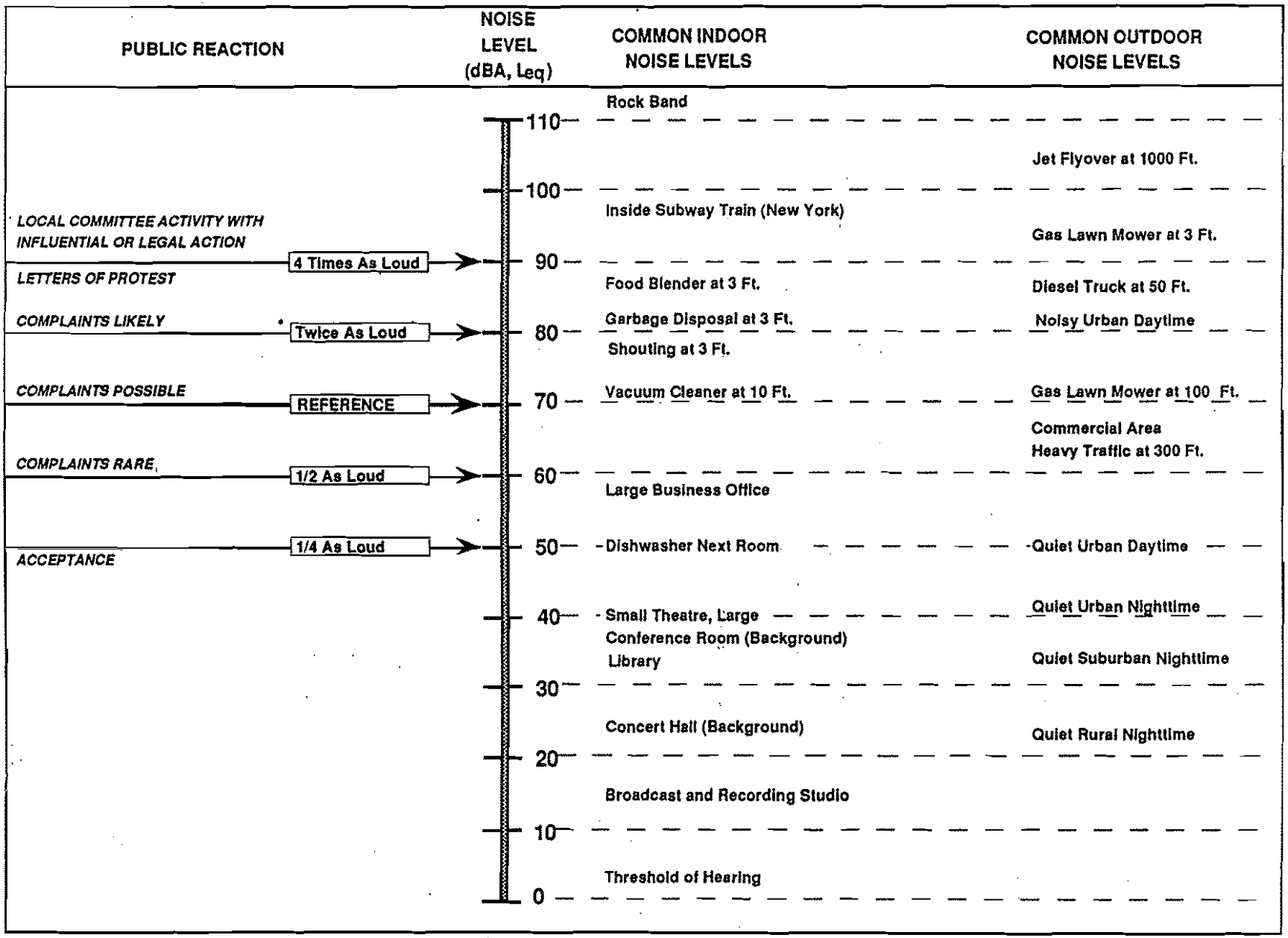
INTRODUCTION

Noise is defined as unwanted sound. Sound, traveling in the form of waves from a source, exert a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing.

Environmental noise is typically measured in A-weighted decibels (dBA). A dBA is a decibel corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels. In general, A-weighting of environmental sound consists of evaluating all of the frequencies of a sound, taking into account the fact that human hearing is less sensitive at low frequencies and extremely high frequencies than in the frequency mid-range (much like a bell shaped curve - an A-weighted curve). In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Figure 4.7-1**.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as a 80 dBA sound and twice as loud as a 60 dBA sound.

Environmental noise within an urbanized area typically fluctuates over time. This time-varying characteristic of environmental noise is described using statistical noise descriptors. Descriptors used include L_{eq} and L_{dn}. The L_{eq} is the average A-weighted noise level that, during a stated time period, generates the same total acoustical energy as the time varying noise. The L_{dn} is a 24-hour day and night noise measurement which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises. In addition to the L_{dn}, the Community Noise Equivalent Level (CNEL) adds a 5 dBA "penalty" for the evening hours between 7:00 p.m. and 10:00 p.m. The statistical noise descriptors L_{50} and L_{max} are often used in noise policies and regulations in order to set limits on environmental noise. The L_{50} is the A-weighted noise level that is equaled or exceeded 50 percent of the stated time period. The L_{max} is an A-weighted maximum noise level for a given period of time and is not an average noise level such as L_{eq}, L_{dn}, or CNEL. Other statistical noise descriptors exist; however, for the purposes of this analysis, L_{eq}, L_{dn}, and CNEL will be used.



SOURCE: Caltrans Transportation Laboratory Noise Manual, 1982; and Modification by Environmental Science Associates

Figure 4.7-1
Effects of Noise on People

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;

- outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;

- a change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and

- a 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 to 9 dBA per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and noise barriers, either vegetative or manufactured, etc.). Widely distributed noises, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate, approximately 4 to 6 dBA.

NOISE REGULATIONS, PLANS, AND POLICIES

El Dorado County Noise Element

El Dorado County's policies and guidelines towards noise are contained in the General Plan's Noise Element. The Noise Element establishes transportational and non-transportational noise exposure standards for different land uses. For impacts to residential land uses from transportational noise sources, the normally acceptable exterior noise level is 60 dB, L_{dn}/CNEL. In instances where attainment of 60 dB, L_{dn}/CNEL is not possible with best available noise reduction measures, the Noise Element allows an exterior noise level exceeding the acceptable L_{dn}/CNEL up to 65 dB L_{dn}/CNEL, provided that noise level reduction measures have been implemented and that certain interior noise levels are achieved. For impacts to residential land uses from non-transportational noise sources, the normally acceptable noise exposure performance standards are set for specific times of the day and distinguishes between community based residential land uses and rural residential land uses. No exterior noise standards have been designated for business or commercial land uses. The County's transportational and non-transportational noise exposure standards for various land uses are shown in **Table 4.7-1** and **Table 4.7-2**, respectively (El Dorado County, 1996).

TABLE 4.7-1
MAXIMUM ALLOWABLE NOISE EXPOSURE FOR TRANSPORTATION NOISE SOURCES

Land Use	Outdoor Activity Area L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB
Residential	60	45	--
Transient Lodging	60	45	--
Hospitals, Nursing Homes	60	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls, Schools	60	--	40
Office Buildings	--	--	45
Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

Note: Refer to General Plan for detailed discussion regarding allowable noise exposure levels.

SOURCE: El Dorado County, 1996.

The Noise Element also contains specific policies governing noise sources and receptors. Policies 6.5.1.1, 6.5.1.3, and 6.5.1.6 through 6.5.1.9 relate to the proposed project and are intended to regulate both noise sources and proposed noise-sensitive receivers. A listing of all policies along with detailed descriptions of each policy can be found in the Noise Element of the El Dorado County General Plan.

TABLE 4.7-2
NOISE LEVEL PROTECTION STANDARDS FOR NOISE SENSITIVE LAND USES AFFECTED BY NON-TRANSPORTATIONAL SOURCES

	Daytime 7 a.m.-7 p.m.		Evening 7 p.m.-10 p.m.		Night 10 p.m.-7 a.m.	
Noise Level Descriptor	**Community**	**Rural**	**Community**	**Rural**	**Community**	**Rural**
Hourly L_{eq}, dB	55	50	50	45	45	40
L_{max}, dB	70	60	60	55	55	50

Note: Refer to General Plan for detailed discussion regarding allowable noise exposure levels.

SOURCE: El Dorado County, 1996.

El Dorado County Noise Control Ordinance

El Dorado County does not have a noise control ordinance. Noise control is implemented through enforcement of the policies outlined in the General Plan Noise Element and in the environmental review process (Trout, 1996). Noise complaints are addressed through the El Dorado County Sheriff's Department.

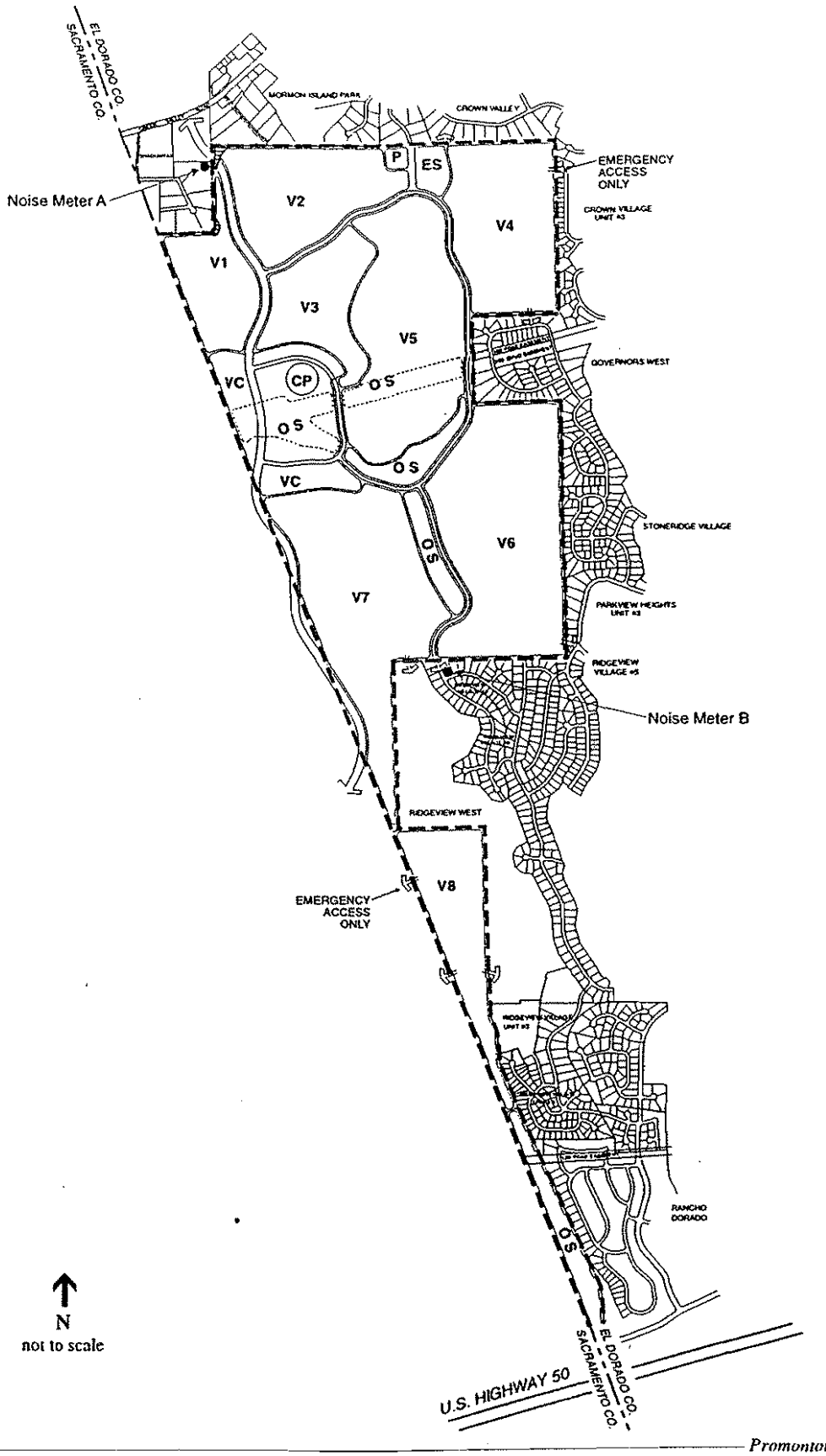
EXISTING NOISE SOURCES

Ambient noise in the project area is primarily generated from transportational noise sources. No existing fixed (point) noise sources are located in close enough proximity to the project site to substantially contribute or affect ambient noise. Due to the rolling, hilly terrain, ambient noise levels within the project site varies. Major transportational noise sources are Green Valley Road, Blue Ravine Road, and U.S. Highway 50. These noise sources would primarily affect the western slopes of the proposed villages 1, 2, 3, 5, 7, 8, and the proposed village center; however, their overall contribution to ambient noise levels is small.

Ambient Noise Metering

Two 24-hour ambient noise measurements were taken on December 3, 1996, and January 26, 1997. Noise meter A was placed on the property line of 2561 Shadowfax Lane, adjacent the proposed Russell Ranch Boulevard extension prior to its eventual intersection with Green Valley Road (**Figure 4.7-2**). Noise meter B was placed 100 feet from the intersection of Beatty Drive, Julie Ann Way, and a project proposed roadway entering the Ridgeview Village #9 development (**Figure 4.7-2**). Noise meter results and statistics are summarized in **Table 4.7-3**.

Noise meters were calibrated with acoustical calibrators in the field prior to use. The noise meters used comply with all the pertinent requirements of the American National Standards Institute (ANSI).



SOURCE: Pennington, 1997

Promontory Specific Plan / 950107 ■

Figure 4.7-2
Noise Meter Locations

TABLE 4.7-3
LONG-TERM NOISE MONITORING STATISTICAL FINDINGS

Statistical Descriptor	Meter A	Meter B
L_{eq} Morning Peak Hour 7:00-10:00 a.m.	55 dBA	48 dBA
L_{eq} Evening Peak Hour 4:00-8:00 p.m.	54 dBA	48 dBA
L_{eq} Nighttime 10:00 p.m. - 7:00 a.m. (not penalized)	50 dBA	43 dBA
L_{eq} Daytime 7:00 a.m. -10:00 p.m.	53 dBA	47 dBA
L_{eq} 24-Hour	52 dBA	46 dBA
L_{dn} 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.	57 dBA	50 dBA
CNEL 5 dBA penalty for noise between 7:00 p.m. and 10:00 p.m. and 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.	58 dBA	50 dBA

SOURCE: Environmental Science Associates

At neither of the two monitoring locations did the ambient noise level exceed or equal the Maximum Allowable Noise Exposure For Transportation Noise Sources as outlined in **Table 4.7-1**.

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to ambient noise levels than others; sensitivity being a function of noise exposure (in term of both exposure duration and insulation from noise) and the types of activities involved. Residential land uses are generally more sensitive to noise than commercial and industrial land uses. This is evident in the County's noise performance standards (see **Table 4.7-1** and **Table 4.7-2**).

The project site is surrounded by existing sensitive receptors to the north, east, and south. These noise sensitive residential land uses comprise the segments of Shadowfax, Mormon Island, Crown Village, Governors West, Ridgeview, Parkview Heights, and Stoneridge residential developments adjacent the project site. To the west in the City of Folsom, the Russell Ranch development has been approved yet is currently not under development. No schools, hospitals, churches, concert halls, or convalescent homes are located in the near vicinity of the project site.

4.7.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The CEQA Guidelines define a significant adverse impact on the environment as an impact that would substantially increase the ambient noise levels in adjoining areas.

To assess long-term changes in the ambient noise environment, the significance criteria provided in **Table 4.7-4** takes into account both the absolute change in noise levels due to a project and the relationship between the resultant noise level and the County's noise/land use compatibility standards.

TABLE 4.7-4
SIGNIFICANCE OF CHANGES IN EXISTING AND CUMULATIVE NOISE EXPOSURE

Ambient Noise Level Without Project (L_{dn} or CNEL)	Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

SOURCE: El Dorado County, 1994.

In addition:

- A change in community noise exposure creating an adverse change in level of compatibility of surrounding land uses as defined in El Dorado County's Noise Element. For example, if the project where to exceed the noise performance standards outlined in the County General Plan (**Table 4.7-1**) as measured at the property line of an adjacent residential land use, project generated noise would be considered significant.

METHODOLOGY

Construction noise impacts are based upon an assumed mixture of construction equipment and related noise levels. Noise levels of individual types of equipment are based on industry averages. Assumptions related to construction equipment mixture and industry noise averages were used to evaluate construction related noise impacts.

Operational noise impacts are primarily related to transportational noise sources. Traffic data presented in Section 4.5, Transportation and Circulation, was used for noise impact modeling. For operational noise impact evaluation, project induced noise impacts were evaluated against predicted existing (1997) and future cumulative (approximately 2015) noise levels without the project (cumulative without project). The cumulative no project traffic data provided by Fehr & Peers Associates included all traffic related to surrounding approved developments such as the Russell Ranch project in the City of Folsom, immediately west of the project site, hence providing

a suitable means of predicting future cumulative baseline noise conditions for which to evaluate the proposed project at buildout, approximately year 2015.

The subsequent noise predictions were used to evaluate transportational noise impacts related to project operation. Noise models used were Caltrans noise prediction model SOUND32 and the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model. Noise modeling assumptions and outputs are attached as **Appendix D.** No significant stationary noise sources (i.e. industrial land uses) are proposed as part of the project. Stationary noise impacts were not evaluated.

In both construction and operational phases of project implementation, noise impacts were evaluated by the significance criteria described above. A change in noise level as a consequence of project implementation might not be considered significant when evaluated by **Table 4.7-4**, but may create a condition where the existing land use is no longer compatible with the General Plan's noise performance standards as outlined in **Table 4.7-1**. In a case such as this, the change in noise level may be less than 1 dBA, which is not perceivable to the human ear. Nevertheless, the change creates a condition of noise/land use incompatibility, and was, therefore, considered significant.

Exceedences of the interior noise standards of **Table 4.7-1** likely would not occur given standard building practices. The U.S. Department of Housing and Urban Development states in its Noise Guidebook (HUD, 1985), "It is assumed that with standard construction any building will provide sufficient attenuation so that if the exterior level is 65 L_{dn} or less, the interior level will be 45 L_{dn} or less." Therefore, noise impacts were evaluated against exterior noise standards in this EIR. If the exterior noise standard is met for a residence (60 dBA, L_{dn}), it is assumed that the interior noise level is similarly met.

Computer noise modeling required traffic data. Because internal traffic (inside the project site) could not be characterized, internal noise impacts were evaluated qualitatively.

Impact

4.7.1 Construction of the necessary infrastructure improvements, the village center, and the residential units would temporarily increase noise levels in nearby areas. This would be a temporary significant unavoidable impact.

Typical construction noise levels are shown in **Table 4.7-5**. **Table 4.7-5** assumes operation of various construction equipment shown in **Table 4.7-6**. The primary project construction source of noise would stem from road construction, which would involve clearing of trees, brush and boulders, grading and excavation. Russell Ranch

Boulevard, the primary arterial through the project area, would require construction activities to take place in close proximity to existing residential land uses at the Shadowfax development. Similarly, other roads would connect with existing roads in the surrounding communities resulting in the exposure of existing residential land uses to significant levels of construction noise.

TABLE 4.7-5
TYPICAL CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level (dBA, L_{eq}) /a/
Ground Clearing	84
Excavation	89
Foundations	88
Erection	79
Finishing	84

/a/ Average noise levels 50 feet from the noisiest source and 200 feet from the rest of the equipment associated with a given construction phase. Noise levels correspond to public works projects, road, sewer, and trench construction.

SOURCE: Bolt, Beranek, and Newman, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, 1971.

TABLE 4.7-6
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Level (dBA at 50 feet)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Dozer	87
Paver	89
Generator	76
Backhoe	85

SOURCE: Cunniff, Environmental Noise Pollution, 1977.

In a worst-case scenario, it can be assumed that adjacent residents would be intermittently exposed throughout the construction phase of the project to noise levels upwards of 89 dBA, L_{eq}, depending on surface topography and distance to construction activity. Noise levels of this magnitude would constitute a significant impact. These worst case scenario noise impacts would be limited to the installation

of key infrastructure, such as roads and public utilities. Infrastructure facilities would likely be constructed within the first five years of the construction phase.

Mitigation Measures

4.7.1a Construction activities shall be limited to the hours of 7:00 a.m. to 6 p.m. on weekdays and the hours of 8:00 a.m. to 5 p.m. on Saturday and Sunday.

4.7.1b Locate fixed construction equipment such as compressors and generators as far as feasibly possible from sensitive receptors. Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power construction equipment.

Significance After Mitigation

Significant and unavoidable, but only for the duration of the construction period.

Impact

4.7.2 Upon project buildout, subsequent local traffic increases would increase noise levels along local arterial roads. P.M. peak-hour noise levels would increase along segments of Green Valley Road, Francisco Drive, East Natoma Street, and El Dorado Hills Boulevard, exposing existing residents to noise levels exceeding the performance standards outlined in the El Dorado County General Plan Noise Element and the City of Folsom Noise Element where applicable. This would be a significant unavoidable impact.

Existing and future noise levels and noise contours along Green Valley, Francisco, El Dorado, and East Natoma roads were modeled using the Federal Highway Administrations (FHWA) Highway Traffic Noise Prediction Model. P.M. peak traffic data was used to predict 60 and 65 dBA noise contours and noise levels 49 feet (15 meters) from the roadway center line. Travel speeds assumed existing posted speed limits. The vehicle mix assumed 96 percent autos, 2 percent medium trucks, and 2 percent heavy trucks.

The projected distances to noise contours do not account for acoustical barriers such as buildings, vegetation, and rolling topography. As a consequence, the distances and noise levels listed in **Table 4.7-7** and **4.7-8** are worst-case estimates of actual noise exposure during the P.M. peak commute hour. Average noise exposure throughout the day excluding the P.M. and A.M. commute hours would be marginally lower.

A positive change in noise level exposure, as shown in **Table 4.7-7** and **Table 4.7-8**, indicates an increase in noise level from a point 49 feet from the center of the indicated roadway segment as a consequence of project implementation. A negative change in noise level exposure indicates a decrease in future noise level from a point 49 feet from

TABLE 4.7-7
P.M. PEAK-HOUR NOISE CONTOUR DISTANCES FROM ROADWAY CENTER LINE
EXISTING AND EXISTING PLUS PROJECT CONDITIONS

Segment Location	Distance To Existing No Project Contours (Feet)		Distance To Existing Plus Project Contours (Feet)		Changes Between Existing No Project and Existing Plus Project
	60 dBA	65 dBA	60 dBA	65 dBA	(dBA at 49 feet)
Green Valley Road					
East Natoma Street to Morman Island Drive	1,590	503	/a/	/a/	--
East Natoma Street to Russell Ranch Boulevard	/b/	/b/	2,044	647	+1.1 /c/
Russell Ranch Boulevard to Morman Island Drive	/b/	/b/	1,424	450	-0.5 /c/
Morman Island Drive to Francisco Drive	1,356	429	1,462	462	+0.3
Francisco Drive to Salmon Falls Road	911	288	952	301	+0.2
Francisco Drive					
Green Valley Road to El Dorado Hills Boulevard	431	136	448	142	+0.2
El Dorado Hills Boulevard					
Green Valley Road to Francisco Drive	190	60	214	68	+0.5
Francisco Drive to Governor Drive	654	207	/a/	/a/	--
Francisco Drive to East/West Collector	/b/	/b/	626	198	-0.2 /d/
East/West Collector to Governor Drive	/b/	/b/	730	231	+0.5 /d/
Governor Drive to Olson Lane	793	251	1,060	335	+1.2
Olson Lane to Wilson Boulevard	865	274	1,150	364	+1.2
Wilson Boulevard to Westbound U.S. Highway 50 On-ramp	1,051	332	1,651	522	+2.0

P.M. peak-hour L_{eq} assumed to be equivalent to L_{dn}
/a/ This segment is partitioned by the proposed Russell Ranch Boulevard or the East/West Collector from Crown Valley.
/b/ This segment would not exist without the proposed project.
/c/ Determined by comparing proposed project segment to Existing No Project segment 'Natoma Street to Mormon Island Drive'.
/d/ Determined by comparing proposed project segment to Existing No Project segment 'Francisco Drive to Governor Drive'.

SOURCE: Environmental Science Associates

TABLE 4.7-8
P.M. PEAK-HOUR NOISE CONTOUR DISTANCES FROM ROADWAY CENTER LINE
CUMULATIVE AND CUMULATIVE PLUS PROJECT CONDITIONS

Segment Location	Distance To Cumulative No Project Contours (Feet)		Distance To Cumulative Plus Project Contours (Feet)		Changes Between Cumulative No Project and Cumulative Plus Project
	60 dBA	65 dBA	60 dBA	65 dBA	(dBA at 49 feet)
Green Valley Road					
East Natoma Street to Mormon Island Drive	2,061	652	/a/	/a/	--
East Natoma Street to Russell Ranch Boulevard	/b/	/b/	3,639	1,151	+2.5 /c/
Russell Ranch Boulevard to Morman Island Drive	/b/	/b/	2,241	709	+0.4 /c/
Morman Island Drive to Francisco Drive	2,224	703	2,336	739	+0.2
Francisco Drive to Salmon Falls Road	1,466	464	1,511	478	+0.2
Francisco Drive					
Green Valley Road to El Dorado Hills Boulevard	778	246	795	252	+0.1
El Dorado Hills Boulevard					
Green Valley Road to Francisco Drive	264	83	277	88	+0.2
Francisco Drive to Governor Drive	1,134	359	/a/	/a/	--
Francisco Drive to East/West Collector	/b/	/b/	1,191	377	+0.2 /d/
East/West Collector to Governor Drive	/b/	/b/	1,232	390	+0.4 /d/
Governor Drive to Olson Lane	1,556	492	1,718	543	+0.4
Olson Lane to Wilson Boulevard	1,690	535	1,949	616	+0.6
Wilson Boulevard to West Bound Highway 50 On-ramp	1,887	597	2,235	707	+0.8
East Natoma/Russell Ranch Boulevard					
East Natoma Street to Westbound U.S. Highway 50 On-ramp	1,202	380	1,314	416	+0.4

P.M. peak-hour L_{eq} assumed to be equivalent to L_{dn}
/a/ This segment is partitioned by the proposed Russell Ranch Boulevard or the East/West Collector from Crown Valley.
/b/ This segment would not exist without the proposed project.
/c/ Determined by comparing proposed project segment to Cumulative No Project segment 'Natoma Street to Mormon Island Drive'.
/d/ Determined by comparing proposed project segment to Cumulative No Project segment 'Francisco Drive to Governor Drive'.

SOURCE: Environmental Science Associates

the center of the indicated roadway segment. A decrease in noise level exposure would occur as a consequence of road construction and improvements that would direct future traffic away from existing impacted road segments. It generally holds true for any distance from the center of the roadway, the change in noise level between existing and existing with project as well as cumulative and cumulative with project will remain the same. This assumes unobscured line of site between the receptor and noise source.

Predicted noise levels were compared to El Dorado County and City of Folsom noise performance standards for residential land uses. Under both General Plan's, the normally acceptable noise exposure level is 60 dBA, L_{dn}. Impacts are evaluated against this criterion for road segments in both the City of Folsom and El Dorado County.

Impacts related to project implementation are evaluated against existing conditions and future cumulative conditions.

Existing

Implementation of the proposed project would increase existing ambient noise levels along arterial roads. **Table 4.7-7** lists the distances to the existing plus project traffic noise contours and differences in noise levels 49 feet (15 meters) from the center line of the roadway segments along Green Valley Road, Francisco Drive, and El Dorado Hills Boulevard.

Although only the road segment Wilson Boulevard to the West Bound Highway 50 On-ramp had a change in noise exposure of more than 1.5 dBA (this would only affect residences between the road segment center line and the existing 65 dBA contour), noise exposure can be significant if an existing residential receptor is subsequently exposed to noise levels exceeding the General Plan's noise/land use compatibility standards. On all road segments, except Green Valley Road between East Natoma Street and the proposed Russell Ranch Boulevard and El Dorado Hills Boulevard between Francisco Drive and the proposed east/west collector, existing residential noise receptors closest Green Valley Road, Francisco Drive and El Dorado Hills Boulevard could potentially experience a change in noise exposure exceeding the performance standards outlined in the County and City's General Plan Noise Element and in **Table 4.7-1** as a consequence of increased noise contour distances. This would be a significant unavoidable impact.

Cumulative

Implementation of the proposed project would increase future cumulative ambient noise levels along arterial roads. **Table 4.7-8** lists the distances to the cumulative future with project traffic noise contours and differences in noise levels 49 feet (15 meters) from the center line of the roadway segments along Green Valley Road,

Francisco Drive, El Dorado Hills Boulevard, and Russell Ranch Boulevard. Green Valley Road, between East Natoma Street and the proposed Russell Ranch Boulevard, would experience a change in noise level of approximately 2.5 dBA. No residences currently exist or are planned for this segment within the cumulative no project 65 dBA contour. Therefore, a change in noise level of 2.5 dBA would be less than significant. However, on all road segments, existing residential noise receptors closest to Green Valley Road, Francisco Drive, East Natoma Street and El Dorado Hills Boulevard could potentially experience a change in noise exposure exceeding the performance standards outlined in the County and City's General Plan Noise Element and in **Table 4.7-1** as a consequence of increased noise contour distances. This would be a cumulatively significant unavoidable impact.

Mitigation Measure

4.7.2 Since the identified noise impacts are an offsite consequence of project implementation, no feasible project related mitigation measures are available.

Significance After Mitigation

Significant and unavoidable.

Impact

4.7.3 Resultant traffic along the proposed Russell Ranch Boulevard extension would expose residents of the Shadowfax subdivision and Amys Lane to noise levels exceeding the performance standards of the El Dorado County Noise Element and Table 4.7-1. This would be a significant impact.

The proposed Russell Ranch Boulevard extension connecting with Green Valley Road would pass approximately 100 feet from residents of the Shadowfax subdivision. The segment of Russell Ranch Boulevard adjacent to the Shadowfax subdivision would be a split level road, with the north bound lane topographically higher than the southbound lane. Russell Ranch Boulevard would pass the Shadowfax subdivision at an elevation higher than the existing residences. Subsequent noise impacts were predicted using Caltrans noise prediction model SOUND32, capable of assessing noise impacts in topographically complex locations. Traffic volume assumptions used traffic data presented in Section 4.5, Transportation and Circulation. Vehicle mix assumptions included 96 percent autos, 2 percent medium trucks, 2 percent heavy trucks on Green Valley Road and 98 percent autos, 2 percent medium trucks on Russell Ranch Boulevard. It was assumed that very few heavy trucks would travel on the northern section of Russell Ranch Boulevard as a consequence of the relatively steep grade. Traffic speeds on Green Valley Road were assumed to be 55 miles per hour (mph) and on Russell Ranch Boulevard to be 40 mph (these speeds assumed 5 mph posted speed limit exceedance).

Figure 4.7-3 shows the proposed route of the Russell Ranch Boulevard and the nearest existing residences. Resultant project generated noise exposure levels were predicted at the five residences listed in **Table 4.7-9** and **4.7-10**. Significance of the noise impacts were determined by comparison of predicted Existing No Project and Cumulative No Project noise exposure levels to predicted Existing Plus Project and Cumulative Plus Project noise exposure levels (**Table 4.7-9 and 4.7-10** respectively). Discussion of existing and cumulative conditions proceeds below.

TABLE 4.7-9
RUSSELL RANCH BOULEVARD EXISTING NOISE PREDICTION RESULTS

Receptor Identification	Address	Existing No Project dBA, L_{dn}	Existing Plus Project dBA, L_{dn}	Noise Exposure Difference	Significant
Residence #1	2561 Shadowfax Lane	57.1	58.9	1.8	No
Residence #2	2593 Shadowfax Lane	55.2	56.6	1.4	No
Residence #3	2609 Shadowfax Lane	53.3	54.8	1.5	No
Residence #4	2552 Amys Lane	58.9	60.1	1.2	Yes /a/
Residence #5	2515 Amys Lane	61.0	61.8	0.8	No /b/

/a/ Found significant by noise/land use incompatibility criteria.
/b/ Not considered significant because change in noise exposure would not exceed 3 dBA (**Table 4.7-4**).
P.M. peak-hour L_{eq} assumed to be equivalent to L_{dn}.
SOURCE: Environmental Science Associates

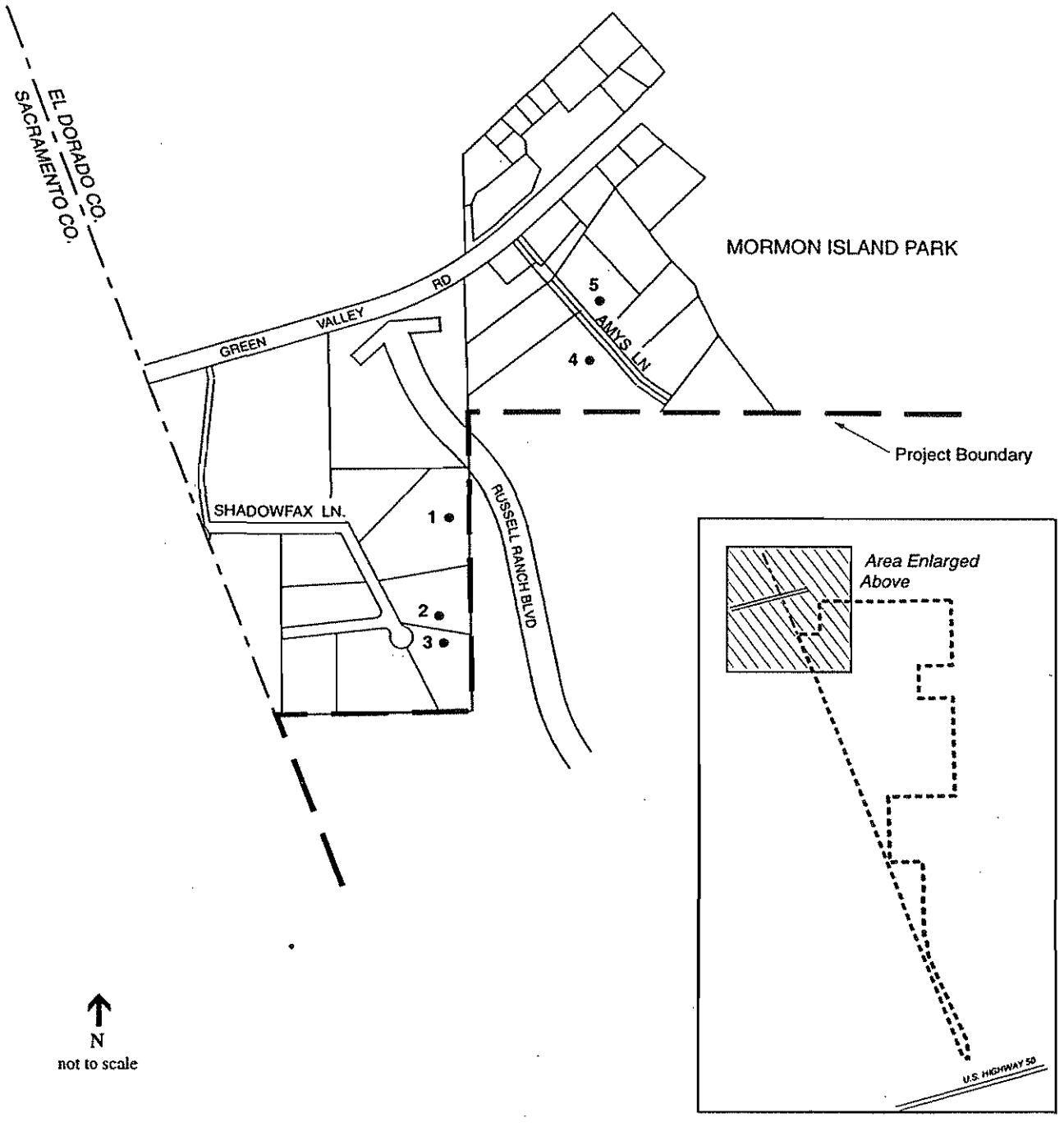
TABLE 4.7-10
RUSSELL RANCH BOULEVARD CUMULATIVE NOISE PREDICTION RESULTS

Receptor Identification	Address	Cumulative No Project dBA, L_{dn}	Cumulative Plus Project dBA, L_{dn}	Noise Exposure Difference	Significant
Residence #1	2561 Shadowfax Lane	59.2	60.0	0.8	Yes /a/
Residence #2	2593 Shadowfax Lane	57.3	57.9	0.6	No
Residence #3	2609 Shadowfax Lane	55.4	56.0	0.6	No
Residence #4	2552 Amys Lane	60.9	61.6	0.7	No /b/
Residence #5	2515 Amys Lane	63.0	63.5	0.5	No /b/

/a/ Found significant by noise/land use incompatibility criteria.
/b/ Not considered significant because change in noise exposure would not exceed 3 dBA (**Table 4.7-4**).
P.M. peak-hour L_{eq} assumed to be equivalent to L_{dn}.
SOURCE: Environmental Science Associates

Existing

Increased ambient noise levels at Residence #4, as a consequence of project implementation, would create a condition of General Plan noise/land use incompatibility resulting in a significant impact. Although noise exposure levels increase at all other modeled residences, changes in the ambient noise environment at



SOURCE: Environmental Science Associates

Promontory Specific Plan / 950107 ■

Figure 4.7-3

Existing Modeled Residences Nearest the Proposed Russell Ranch Boulevard

these residences does not constitute a significant impact as defined in **Table 4.7-4** nor would there be any change creating a condition of noise/land use incompatibility constituting a significant impact.

Cumulative

Increased ambient noise levels at Residence #1, as a consequence of project implementation, would create a condition of General Plan noise/land use incompatibility resulting in a significant impact. Although noise exposure levels increase at all other modeled residences, changes in the ambient noise environment at these residences does not constitute a significant impact as defined in **Table 4.7-4** nor would there be any change creating a condition of noise/land use incompatibility constituting a significant impact.

Mitigation Measures

4.7.3 The County shall require:

- **that speeds along Russell Ranch Boulevard in the area of Shadowfax and Amys Lane be posted at no higher than 30 mph (assumes posted speed limit exceedance by 5 mph and subsequently assures compliance with mitigation); and**

- **that a 4-foot earthen berm be constructed adjacent the west side of Russell Ranch Boulevard blocking line of site between Residence #1 through #3 and Russell Ranch Boulevard.**

TABLE 4.7-11
ATTENUATING EFFECTIVENESS OF AVAILABLE MITIGATION MEASURES FOR RUSSELL RANCH BOULEVARD EXTENSION

	Existing Plus Project Mitigated Sound Levels, L_{dn}				Cumulative Plus Project Mitigated Sound Levels, L_{dn}			
Receptor Identification	**Unmitigated Sound Level**	**Reduced Speeds (35 mph)**	**4-foot Berm**	**Reduced Speeds plus 4-foot Berm**	**Unmitigated Sound Level**	**Reduced Speeds (35 mph)**	**4-foot Berm**	**Reduced Speeds plus 4-foot Berm**
Residence #1 /a/	58.9	58.6	57.3	57.2	60.0	59.9	58.5	58.4
Residence #2	56.6	56.4	55.4	55.3	57.9	57.9	56.7	56.7
Residence #3	54.8	54.6	54.2	54.2	56.0	56.0	55.5	55.6
Residence #4 /b/	60.1	59.9	60.1	59.9	61.6	61.5	61.6	61.5
Residence #5	61.8	61.7	61.8	61.7	63.5	63.4	63.5	63.4

P.M. peak-hour L_{eq} assumed to be equivalent to L_{dn}.
/a/ Found to be significantly impacted under cumulative plus project conditions
/b/ Found to be significantly impacted under existing plus project conditions
SOURCE: Environmental Science Associates

The attenuating effectiveness of available mitigation measures were modeled using SOUND32 and using the same traffic and vehicle mix assumptions. Mitigation measures evaluated include 1) reduced speeds along Russell Ranch Boulevard, a 4 foot earthen berm between Russell Ranch Boulevard and the Shadowfax subdivision, and reduced speeds plus an earthen berm. Attenuating results of these mitigation measures are summarized in **Table 4.7-11.** An earthen berm is only proposed for the west side of Russell Ranch Boulevard. Because Residences #4 and #5 are topographically higher than the proposed Russell Ranch Boulevard, a berm or sound wall would not be a feasible method of eliminating line-of-site.

Discussion in terms of existing and cumulative conditions proceeds below.

Although reduced speeds brings noise levels into compliance with the Noise Element performance standards at both Residence #1 and #4, a 4-foot earthen berm in addition to the reduced speeds would reduce ambient noise exposure levels in the Shadowfax development to levels very near baseline existing or cumulative conditions. Reduced traffic speeds on Russell Ranch Boulevard plus a 4-foot earthen berm is the preferred mitigation alternative.

Significance After Mitigation

Less than significant.

Impact

4.7.4 Upon project buildout, subsequent local traffic increases would increase noise levels in residential areas east of the project site. Peak hour noise levels would increase along segments of Hensley Circle, Warren Lane, Governor Drive, Gillett Drive, Olson Lane, Ridgeview Drive, Wilson Boulevard, and Julie Ann Way. This increase would expose existing residents to noise levels exceeding the noise impact significance threshold criteria. This would be a significant unavoidable impact.

Predicted average daily traffic volumes (ADT) were provided by Fehr & Peers Associates for existing, existing plus project, cumulative, and cumulative plus project conditions as described in Section 4.5, Transportation and Circulation. These traffic volumes and the noise analysis below is a worst-case analysis of transportational noise and does not assume any internal project circulation designs that may reduce traffic on certain residential roadways.

For noise modeling, peak-hour traffic volumes were derived by using the general assumption that ten (10) percent of the ADT takes place during the peak hour. Peak-hour turning movements were used to estimate peak hour traffic along Mormon Island Drive and the proposed Crown Valley access.

It was assumed that the peak-hour traffic noise level 15 meters from the center of the roadway segment was equal to the L_{dn}. This conversion of a peak hour L_{eq} to L_{dn} is generally accurate when the primary 24-hour noise source is from vehicular traffic. This is true in the vicinity of the project area and the residential neighborhoods east of the project site. Twenty-four hour predicted L_{dn} traffic noise levels were added to ambient L_{dn} noise levels as monitored at Meter Location B. Adjusted L_{dn} values along each roadway segment were evaluated against the noise impact significance criteria as previously described.

Vehicle traffic through the residential areas east of the project site would almost be 100 percent automobiles. Vehicle speeds were assumed 30 miles per hour (mph), assuming 5 mph posted speed limit exceedence.

The FHWA model does not account for variable topography, the severity of which is extreme in the residential areas east of the project site. Many of the road segments contour steep hillsides. Therefore, predicted noise levels and associated noise impacts can be considered absolute worst case estimates of noise exposure.

Adjusted L_{dn} values for the conditions of project development are summarized in **Table 4.7-12**. These values have been adjusted to include ambient noise levels as measured in the vicinity of the modeled roadway segments (50 dBA L_{dn} at Meter Location B). All positive changes indicate an increase in noise.

TABLE 4.7-12
CALCULATED NOISE LEVELS AT ROAD SEGMENTS (DBA, L_{DN})

Road Segment	Existing	Existing Plus Project	Change	Cumulative	Cumulative Plus Project	Change
Hensley Circle	53	58	+5	53	58	+5
Warren Lane	54	59	+5	54	58	+4
Governor Drive	59	61	+2	59	61	+2
Gillette Drive	53	59	+6	53	58	+5
Olson Lane	56	60	+4	56	59	+3
Ridgeview Drive (Gillett to Powers)	55	59	+4	55	58	+3
Ridgeview Drive (Powers to Wilson)	57	61	+4	57	59	+2
Wilson Boulevard	58	62	+4	60	61	+1
Powers Drive	52	55	+3	52	53	+1
Weststar Lane	50	54	+4	51	54	+3
Julie Ann Way	50	57	+7	50	52	+2
Montridge Way	52	55	+3	53	55	+2
Mormon Island	51	55	+4	52	55	+3
Crown Valley	/a/	57	--	/a/	55	--

/a/ Under existing and cumulative without project conditions, the Crown Valley access would not exist. Therefore, project impacts were only evaluated against El Dorado County General Plan Noise Performance Standards.

SOURCE: Environmental Science Associates

Table 4.7-13 lists the road segment and associated residential receptors that would experience a significant noise impact under the existing and cumulative development conditions as a function of noise level change and exceedance of the County's noise standards.

TABLE 4.7-13
ROAD SEGMENTS AND SIGNIFICANCE OF NOISE IMPACTS
UNDER EXISTING PLUS PROJECT AND CUMULATIVE PLUS PROJECT CONDITIONS

Road Segment	Existing Plus Project Conditions	Cumulative Plus Project Conditions
Hensley Circle	yes	yes
Warren Lane	yes	no
Governor Drive	yes	yes
Gillette Drive	yes	yes
Olson Lane	yes	no
Ridgeview Drive (Gillett to Powers)	no	no
Ridgeview Drive (Powers to Wilson)	yes	no
Wilson Boulevard	yes	no
Powers Drive	no	no
Weststar Lane	no	no
Julie Ann Way	yes	no
Montridge Way	no	no
Mormon Island	no	no
Crown Valley	no	no

SOURCE: Environmental Science Associates

Under existing plus project conditions, the change in noise level along road segments would result in a significant noise impact to residential receptors on:

1) Hensley Circle (from the Promontory access to Warren Lane),
2) Warren Lane (from Hensley Circle to Governor Drive),
3) Governor Drive (from Warren Lane to El Dorado Hills Boulevard),
4) Gillett Drive (from Ridgeview Drive to Olson Lane),
5) Olson Lane (from Gillett Drive to El Dorado Hills Boulevard),
7) Ridgeview Drive (from Powers Drive to Wilson Boulevard),
8) Wilson Boulevard (from Ridgeview Drive to El Dorado Hills Boulevard), and
11) Julie Ann Way (from Powers Drive to Beatty Drive).

Implementation of proposed traffic mitigation (Mitigation Measure 4.5.1) of maintaining a 4,000 average daily trip standard for Olson Lane and Ridgeview Drive would reduce both roadways' anticipated noise levels to 59 dBA, L_{dn}. This would result in a less-than-significant noise impact for both Olson Lane and Ridgeview Drive.

Under cumulative conditions, the change in noise level along road segments would result in a significant noise impact to residential receptors on:

1) Hensley Circle (from the Promontory access to Warren Lane),
3) Governor Drive (from Warren Lane to El Dorado Hills Boulevard), and
4) Gillett Drive (from Ridgeview Drive to Olson Lane).

Implementation of proposed traffic mitigation (mitigation measure 4.5.11) of removing the Promontory Specific Plan access to Mormon Island Road under the cumulative with project conditions would add approximately 140 peak hour vehicle trips to the Crown Valley access roadway, subsequently increasing the predicted noise level along the Crown Valley access roadway to 58 dBA, L_{dn}. However, this would not significantly affect future residents of Crown Valley.

It should be noted that there are substantial project site access differences between the existing plus project and cumulative plus project conditions. The existing plus project condition assumes that access into Russell Ranch (City of Folsom) are not in place, thus project traffic is largely restricted to using the residential roadways to the east. However, cumulative plus project conditions would include access into Russell Ranch which would reduce the project's contribution to residential roadways to the east of the project site. As shown in **Table 4.7-13**, this access change results in fewer significant noise impacts under cumulative conditions.

Possible mitigation measures to reduce significant transportational noise impacts include the deletion or alteration of project access to the residential areas to the east and the development of sound barriers and/or walls along the affected residential roadways. However, deletion or alteration of project access to the east would result in significantly worse traffic impacts on roadways and intersections, as well as increasing noise impacts on other residential areas elsewhere in the project vicinity. Development of sound barriers along affected roadways likely would result in significant aesthetic impacts to the residential areas to the east and would likely be economically infeasible.

Mitigation Measure

4.7.4 Implement Mitigation Measure 4.5.1.

This mitigation measure would result in the restriction of traffic volumes along Olson Lane and Ridgeview Drive to 4,000 average daily trips. This would reduce both roadways' anticipated noise levels under existing plus project conditions to 59dB, which would result in a less-than-significant impact to Olson Lane and Ridgeview Drive.

However, no feasible mitigation has been identified for significant impacts to the following residential roadways.

Existing conditions:

1) Hensley Circle (from the Promontory access to Warren Lane),
2) Warren Lane (from Hensley Circle to Governor Drive),
3) Governor Drive (from Warren Lane to El Dorado Hills Boulevard),
4) Gillett Drive (from Ridgeview Drive to Olson Lane),
8) Wilson Boulevard (from Ridgeview Drive to El Dorado Hills Boulevard), and
11) Julie Ann Way (from Powers Drive to Beatty Drive).

Cumulative conditions:

1) Hensley Circle (from the Promontory access to Warren Lane),
3) Governor Drive (from Warren Lane to El Dorado Hills Boulevard), and
4) Gillett Drive (from Ridgeview Drive to Olson Lane).

Significance After Mitigation

Significant and unavoidable for Hensley Circle, Warren Lane, Governor Drive, Gillett Drive, Wilson Boulevard, and Julie Ann Way.

Impact

4.7.5 Project generated vehicle traffic would create noise levels along the Russell Ranch Boulevard extension, community collector, and village collector roads that could potentially exceed the noise/land use performance standards outlined in the General Plan and impact future residences of the Promontory Specific Plan. This would be a potentially significant impact.

The proposed project will produce on a daily basis 21,857 vehicle trips. A portion of each vehicle trip will occur within the proposed project. Noise from these vehicles would likely create zones of residential incompatibility along the main internal thoroughfares of the project, namely the Russell Ranch Boulevard extension, the community collector, and the village center collector. Because traffic data could not be generated for characterization of internalized traffic movements, noise modeling could not be conducted. However, it is likely that noise impacts would occur. The following mitigation measure is recommended to mitigate any future noise/land use incompatibility impacts that might occur in the future.

Mitigation Measure

4.7.5 Prior to County approval of tentative subdivision maps, project applicants shall demonstrate compliance with the transportational noise compatibility requirements outlined in the El Dorado County General Plan Noise Element. Applicants shall demonstrate compliance through noise modeling and/or noise monitoring using approved methods and equipment. Future mitigation measures shall use Best Available Control Technology (BACT), with the use of

noise barriers as a last feasible means of mitigation. Housing setbacks are the preferred mitigation method.

Significance After Mitigation

Less than significant.

REFERENCES - Noise

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4.8 Biological Resources

4.8 BIOLOGICAL RESOURCES

4.8.1 SETTING

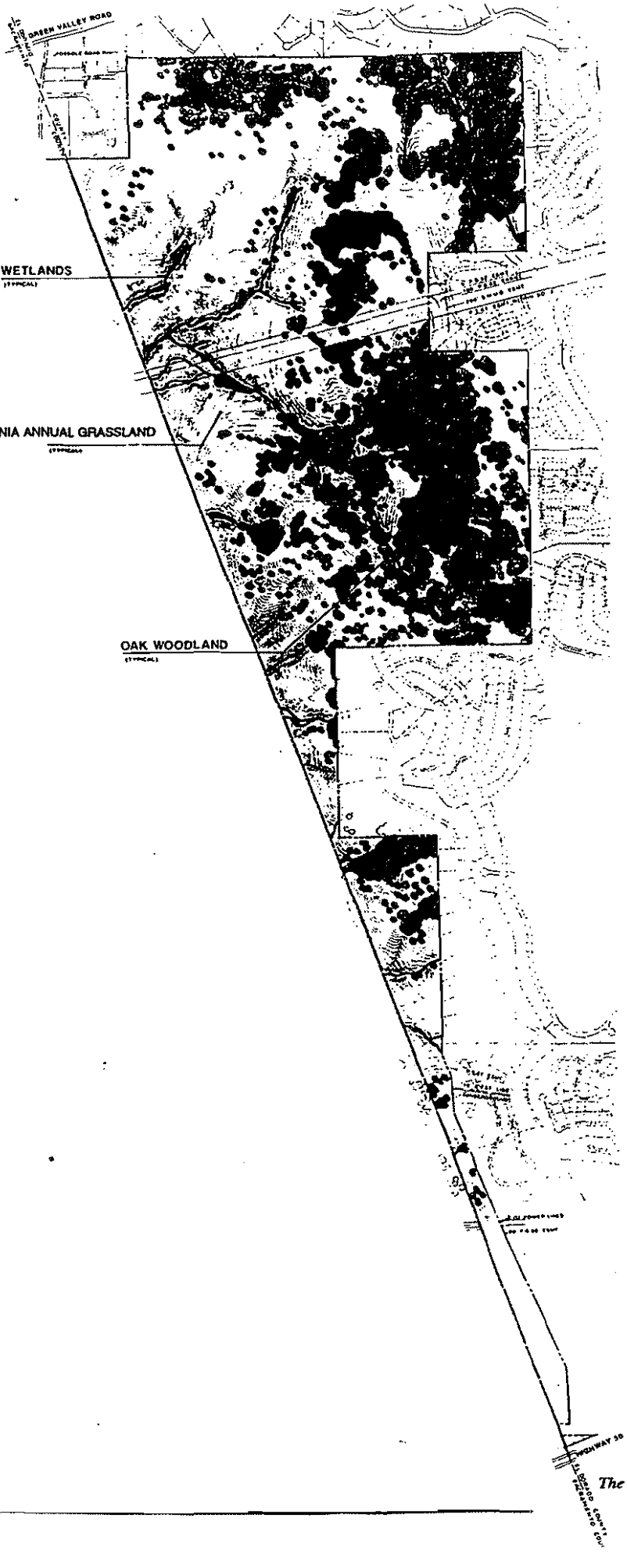
This section describes the existing biological resources that currently exist at the project site, as well as project-related impacts upon those resources. In this section, discussion of these biological resources and analysis of impacts is based on available environmental impact reports, studies of regional biological resources, recent biological surveys, and on field reconnaissance to corroborate results of previous surveys. Vegetative communities were identified during field surveys and mapped using aerial photography. Wildlife habitats were characterized on the basis of both records and field observations.

REGIONAL SETTING

The project site is located on the western border of El Dorado County within the California Floristic Province. El Dorado County has a Mediterranean climate and is a mosaic of upland oak, mixed evergreen, and pine forests, grasslands, upland scrubs, wetland communities, and riparian scrubs and forests. In the "bioregional" characterizations developed as part of California's Agreement on Biological Diversity (a multi-agency memorandum signed in 1993), the area is near the regional separation between the Sierra and Central Valley Bioregions. This position makes the site within the range of several species common to either bioregion. Lower elevation portions of the County are characterized by annual grasslands, intermittent streams, seasonal wetlands, oak savanna, and scrub vegetation. At higher elevations, oak woodland, mixed evergreen forest, scrub and chaparral, and riparian vegetation dominate. For many years the principal land use of the region was cattle grazing, logging, and farming. These land uses are still prevalent within the County but are rapidly being replaced with residential, commercial and industrial land uses.

EXISTING SITE CONDITIONS

The project site is dominated by California annual grassland (approximately 637 acres), oak woodland (approximately 350 acres), freshwater drainages (approximately 7.1 acres) and seasonal wetland (approximately 4.7 acres) (see **Table 4.8-1**). The project site is currently undeveloped and used for cattle grazing. The following provides descriptions of vegetative communities and wildlife use of the site. **Figure 4.8-1** illustrates vegetative communities on the property.



The Promontory Specific Plan / 950107 ■

Figure 4.8-1

Vegetative Communities

TABLE 4.8-1
APPROXIMATE ACREAGES OF VEGETATIVE COMMUNITIES AT THE PROJECT SITE

Land Use	Total Acreage	Acres of Oak Woodland /a/	Acres of California Annual Grassland /a/	Acres of Seasonal Wetland and Riparian /a/
Village 1	55.6	0	56	0
Village 2	87.8	36	51	0.2
Village 3	59.0	0	59	0.5
Village 4	97.0	54	42	0.6
Village 5	124.2	28	96	0
Village 6	164.1	123	41	0
Village 7	164.3	44	119	1.3
Village 8	68.9	17	50	1.9
Village Center	64.7	0	59	3.6
Park	3.6	1	3	0
School	10.0	9	1	0
Undeveloped Public Open Space	99.8	38	60	3.7
Total	**999.0**	**350**	**637**	**11.8**

/a/ Acreages are based on calculations made from an aerial photograph with an overlay of the approximate land use boundaries. Acreage values for the Oak Woodland and California Annual Grassland communities were rounded to the nearest whole acre.

VEGETATIVE COMMUNITIES

California Annual Grassland

This community is typically composed of a dense to sparse cover of annual grasses, often associated with numerous species of annual and perennial forbs. The on-site habitat additionally contains scattered individual oak trees that are not contiguous with areas of denser oak woodlands. Annual grasslands grow actively during winter and spring, remain dormant during summer and early fall, and persist only as seed until conditions are favorable for germination (Holland, 1986). The presence of this assemblage of non-native, annual grasses originating in the Mediterranean region is a consequence of permanent alterations to the once widely distributed, pristine perennial grasslands of California. The conversion of native perennial grassland into non-native annual species has resulted from a combination of 1) invasion by non-native plant species, 2) changes in the kinds of animals and their grazing patterns, 3) cultivation, and 4) fire regime (Heady, 1988). Non-native grassland is generally found on fine-textured, clay-rich soils, which are moist to waterlogged during winter rains and dry during the summer and fall (Holland, 1986).

California annual grassland is dominated by a number of introduced annual grasses which include soft chess (*Bromus mollis*), ripgut grass (*Bromus diandrus*), foxtail brome (*Bromus rubens*), wild oat (*Avena barbata*), and foxtail barley (*Hordeum jubatum*). In areas where this community borders wetlands it is often dominated by perennial rye-grass (*Lolium perenne*) and rabbit's-foot

grass (*Polypogon monspeliensis*). A number of non-native herbs, such as a filaree (*Erodium* sp.), Italian thistle (*Carduus pycnocephalus*), wild radish (*Raphanus sativa*), field bindweed (*Convolvulus arvensis*), burclover (*Medicago polymorpha*), cut-leaved geranium (*Geranium dissectum*), and mustard (*Brassica* sp.) frequently occur as subdominants. Native forbs commonly interspersed among the grasses include lupine species (*Lupinus* sp.), tarweeds (*Hemizonia* sp.), California poppy (*Eschscholzia californica*), popcorn flower (*Plagiobothrys* sp.), owl's clover (*Orthocarpus* sp.), common fiddleneck (*Amsinckia intermedia*), blue dicks (*Dichelostemma pulchellum*), checkerbloom (*Sidalcea malvaeflora*), Johnny jump-ups (*Viola pedunculata*), and wild onion (*Allium* sp.). The presence and relative abundance of native annual and perennial herbs is also strongly influenced by the level of grazing by stock animals and/or other disturbance. Non-native herbs common in areas with higher levels of disturbance, such as the grazed portions of the project area, include filaree (*Erodium* sp.) and yellow star thistle (*Centaurea solstitialis*).

California annual grasslands are distributed throughout the valleys and foothills of most of California, except for the north coastal and desert regions, usually below 3,000 feet (4,000 feet in southern California) and range from Oregon to northern Baja California (Holland, 1986). California annual grasslands formerly occupied large portions of the Sacramento, San Joaquin, and Salinas Valleys, as well as the Los Angeles Basin, areas which have been developed for agricultural or urban uses (Holland, 1986).

Grasslands attract reptiles and amphibians such as western fence lizard (*Sceloporus occidentalis*) and Pacific slender salamander (*Batrachoseps attenuatus*), which feed on invertebrates found within and underneath fallen logs and debris within the community, and western rattlesnake (*Crotalis viridis*), which feed primarily on rodents. This habitat also attracts avian seed eaters as well as insect eaters. California quail, mourning dove (*Zenaida macroura*), savanna sparrow (*Passerculus sandwichensis*), western kingbird (*Tyrannus verticalis*), and western meadowlarks (*Sturnella neglecta*) are a few seed eaters that nest in grasslands. Insect eaters such as scrub jays (*Aphelocoma coerulescens*), barn swallows (*Hirundo rustica*), and mockingbirds (*Mimus polyglottus*) use the habitat for foraging only.

Grasslands are important foraging grounds for aerial and ground foraging insect eaters such as *Myotis* bat species and pallid bats (*Antrozous pallidus*). Mammals such as California vole (*Microtus californicus*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Peromyscus maniculatus*), broad-footed mole (*Scapanus latimanus*), California ground squirrel (*Spermophilus beecheyi*), badger (*Taxidea taxus*), and black-tailed jackrabbit (*Lepus californicus*) forage and nest within the grassland. Small rodents attract raptors (birds of prey) including red-tailed hawks (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), white-tailed kite (*Elanus caeruleus*), red-shouldered hawks

(*Buteo lineatus*), and barn owl (*Tyto alba*). Black-tailed deer (*Odocoileus hemionus californicus*) use grassland for grazing and, if the grass is tall enough, for nesting at night.

Blue Oak Series / Interior Live Oak Series

Two types of oak woodlands occur within the project area. The blue oak series occurs primarily along drainages, with interior live oak occurring on the slopes and hilltops. In this document, the two series were combined for acreage determinations and impact analysis.

Blue oak series occurs as a dense, closed canopy woodland/forest on the site with an understory composed of native and non-native grasses and forbs such as soft chess (*Bromus mollis*) and ripgut grass (*Bromus diandrus*), intermixed with native and non-native wildflowers including mission bells (*Fritillaria affinis*), chickweed (*Stellaria media*), bedstraw (*Galium aparine*), mugwort (*Artemesia douglasiana*), fiesta flower (*Pholistoma auritum*), and miner's lettuce (*Claytonia perfoliata*). Blue oak (*Quercus douglasii*), is the dominant species, interspersed with occasional interior live oak (*Quercus wislizenii*), California buckeye (*Aesculus californica*) and foothill pine (*Pinus sabiniana*). Interior live oak series also is a dense canopied woodland with little herbaceous understory. Dominant species in this series include interior live oak, blue oak, and California buckeye.

The growing season begins in winter and continues through spring, with a reduction in growth during the summer-fall drought (Holland, 1986). Heights of characteristic tree species range between 30 and 80 feet. Blue oak and interior live oak woodlands are found both in the foothills of the Sierra Nevada and in portions of the Coast Range, generally below 2,000 feet in elevation (Holland, 1986). Due to loss of habitat and very low seedling regeneration, all oak woodlands are considered communities of concern by the California Department of Fish and Game (CDFG) (CNDDB, 1996b).

The oak woodlands/forests on the site provides valuable wildlife movement corridor, cover, forage, nesting, and resting and perching areas. Species common to this habitat include killdeer (*Charadrius vociferus*), spotted sandpiper (*Acitis macularia),* American crow (*Corvus brachyrhyncos*), red-winged blackbird (*Agelaius phoeniceus*), black phoebe (*Sayornis nigricans*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*) and opossum (*Didelphis virginiana*). Black-tailed deer (*Odocoileus hemionus californicus*) likely use the forest for forage, nesting, rearing, and as a corridor to currently undeveloped neighboring parcels. Although one buck, doe, and fawn were observed on the site, few other signs (e.g., scat, tracks) of a larger deer population were noted. Sharp-shinned hawks (*Accipiter striatus*), red-shouldered hawks (*Buteo lineatus*), and Cooper's hawk (*Accipiter cooperi*) may nest within the forest community and forage over site

grasslands. Bats, such as *Myotis* species and pallid bats (*Antrozous pallidus*) are expected to occur within the forest community on the property.

Stream Channels

The site is drained by numerous small waterways typically dry except during and after major storms. The northern quarter of the site drains to Humbug Creek which drains other lands to the north and flows to the west to its confluence with Willow Creek several miles downstream. The southern remainder of the site drains to Willow Creek which flows through the Russell Ranch and The Parkway project areas in an unimproved condition before reaching the Lexington Hills subdivision, where the channel has been improved to carry the 100-year storm.

Approximately 7.1 acres of stream channel have been identified as riparian waterway on-site (Zentner and Zentner, 1991). Cattle grazing has affected stream channels on the property, creating incised banks that for the most part, are devoid of vegetation. Where disturbance is less, occasional patches of California rose (*Rosa californica*) occur. Riparian vegetation along the banks includes a mixture of valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii*), Fremont's cottonwood (*Populus fremontii*), California buckeye (*Aesculus californica*), and arroyo willow (*Salix lasiolepis*).

The seasonal water provided by on-site drainages provides a source of fresh drinking water for species commonly associated with grasslands and forests, and may provide temporal resting and foraging habitat for migratory waterfowl and shorebirds. Species expected to frequent this community include killdeer (*Charadrius vociferus*), spotted sandpiper (*Acitis macularia),* northern harrier (*Circus cyaneus*), common garter snake (*Thamnophis sirtalis*), Pacific tree frog (*Hyla regilla*), bullfrog (*Rana catesbiana*), California slender salamander (*Batrachoseps attenuatus*), California newt (*Taricha torosa*), western toad (*Bufo boreas*), American crow (*Corvus brachyrhyncos*), red-winged blackbird (*Agelaius phoeniceus*), black phoebe (*Sayornis nigricans*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginiana*), black-tailed deer (*Odocoileus hemionus californicus*), sharp-shinned hawks (*Accipiter striatus*) and red-shouldered hawks (*Buteo lineatus*).

Historically, there were a great many species nesting in riparian habitats, including ringtail (*Bassariscus astutus*), great blue heron (*Ardea herodius*), great egret (*Casmerodius albus*), Cooper's hawk (*Accipiter cooperi*), bald eagle (*Haliaeetus leucocephalus*), yellow-billed cuckoo (*Coccyzus americanus*), willow flycatcher (*Empidonax traillii*), Bell's vireo (*Vireo bellii*), warbling vireo (*Vireo gilvus*), yellow warbler (*Dendroica petechia*) and common yellow throat (*Geothylpis trichas*). Presently, only a few of the smaller species nest in the remaining riparian habitats, such as willow flycatcher and yellow warbler. Because of habitat fragmentation and

down-sizing of the available habitat, the larger species, such as bald eagle and Cooper's hawk, have moved their nesting territories to larger forest areas that have not been disturbed.

Seasonal Wetlands

Freshwater seasonal wetlands are found on-site where the drainages flatten out and infiltrate adjacent meadows, creating a seasonal wet meadow condition. These wetlands are gentle gradient surface depressions that hold and transport water after winter and spring rains. Evaporation and slow runoff are the principal ways in which water is lost. Plants are predominantly native low growing, ephemeral annual herbs with occasional perennials. Germination and early growth occur in early spring through summer, often while plants remain submerged. A total of 4.7 acres of seasonal wetland (freshwater marsh) have been identified on the property (Zentner and Zentner, 1991). Based on recent surveys, no vernal pools not plant or animal communities associated with vernal pools were observed on the project site (Foothill Associates, 1997). Dominant plant species occurring in seasonal wetlands on site are Baltic rush (*Juncus balticus),* sedge (*Carex densa*), umbrella sedge (*Cyperus eragrostis*), Italian ryegrass (*Lolium perenne*), and bermuda grass (*Cynodon dactylon*).

Seasonal wetlands are considered a "significant" community due historic and ongoing habitat loss. The CDFG estimates that between 10,000 and 50,000 acres of seasonal wetlands, like those on the project site persist within California.

This habitat is one of the most productive habitats for wildlife in that it offers water, food and cover for a variety of species. Reptiles and amphibians using this habitat include garter snake (*Thamnophis* sp.) and tree frogs. Northern harrier (*Circus cyaneus*), American avocets (*Recurvirostra americana*), and killdeer (*Charadrius vociferous*) use these areas for foraging and nesting. Waterbirds such as mallard (*Anas platyrhynchos*), green-winged teal (*Anas crecca*), and greater-yellowlegs (*Tringa melanoleuca*) are expected to forage and rest within seasonal wetlands and adjacent grasslands during the spring. Mammals common in this habitat are meadow voles (*Microtus californicus*) along the edges of the marsh area, raccoons foraging on eggs and invertebrates, striped skunk, and gray fox (*Urocyon cineroargenteus*). This habitat provides important foraging and drinking areas for aerial and ground feeding insectiverous bats, such as *Myotis* species and pallid bats (*Antrozous pallidus*).

WILDLIFE MOVEMENT AND CORRIDORS

Wildlife movement between the study area and adjacent undeveloped lands is largely unconstrained to the south and west. The Russell Ranch residential development has been approved and includes a wildlife corridor that will provide connections to the open space

designated areas in the project site. In contrast, roads and urban development to the north and east prohibit connection to natural habitats in those directions.

WETLANDS

Wetlands are ecologically productive habitats that support a rich variety of both plant and animal life. The importance and sensitivity of wetlands has increased as a result of their importance as recharge areas and filters for water supplies and widespread filling and destruction to enable urban and agricultural development. In a jurisdictional sense, there are two definitions of a wetland, one definition adopted by federal agencies and a separate definition adopted by the State of California. Both are presented below.

Federal Wetland Definition. Wetlands are a subset of "waters of the United States" and receive protection under Section 404 of the Clean Water Act. The term "waters of the United States" as defined in Code of Federal Regulations (33 CFR 328.3[a]; 40 CFR 230.3[s]) includes:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.

2. All interstate waters including interstate wetlands. (Wetlands are defined by the federal government [CFR, Section 328.3(b), 1991] as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.).

3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:

    - which are or could be used by interstate or foreign travelers for recreational or other purposes; or

    - from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

    - which are used or could be used for industrial purposes by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the United States under the definition.

5. Tributaries of waters identified in paragraphs (1) through (4).

6. Territorial seas.

7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6).

8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with EPA (328.3[a][8] added 58 FR 45035, Aug. 25, 1993).

California Wetland Definition. Unlike the federal government, the California Department of Fish and Game has adopted the Cowardin (1979) definition of wetlands.

> *Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface of the land or is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (at least 50% of the aerial vegetative cover); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year (Cowardin et al., 1979).*

Under normal circumstances, the federal definition of wetlands requires all three wetland identification parameters to be met, whereas the Cowardin definition requires the presence of at least one of these parameters. For this reason, identification of wetlands by CDFG consists of the union of all areas which are periodically inundated or saturated, **or** in which at least seasonal dominance by hydrophytes may be documented, **or** in which hydric soils are present. The CDFG does not normally have direct jurisdiction over wetlands unless they are subject to jurisdiction under Streambed Alteration Agreements or they support state listed endangered species.

Regulated wetlands, those subject to Section 404 of the Clean Water Act, within the project site include streams and naturally ponded areas. Wet areas that are not regulated would include stock watering ponds and agricultural ditches.

Regulation of Activities in Wetlands

The regulations and policies of various federal agencies (e.g., Corps, U.S.D.A Natural Resource Conservation Service [NRCS], U.S. EPA, U.S. Fish and Wildlife Service [USFWS], National Marine Fisheries Service [NMFS]) mandate that the filling of wetlands be avoided unless it can be

demonstrated that no practicable alternatives (to filling wetlands) exist. The Corps has primary federal responsibility for administering regulations that concern waters and wetlands within the project site. In this regard, the Corps acts under two statutory authorities, the Rivers and Harbors Act (Sections 9 and 10), which governs specified activities in "navigable waters," and the Clean Water Act (Section 404), which governs specified activities in "waters of the United States," including wetlands. The Corps requires that a permit be obtained if a project proposes placing structures within navigable waters and/or alteration of waters of the U.S. below the ordinary high water mark in nontidal waters. On agricultural lands, NRCS becomes the primary agency charged with determining the boundary of jurisdictional wetlands for implementation of the Food Securities Act, while the Corps retains primary permitting authority. U.S. EPA, USFWS, NMFS, and several other agencies provide comment on Corps permit applications. U.S. EPA has provided the primary criteria for evaluating the biological impacts of Corps permit actions in wetlands.

The State's authority in regulating activities in wetlands and waters at the site resides primarily with the California Department of Fish and Game (CDFG) and the State Water Resources Control Board (SWRCB). The CDFG provides comment on Corps permit actions under the Fish and Wildlife Coordination Act. CDFG is also authorized under the State Fish and Game Code Sections 1600-16007 to develop mitigation measures and enter into a Stream Alteration Agreement (SSA) with applicants that propose a project that would obstruct the flow or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams. The SWRCB, acting through the Central Valley Regional Water Quality Control Board (RWQCB), must certify that a Corps permit action meets State water quality objectives (Section 401, Clean Water Act).

Jurisdictional Wetlands at The Project Site

A jurisdictional delineation of the project site was completed by Zentner and Zentner in 1991. Based on their results, a total of 11.8 acres of waters of the United States occur on the property (see **Table 4.8-1**). Habitats considered waters of the United States include 7.1 acres of stream channel (unvegetated riparian waterway) and 4.7 acres of seasonal wetland (freshwater marsh) (Zentner & Zentner, 1991). A copy of the Zentner & Zentner delineation (1991) is on file with the County for review.

An Individual 404 permit for fill of 2.5 acres of seasonal wetland and 4.85 acres of unvegetated intermittent stream has been granted for the project by the Corps (1994, Permit #199001102). Although alterations to the proposed project have been made since the permit was completed, the wetland impacts remain the same. The permit includes six General Conditions pertaining to the time limit for construction, maintenance of the area in good condition, notification of the

discovery of any previously unknown historic or archeological remains, sale of the property, water quality certification, and inspection of the area by the Corps. In addition, the permit contains ten Special Conditions, summarized as follows:

1. Creation of 4.67 acres of seasonal wetlands, 6.25 acres of riparian woodland, and 14.1 acres of oak woodland buffer (as described in the Wetland Mitigation Plan [Zentner & Zentner, 1991]).

2. Construction of mitigation sites concurrently with or in advance of construction, and to be completed within two years of the start of construction.

3. Revision of the Wetland Mitigation Plan to specify stem densities in the oak woodland buffer and a detailed planting design, to be approved by the Corps in consultation with the USFWS and CDFG.

4. Monitoring of oak woodlands for ten years during years 1-4, 6, 8, and 10.

5. Monitoring of constructed wetlands to commence upon completion of their construction, with the additional monitoring criterion of wetland success for three consecutive years without human intervention.

6. Placement of trails within buffer areas on only one side of a wetland preserve area, encroaching no more than 10 feet into the 50-foot buffers with the exception of viewing stations to be approved individually. The trail system design must be approved by the Corps prior to construction.

7. On-site roads to avoid areas of wetland fill/preservation (Area G on Figure Four of the Mitigation Plan), with fill placed in Areas F and K. The Corps must approve the bridge design prior to construction.

8. Corps approval of bridge design within the mitigation area prior to construction.

9. Corps approval of bridge design prior to construction if Russell Ranch Road passes over Area G, and additional on-site wetland mitigation at 1.1:1 with additional oak woodland buffer. Additional mitigation shall be approved by the Corps prior to its construction.

10. Formation of a suitable financing mechanism for maintenance of mitigation areas, subject to Corps approval, prior to sale of any lots; deed restrictions to maintain the wetland preserve in perpetuity, with restriction language subject to Corps approval; and submittal of recorded document copies to the Corps no later than 30 days prior to any construction activities.

SPECIAL STATUS SPECIES

As discussed below, several species known to occur on or in the vicinity of the project site are accorded "special status" because of their recognized rarity or vulnerability to various causes of

habitat loss or population decline. Some of these receive specific protection defined in federal or State endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of State resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as "special status species" in this EIR, following a convention that has developed in practice but has no official sanction. The various categories encompassed by the term, and the legal status of each, are summarized below.

Regulation of Special Status Species

Federal Endangered Species Act

Under the Federal Endangered Species Act (FESA), the Secretary of the Interior and the Secretary of Commerce, jointly have the authority to list a species as threatened or endangered (16 USC 1533[c]). Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered "significant" in this EIR.

The USFWS also publishes a list of candidate species. Species on this list receive "special attention" from federal agencies during environmental review, although they are not protected otherwise under the FESA. The candidate species are taxa for which the USFWS has sufficient biological information to support a proposal to list as Endangered or Threatened. Project impacts to such species would be considered "significant" in this EIR.

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFG has the responsibility for maintaining a list of threatened species and endangered species (Cal. Fish and Game Code 2070). The CDFG also maintains a list of "candidate species" which are species that the CDFG has formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. The CDFG also maintains lists of "species of special concern" which serve as "watch lists." Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a

potentially significant impact on such species. In addition, the Department encourages informal consultation on any proposed project which may impact a candidate species. Project-related impacts to species on the CESA endangered list and threatened list would be considered "significant" in this EIR. Impacts to "species of concern" would be considered "significant" under certain circumstances, discussed below.

CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines section 15380(b) provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the Guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a "candidate species" that has not yet been listed by either the USFWS or CDFG. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

Other Statutes, Codes, and Policies Affording Limited Species Protection

The federal Migratory Bird Treaty Act (16 U.S.C., Sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Birds of Prey are protected in California under the State Fish and Game Code (Section 3503.5, 1992). Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFG. Any loss of fertile eggs, nesting raptors, or any activities resulting in nest abandonment would constitute a significant impact. This approach would apply to red-tailed hawks, American kestrels, burrowing owls, and other birds of prey. Project impacts to these species would not be considered "significant" in this EIR unless they are known or have a high potential to nest on the site or rely on it for primary foraging.

The federal Bald Eagle Protection Act prohibits persons within the United States (or places subject to U.S. jurisdiction) from "possessing, selling, purchasing, offering to sell, transporting,

exporting or importing any bald eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof."

Vascular plants listed as rare or endangered by the California Native Plant Society (CNPS) (Skinner and Pavlik, 1995), but which have no designated status or protection under federal or State endangered species legislation, are defined as follows:

List 1A Plants Believed Extinct.

List 1B Plants Rare, Threatened, or Endangered in California and elsewhere.

List 2 Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.

List 3 Plants About Which We Need More Information - A Review List.

List 4 Plants of Limited Distribution - A Watch List.

In general, plants appearing on CNPS List 1 or 2 are considered to meet CEQA's Section 15380 criteria and affects to these species are considered "significant" in this EIR.

Special Status Species at The Project Site

A list of special status plant and animal species reported to occur within the vicinity of the project site was compiled on the basis of data in the CNDDB (1996), consultation with the CDFG, CNPS literature (Skinner and Pavlik, 1995), consultation with the USFWS, and biological literature of region. Of the plants and animals in **Table 4.8-2,** several special status species are highly likely to occur on the project site, based on a reconnaissance-level area assessment, existing information in the California Natural Diversity Data Base, and sightings by ESA biologists in 1996.

Federally or state listed or candidate species with a high or medium potential to occur consist of Swainson's hawk. Other special status species identified as having a high or medium potential to occur include burrowing owl, northern harrier, loggerhead shrike, Cooper's hawk, sharp-shinned hawk, long-eared owl, short-eared owl, California horned lark, hoary navarretia, and Sanford's arrowhead.

TABLE 4.8-2
SPECIAL STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PROJECT SITE

Species that are Listed, Proposed for Listing, or are Candidates for Listing

Scientific Name Common name	Listing Status USFWS/ CDFG/CNPS	General Habitat	Potential for Occurrence	Period of Identification
ANIMALS				
Birds				
Buteo swainsoni Swainson's hawk	--/CT	Nests in large trees adjacent to grasslands	**Medium Potential.** The site provides only marginal habitat for this species.	March-August
Empidonax traillii Willow flycatcher	--/CE	Nests in dense riparian cover	**Low Potential.** The site does not support good habitat for this species.	May-August
Haliaeetus leucocephalus Bald eagle	FT/CE	Ocean shorelines, lake margins, and river courses for both nesting and wintering.	**Potential Wintering Habitat.** The site does provides wintering habitat for this species.	May-August
Reptiles				
Thamnophis couchi gigas Giant garter snake	FC/CT	Marshes, streams, and sloughs of the Central Valley.	**Low Potential.** The site is located outside this species known range.	Winter rains and March-April
Amphibians				
Ambystoma californiense California tiger salamander	FC/CSC	Wintering sites occur in grasslands occupied by burrowing mammals; breed in ponds and vernal pools	**Low Potential.** The site does not support good habitat for this species.	Winter rains and March-April
Rana aurora draytonii California red-legged frog	FT/CSC	Breed in stock ponds, pools, and slow moving streams absent of bullfrog	**Low Potential.** Probably extirpated from the Central Valley. The project site provides only limited habitat.	May-August
Invertebrates				
Branchinecta lynchi Vernal pool fairy shrimp	FT/--	Life cycle within vernal pools and valley foothill grassland swales	**Unlikely.** No vernal pools occur on site.	winter rains
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT/--	Valley elderberry throughout the Central Valley	**Low Potential.** No blue elderberry were located on site.	year-round (exit holes in shrub stems)
Lepidurus packardi Vernal pool tadpole shrimp	FE/--	Life cycle within vernal pools and valley foothill grassland swales	**Unlikely.** No vernal pools occur on site.	winter rains
Plants				
Ceanothus roderickii Pine Hill ceanothus	FE/CR/List 1B	Ultramafic soils within chaparral and woodland habitats.	**Unlikely.** No ultramafic soils occur on the project site.	May-June
Ghamaesyce hooveri Hoover's spurge	FPT/--/List 1B	vernal pools	**Unlikely.** No vernal pools occur on site.	July
Chlorogalum grandiflorum Red Hills soaproot	FE/--/List 1B	Ultramafic soils within chaparral and woodland habitats.	**Unlikely.** No ultramafic soils occur on the project site.	May-June

Scientific Name Common name	Listing Status USFWS/ CDFG/CNPS	General Habitat	Potential for Occurrence	Period of Identification
Fremontodendron decumbens Pine Hill flannelbush	FE/CR/List 1B	Ultramafic soils within chaparral and woodland habitats.	**Unlikely.** No ultramafic soils occur on the project site.	April-June
Gratiola heterosepala Boggs Lake hedge-hyssop	--/CE/List 1B	vernal pools	**Unlikely.** No vernal pools occur on site.	April-June
Juncus leiospermus var. *ahartii* Ahart's dwarf rush	FC/--/List 1B	vernal pools	**Unlikely.** No vernal pools occur on site.	March-May
Orcuttia tenuis Slender orcutt grass	FPT/CE/List 1B	vernal pools	**Unlikely.** No vernal pools occur on site.	May-July
Orcuttia stricta Sacramento orcutt grass	FE/CE/List 1B	vernal pools	**Unlikely.** No vernal pools occur on site.	May-June
Senecio layneae Layne's butterweed	FPT/CR/List 1B	Ultramafic soils within chaparral, woodland and stream habitats.	**Unlikely.** No ultramafic soils occur on the project site.	April-July
Tuctoria greenei Green's tuctoria	FPE/CR/List 1B	vernal pools	**Unlikely.** No vernal pools occur on site.	May-July
Wyethia reticulata El Dorado County mule ears	FE/--/List 1B	Ultramafic soils within chaparral and woodland habitats.	**Unlikely.** No ultramafic soils occur on the project site.	May-July

Species that are Federal or State Species of Concern

Scientific Name Common name	Listing Status USFWS/ CDFG/CNPS	General Habitat	Project Site Occurrence	Period of Identification
ANIMALS **Mammals**				
Myotis ciliolabrum Small-footed myotis	FSC/CSC	Forages over grasslands and roosts in caves and rock crevices.	**Low Potential.** The project site does not provide suitable roosting habitat	February-August
Myotis evotis Long-eared bat	FSC/CSC	Forages over grasslands and roosts in trees, caves and rock crevices.	**Potential Resident.** The project site provides suitable roosting habitat.	February-August
Myotis thysanodes Fringed bat	FSC/CSC	Forages over grasslands and roosts in trees, caves and rock crevices.	**Low Potential.** The project site does not provide suitable roosting habitat due to species known range.	February-August
Myotis volans Long-legged myotis	FSC/CSC	Forages over grasslands and roosts in trees, caves and rock crevices.	**Potential Resident.** The project site provides suitable roosting habitat.	February-August
Myotis yumanensis Yuma myotis	FSC/CSC	Forages over grasslands and roosts in trees, caves and rock crevices.	**Potential Resident.** The project site provides suitable roosting habitat.	February-August
Plecotus townsendii townsendii Pacific western big-eared bat	FSC/CSC	Mesic habitats, roosting in caves, mines, tunnels and buildings.	**Low Potential.** The project site does not provide suitable roosting habitat	February-August
Birds				
Agelaius tricolor Tricolored blackbird	FSC/CSC	Nests in cattails or thistles, large enough to support a minimum of 50 pairs, adjacent to water.	**Low Potential.** The project site does not provide suitable habitat	February-June

Scientific Name Common name	Listing Status USFWS/ CDFG/CNPS	General Habitat	Project Site Occurrence	Period of Identification
Accipiter cooperi Cooper's hawk	--/CSC	Nest in riparian areas and oak woodlands.	**Potential Resident.** Potential nesting habitat occurs throughout the site.	March-August
Accipiter striatus Sharp-shinned hawk	--/CSC	Nest in riparian areas and oak woodlands.	**Potential Resident.** Potential nesting habitat occurs throughout the site.	September-March
Aquila chrysaetos Golden eagle	BEPA/CSC	Nests on cliffs and tall trees on hillsides.	**Low Potential.** The project site does not provide suitable nesting habitat.	February-June
Asio otus Long-eared owl	--/CSC	Nests in wet meadows and grasslands.	**Potential Resident.** Potential nesting habitat within the grassland areas.	March-July
Asio flammeus Short-eared owl	--/CSC	Nests in wet meadows and grasslands.	**Potential Resident.** Potential nesting habitat within the grassland areas.	March-July
Birds				
Buteo regalis Ferruginous hawk	FSC/CSC	Wintering grounds consist of open grasslands.	**Potential Winter Visitor.** The project site provides winter foraging habitat.	February-June
Buteo swainsoni Swainson's hawk	FC/CT	Nests in oak savanna and open riparian forests.	**Potential Foraging Habitat.** The project site provides foraging habitat. No known nesting pairs are known from the site or immediate area.	February-June
Circus cyaneus Northern harrier	--/CSC	Nests in wet meadows.	**Potential Resident.** Potential nesting habitat within the grassland areas.	year-round
Dendroica petechia Yellow warbler	--/CSC	Nests in dense riparian cover.	**Low Potential.** The site provides only marginal habitat.	April-August
Elanus leucurus White-tailed kite	--/3511	Nests in shrubs and trees adjacent to grasslands.	**Medium Potential.** The site provides marginal habitat.	year-round
Eremophila alpestris actia California horned lark	--/CSC	Arid grassland and sagebrush meadows.	**Medium Potential.** Potential nesting habitat within the grassland areas	March-July
Icteria virens Yellow breasted chat	--/CSC	Nests in dense riparian cover.	**Low Potential.** The site provides only marginal habitat.	April-September
Lanius ludovicianus Loggerhead shrike	FSC/CSC	Scrub, open woodlands, and grasslands.	**Medium Potential.** Potential nesting habitat within the grassland areas	March-July
Speotyto cunicularia Burrowing owl	FSC/CSC	Nests in burrows in grassland areas where ground squirrels are present.	**Potential Resident.** Potential nesting habitat within the grassland areas.	March-July
Reptiles				
Clemmys marmorata marmorata Northwestern pond turtle	FSC/CSC	Rivers and streams with some canopy cover.	**Unlikely.** The site does not support suitable habitat.	May-September

Scientific Name Common name	Listing Status USFWS/ CDFG/CNPS	General Habitat	Project Site Occurrence	Period of Identification
Amphibians				
Scaphiopus hammondii Western spadefoot toad	--/CSC	Breed in vernal pools and seasonal wetlands.	**Low Potential.** The site does not support good habitat for this species.	May-August
Plants				
Balsamorhiza macrolepis var. *macrolepis* Big-scale balsam root	--/--/List 1B	valley foothill grasslands on serpentine soils.	**Unlikely.** The project site does not contain suitable habitat.	March -June
Cordylanthus mollis ssp. *hispidus* Hispid bird's-beak	FSC/--/List 1B	alkaline meadows and playas	**Unlikely.** The project site does not contain suitable habitat.	June-September
Downingia pusilla Dwarf downingia	--/--/List 2	mesic valley foothill grasslands and vernal pools	**Low Potential.** No vernal pools occur on site.	March-May
Eryngium pinnatisectum Tuolumne button celery	FSC/--/List 4	vernal pools	**Low Potential.** No vernal pools occur on site.	June
Hibiscus lasiocarpus Rose mallow	--/--/List 2	freshwater marshlands	**Unlikely.** Potential habitat does not occur on-site.	August-September
Ivesia serioleuca Plumas ivesia	FSC/--/List 1B	meadows and vernal pools usually on volcanic soils	**Low Potential.** The site does not support good habitat for this species.	May-September
Juncus leiospermus var. *leiospermus* Red Bluff dwarf rush	--/--/List 1B	valley foothill grasslands and vernal pools	**Low Potential.** No vernal pools occur on site.	March-May
Legenere limosa Legenere	FSC/--/List 1B	vernal pools	**Low Potential.** No vernal pools occur on site.	May-June
Sagittaria sanfordii Sanford's arrowhead	FSC/List 1B	freshwater marsh	**Medium Potential.** This species could occur within the seasonal wetlands on-site.	May-August

Other Species (may or may not be considered "special status")

Scientific Name Common name	Listing Status USFWS/ CDFG/CNPS	General Habitat	Project Site Occurrence	Period of Identification
Animals				
Ardea herodias Great blue heron	--/--/--	colonial nester in tall trees, cliffsides, and sequestered spots on marshes	**Low Potential.** This species is expected as an occasional visitor to the site.	February-June
Casmerodius albus Great egret	--/--/--	colonial nester in large trees	**Low Potential.** This species is expected as an occasional visitor to the site.	February-June

Scientific Name Common name	Listing Status USFWS/ CDFG/CNPS	General Habitat	Project Site Occurrence	Period of Identification
PLANTS				
Astragalus pauperculus Depauperate milk vetch	--/--/List 4	valley foothill grasslands, vernally mesic on volcanic soils	**Low Potential.** The site does not support good habitat for this species.	March-May
Fritillaria agrestis Stinkbells	--/--/List 4	valley foothill grasslands on clay soils	**High Potential.** This species could occur within the grasslands and seasonal wetlands on-site.	March-April
Navarretia eriocephala Hoary navarretia	--/--/List 4	valley foothill grasslands	**High Potential.** This species could occur within the grasslands and seasonal wetlands on-site.	May-June

STATUS CODES:
FEDERAL: (U.S. Fish and Wildlife Service)
FE = Listed as Endangered by the Federal Government
FT = Listed as Threatened by the Federal Government
FPE = Proposed for Listing as Endangered
FPT = Proposed for Listing as Threatened
FC = Candidate for Federal listing
FSC = Federal Species of Special Concern

STATE: (California Department of Fish and Game)
CE = Listed as Endangered by the State of California
CT = Listed as Threatened by the State of California
CR = Listed as Rare by the State of California (plants only)
CSC = California species of special concern
3511 = Fully protected bird species

California Native Plant Society
List 1A = Plants believed extinct
List 1B = Plants rare, threatened, or endangered in California and elsewhere
List 2 = Plants rare, threatened, or endangered in California but more common elsewhere
List 3 = Plants about which more information is needed
List 4 = Plants of limited distribution
SOURCE: USFWS 1995 and 1996, Skinner and Pavlik, 1995, CNDDB 1996a.

RELEVANT GENERAL PLAN GOALS, OBJECTIVES AND POLICIES - COUNTY OF EL DORADO

Relevant El Dorado County General Plan Goals, Objectives, and Policies related to biological resources include the following:

Objective 7.3.3: Wetlands. Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.

Policy 7.3.3.1: A site-specific wetland investigation shall be required on all development projects within those areas identified as wetlands on the Important Biological Resources Map. If it is determined by the presence of hydrophytic plants and wetland hydrology that a wetland may exist in an area not identified on the map, a site-specific investigation shall also be required. This study shall be conducted using the Corps of Engineers Wetland Delineation Program and Manual. The study shall determine the boundaries of all wetland areas that can be classified wetlands under the Corps of Engineers' definition.

Policy 7.3.3.2: All feasible project modification shall be considered to avoid wetland disturbance. Direct or indirect losses of wetlands and/or riparian vegetation associated with discretionary application approval shall be compensated by replacement, rehabilitation, of wetlands habitat on a no-net loss basis. Compensation may result in provision of wetlands habitat on- or off-site at a minimum of a 1:1 ratio as associated with the disturbed resource. A wetland study and mitigation monitoring program shall be submitted to the County and connected State and Federal agencies for approval prior to permit approval.

Objective 7.3.4: Drainage. Protection and utilization of natural drainage patterns.

Policy 7.3.4.1: Natural watercourses shall be integrated into new development in such as way that they enhance the aesthetic and natural character of the site without disturbance.

Policy 7.3.4.2: Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.

Objective 7.4.1: Rare, Threatened and Endangered Species. The county shall protect State and Federally recognized rare, threatened, or endangered species and their habitats consistent with Federal and State laws.

Policy 7.4.1.5: Species, habitat, and natural community preservation/conservation strategies shall be prepared to protect special status plant and animal species and natural communities and habitats when discretionary development is proposed on lands with such resources unless it is determined that those resources exist and are, or can be, protected on public lands or private Natural Resource lands.

Policy 7.4.1.6: Where substantial modification of natural communities and habitats of special status plant and animal species through grading or other disturbances occur in anticipation of or prior to either the submittal and/or approval of a formal discretionary application, that application shall be accompanied with a comprehensive habitat restoration and/or off-site mitigation plan. The provisions of the plan shall be implemented as part of the project approval.

Objective 7.4.2: Identify and Protect Resources. Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.

Policy 7.4.2.2: Where critical wildlife areas and migration corridors are identified during review of projects, the County shall protect the resources from degradation by requiring all portions of the project site that contain of influence said areas to be retained as non-disturbed natural areas through mandatory clustered development on suitable portions of the project site or other means such as density transfers if clustering cannot be achieved. The setback distance for designated or protected migration corridors shall be determined as part of the project's environmental analysis. The intent and emphasis of Open Space land use designation and of the non-disturbance policy is to ensure continued viability of contiguous or interdependent habitat areas and the preservation of all movement corridors between related habitats. The intent of mandatory clustering is to provide a mechanism for natural resource protection while allowing appropriate development of private property.

Objective 7.4.3: Coordination with Appropriate Agencies. Coordination of wildlife and vegetation protection programs with appropriate Federal and State agencies.

Objective 7.4.4: Forest and Oak Woodland Resources. Protect and conserve forest and woodland resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.

Policy 7.4.4.2: Through the review of discretionary projects the County shall encourage the protection, planting, restoration and regeneration of native trees in new developments and within existing communities.

Policy 7.4.4.3: Utilize the clustering of development, to retain the largest contiguous areas possible in wildland (undeveloped) status.

Policy 7.4.4.4: The County shall apply tree canopy coverage standards to discretionary permit review applicable to oak woodland habitats. Parcels having canopy cover by trees of at least 10 percent, as determined from base line aerial photography or by site survey performed a qualified licensed arborist or botanist, are subject to canopy coverage retention or replacement standards:

Existing Canopy Cover	Percent of Canopy Cover to be Retained or Replaced
80 - 100 percent	.60 of existing canopy
60 - 79 percent	.70 of existing canopy
40 - 59 percent	.80 of existing canopy
20 - 39 percent	.85 of existing canopy
19 percent or less	.90 of existing canopy
Specific standards shall be included in the Zoning Ordinance.	

Policy 7.4.4.5: Where existing individual or a group of oak trees are lost within a stand, a corridor of oak trees shall be retained that maintains continuity between all portions of the stand. The retained corridor shall have a tree density that is equal to the density of the stand.

Policy 7.4.5.1: A tree survey, preservation and replacement plan shall be required to be filed with the County prior to issuance of a grading permit for discretionary permits on all high-density residential, multi-family residential, commercial and industrial projects. To ensure that proposed replacement trees survive; a mitigation monitoring plan should be incorporated into discretionary projects when applicable and shall include provisions for necessary replacement of trees.

Policy 7.4.5.2: The County shall require, as a condition of development approval for Commercial, Industrial, and Multi-Family Residential uses, that at a minimum, 50 percent of the proposed landscaping is consistent with the predominant plant community, and fits the natural vegetation native to the area. Exotic or introduced plant species not consistent with the plant community in which proposed development is located shall be discouraged.

Objective 7.6.1: Importance of Open Space. Consideration of open space as an important factor in the County's quality of life.

Policy 7.6.1.1: The General Plan land use map shall include an Open Space land use designation. The purpose of this designation is to implement the goals and objectives of the Land Use and the Conservation and Open Space Elements by serving one or more of the purposes stated below. In addition, the designations on the land use map for Rural Residential and Natural Resource areas are also intended to implement said goals and objectives. Primary purposes of open space include:

A. Conserving natural resource areas required for the conservation of plant and animal life including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, banks of rivers and streams and watershed lands;

B. Conserving natural resource lands for the managed production of resources including forest products, rangeland, agricultural lands important to the production of food and fiber; and areas containing important mineral deposits;

C. Maintaining areas of importance for outdoor recreation including areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes including those providing access to lake shores, beaches and rivers and streams; and areas which serve as links between major recreation and

open space reservations including utility easements, banks of rivers and streams, trails and scenic highway corridors;

D. Delineating open space for public health and safety including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, floodplains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs, and areas required for the protection and enhancement of air quality; and

E. Providing for open spaces to create buffers which may be landscaped to minimize the adverse impact of one land use on another.

Policy 7.6.1.2: The County will provide Open Space land through:

A. the designation of land as Open Space;

B. the designation of land for low-intensity land uses as provided in the Rural Residential and Natural Resources land use designation;

C. local implementation of the Federal Emergency Management's Agency's National Flood Insurance Program;

D. local implementation of the State Land Conservation Act program; and

E. open space land set aside through Planned Developments (PDs).

Policy 7.6.1.3: The County shall implement Policy 7.6.1.1 through zoning regulations and the administration thereof. It is intended that certain districts and certain requirements in zoning regulations carry out the purposes set forth in Policy 7.6.1.1 as follows:

C. Zoning regulation shall provide for setbacks from all flood plains, streams, lakes, rivers and canals to maintain Purposes A, B, C, and D set forth in Policy 7.6.1.1

The project would result in the loss of some biological resource habitats at the project site (e.g., wetlands, oak woodlands, special status species habitat). Because the proposed project includes mitigation as part of the 404 Permit and the Wetland Mitigation Plan, the project is generally consistent with El Dorado County General Plan goals, objectives, and policies related to biological resources.

4.8.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines indicates that a project would have a significant effect on the environment if it would:

- interfere substantially with the movement of any resident or migratory fish or wildlife species;
- substantially diminish habitat for fish, wildlife or plants; or
- substantially affect a rare or endangered species of animal or plant or the habitat of the species.

CEQA Section 15380 further provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists if, for example, it is likely to become endangered in the foreseeable future.

Local Plans and Policies

CEQA Guidelines (Appendix G) specifies that a project will normally have a significant impact on the environment if it will physically impact communities or species protected by adopted environmental plans and goals of the community(ies) where it is located.

For the purposes of this EIR, three principal components of the guidelines outlined above were considered:

- Magnitude of the impact (e.g., substantial/not substantial)
- Uniqueness of the affected resource (rarity)
- Susceptibility of the affected resource to perturbation (sensitivity)

The evaluation of significance must consider the interrelationship of these three components. For example, a relatively small magnitude impact to a State or Federally listed species would be considered significant because the species is very rare and is believed to be very susceptible to disturbance. Conversely, a plant community such as California annual grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be required to result in a significant impact.

IMPACT ASSUMPTIONS

Impacts and mitigation measures presented in this section are at the Program Level (i.e., they are primarily qualitative, including only approximate impact acreages because no specific development plan is available). Impact analysis includes the worst-case scenario of complete resource removal within the proposed land use areas. However, the actual impact level will be less due to the protection of natural resources within the proposed retained private and public open space areas.

IMPACT OVERVIEW

Impacts to biological resources are considered "significant" when past and on-going habitat modifications (e.g., development, introduction of non-native plant and animal species, increased human intrusion, barriers to movement, and landscape management) reduce species populations and habitats to the extent that they become rare and are recognized as "significant resources" under CEQA and by local, state and federal governments.

The analysis below identifies seven impacts to biological resources. The mitigation measures presented, a combination of measures proposed as part of the project and those recommended by the EIR, are designed to protect or provide suitable habitat quality and quantity to offset project losses to below the level of significance wherever possible. The mitigation measures presented in this report are based on requirements, recommendations, and guidelines established by El Dorado County, the U.S. Fish and Wildlife Service, the California Department of Fish and Game, the U.S. Army Corps of Engineers, and the Central Valley Regional Water Quality Control Board.

The project applicant developed a Wetland Mitigation Plan for the project in 1991 as part of the project's Individual 404 permit (Zentner and Zentner, 1991). Contents of this plan are summarized below where appropriate. Although modifications have been made to the project, the basic project envelope and impacts to wetland acreages have not changed. The figures presented in the Wetland Mitigation Plan, therefore, are still applicable to the impact calculations.

IMPACTS AND MITIGATION MEASURES

Impact

4.8.1 An undetermined acreage of oak woodland will be removed due to project implementation. This would be a significant impact.

Most of the land use areas proposed under the Specific Plan, with the exception of villages 1 and 3, contain oak woodland (see **Table 4.8-1**). The heaviest concentration of oak woodland occurs in villages 4 and 6. The worst-case scenario would result in the impact of up to 314 acres of oak woodland in the villages, neighborhood park, and

elementary school. However, the plan includes development standards that would limit tree removal in all of the villages by retaining private open space on lots with steep slopes and on large and medium lots for single family detached dwellings. The total private open space proposed for the project is 184 acres. Although the exact locations of the private open space are currently undetermined, they will be established with future tentative and final subdivision maps. These areas would preserve individual oak trees, if not the current wildlife habitat value of the oak woodland. Additional guidelines in the development standards and grading plan provide for protection of oak trees by realigning roadways to preserve trees and limiting grading in dense tree stands to the house pad only. Approximately 36 acres of oak woodland also would be retained in the public undeveloped open space. This area would more likely retain its wildlife habitat value.

The removal of a substantial acreage of oak woodland would result in a permanent loss of important plant and wildlife habitat. Impacts to woodland communities within the project site would create significant impacts to wildlife species dependent upon these communities because of the large acreage of this habitat that would be directly lost, and additional areas that would lose habitat value. The private open space areas between houses would not retain wildlife habitat value for species dependent on the understory if understory vegetation is removed. Loss of oak woodland would substantially decrease suitable habitat for forest-dwelling animals, such as black-tailed deer.

Major impacts of construction would include loss of canopy complexity within the oak woodland; reduction of nesting, resting, and perch sites; reduction in standing crop of plant species used for forage and browse, and mast crop (acorns) produced by oaks; and obstruction of deer feeding trails and movement patterns. The loss of a substantial number of trees could lead to increased erosion and sedimentation of low-lying wetlands.

In addition to the trees and areas directly affected by proposed and potential clearing, portions of the oak woodland left standing could lose their value as oak woodland habitat. Woodland areas that are substantially reduced in size or that become isolated as a result of project development might not provide enough food for animals, or might not allow movement to other areas of similar habitat. The degree of loss in habitat value would depend on the species or group of animals affected. Areas on the project site that could experience such a loss include the areas along roadways, areas that border building envelopes, and wooded areas completely surrounded by development.

An undetermined number of heritage trees, those measuring over 24 inches in diameter at breast height, also would be removed due to the proposed project. All native oaks, regardless of size, should be considered biologically valuable. In particular, young oak

trees which do not meet the definition of heritage trees are a significant biological resource due to declining oak populations in the County and state.

These impacts would be considered significant under CEQA and by the CDFG, the USFWS, and the County of El Dorado.

Mitigation Measures

4.8.1 Mitigation for project impacts to trees shall include measures for tree protection, revegetation and compensation, and monitoring. All aspects of the following measures must be implemented to ensure mitigation/compensation for the impact.

- **The project applicant shall develop and implement a Tree Protection Plan to minimize direct and indirect impacts to oak woodland on the project site during construction and operation phases of the proposed project. The Plan shall require the use of buffers to prevent or reduce the effects of disruption in the hydrologic or edaphic (growing) environment of heritage trees. Canopy cover retention within oak woodlands shall meet the requirements of General Plan Policy 7.4.4.4 wherever possible. The elements of the Tree Protection Plan shall appear as standards in the tentative subdivision maps, improvement plans, and subdivision CC&Rs. The Plan shall be implemented prior to the initiation of ground clearing, grading, or other construction activities that may impact oak trees. Unless stated otherwise, all measures shall be the sole responsibility of the project applicant.**

- **The County or project applicant shall engage a qualified project biologist or equivalent professional to oversee all aspects of construction monitoring that pertain to oak tree protection. The project applicant shall be responsible for reimbursing the County for all costs related to the compliance monitoring of the project.**

- **The project biologist shall be responsible for contractor education and shall monitor all construction activities in areas supporting sensitive biological resources. The project biologist shall be responsible for scheduling and/or implementing pre-construction tree surveys, and shall inform the County, the project engineer and the project general contractor if there are construction activities that threaten protected oak trees for which no mitigation measures have been identified in this EIR.**

- **The project biologist shall clearly mark on project maps all oak trees and oak woodlands to be avoided and provide these maps to the contractor. These areas shall be designated as "no construction" or "limited construction" zones. These areas shall be flagged by the project biologist prior to construction activities. In some cases, trees may need to be fenced or**

otherwise protected from direct or indirect impacts, as determined by the project biologist.

- **The Tree Revegetation Plan shall consist of an implementation and a monitoring component. Because the exact extent of tree loss can only be determined after final grading plans and building envelopes are defined, a detailed analysis of 1) the precise number and species of trees to be removed, and 2) the specific mitigation areas to be planted, shall be developed and identified as part of the tentative and final map processes, in compliance with General Plan Policy 7.4.5.1. Lost tree canopy cover must be replaced at the percentage required under Policy 7.4.4.4 of the County General Plan.**

- **The Monitoring and Management Plan shall identify monitoring and management techniques for a minimum period of ten years following implementation. The plan shall establish success criteria (performance standards) and shall describe steps to be taken to replace vegetation not meeting the success criteria (contingency plans). Performance standards could relate to the number of trees, species and sizes of trees, area of canopy, or a combination. Appropriate data sampling and statistical treatment of data shall be developed and utilized.**

- **A preliminary mitigation plan (based on the elements presented in this EIR) shall be submitted for review prior to approval of subsequent tentative subdivision maps. A draft mitigation plan (including draft versions of the Tree Protection Plan, Revegetation Plan, and Monitoring and Management Plan) shall be submitted with the applications for tentative subdivision maps and other subsequent approvals. The final mitigation plan shall be submitted as part of the final subdivision map process or prior to approval of a grading permit for improvement plans, whichever occurs first. Prior to implementation, the final plan shall be approved by the County. The project applicant shall identify and secure sources of funding and personnel to carry out all identified measures outlined above before any tree removal or grading permits are issued by the County.**

The project applicant has indicated that trees removed as part of site development will be replaced on-site within the public open space areas (see **Figure 3-3**) (McDougall, 1997).

The level of significance after mitigation must be considered speculative because of the magnitude of the identified impact. Successful implementation of these measures would still not be likely to fully provide replacement habitat values or acreage of oak woodland, and would not create similar habitat (tree structure, mast crop) for at least 50 to 100 years.

Significance After Mitigation

Impacts to the oak woodland would remain significant and unavoidable with implementation of mitigation measures presented above.

Impact

4.8.2 Project development would result in the direct filling and alteration of wetlands and waters of the United States. This would be a less than significant impact.

Project development would result in the direct loss of 2.5 acres of seasonal wetland and 4.85 acres of unvegetated intermittent stream. A previous plan for the project has been authorized by the Corps under an Individual 404 Permit (Corps, 1994), and a Wetland Mitigation Plan (Zentner & Zentner) was developed for the required habitat mitigation, as discussed above in Section 4.8.1, which requires the project applicant to create 4.67 acres of seasonal wetlands, 6.25 acres of riparian woodland, and 14.1 acres of oak woodland buffer. The mitigation additionally meets the requirements of El Dorado County General Plan Policies 7.3.3.1 and 7.3.3.2 regarding wetland protection. Although the project has been somewhat altered from the original configuration authorized under the permit and addressed by the mitigation plan, proposed impacts to jurisdictional wetlands remain the same. Special Conditions of the 404 Permit and the Wetland Mitigation Plan will be implemented as part of the project to reduce the filling of wetlands impact to a less-than-significant level.

In addition to the Special Conditions of the 404 Permit, mitigation measures identified in Section 4.10, Hydrology and Water Quality, will reduce potential on-site water quality impacts.

Mitigation Measures

4.8.2 Since no significant impact was identified, no mitigation is required.

Impact

4.8.3 The project has potential to significantly affect federally and state listed and other special status species. This would be a cumulatively significant and unavoidable impact.

Animal species that have potential to occur on the property and could be affected by project development include Swainson's hawk, burrowing owl, northern harrier, loggerhead shrike, Cooper's hawk, sharp-shinned hawk, long-eared owl, short-eared owl, and California horned lark. Plant species that have potential to occur on-site include hoary navarretia, and Sanford's arrowhead. Limited site reconnaissance and database searches performed on the project site have not identified the presence of these species on-site. However, no comprehensive surveys to determine the presence or absence of listed or other special status species has been conducted on the property.

Although Black-tailed deer have been observed on the site, project development would not affect Black-tailed deer winter range or migration corridors.

Mitigation Measures

4.8.3 The project applicant shall hire a biologist(s) approved by the County to conduct protocol surveys for the species listed in Table 4.8-2 as having a potential to occur on the property. In addition, the biologist(s) shall also conduct protocol surveys for any new special status species that may occur on the project site, which are listed by CDFG and/or USFWS subsequent to the certification of this EIR. Results of the surveys shall be submitted to CDFG, USFWS, and the County prior to approval of subsequent tentative subdivision maps. If no sensitive species are located on-site, no further mitigation is necessary. If listed species are located on the property the applicant and County shall enter into informal consultation with CDFG and USFWS and begin preparation of a Biological Assessment or Habitat Conservation Plan, as applicable.

The precise mitigation/compensation for direct and indirect impacts to sensitive species will depend on agency consultation and agreements. The project applicant shall implement all measures identified by the CDFG and USFWS to protect and mitigate impacts to listed and other special status species.

Consultation with the County, CDFG, and USFWS and implementation of a Habitat Management Plan could reduce this impact to a less than significant level. However, without consultation and detailed conservation plans, it is considered speculative to indicate that this impact would be reduced to less than significant.

Significance After Mitigation

The level of significance after mitigation is considered to be significant and unavoidable since the magnitude of the loss of special status species habitat is not quantifiable at this time.

Impact

4.8.4 Project implementation has the potential to introduce or promote the spread of non-native plant species. The introduction or promotion of non-native species to the site or region would be a potentially significant impact.

The spread of non-native plants throughout California has had a dramatic affect on the natural landscape. Several species and communities (e.g., native grasslands and riparian communities) are threatened by the spread of invasive non-native plants such as French broom, eucalyptus, and vinca.

Mitigation Measures

4.8.4 The objective of this mitigation measure is to reduce the potential for introduction or dispersal of non-native plant species to less-than-significant levels. The following measures will be performed:

- **All seeds and straw material shall be certified weed free by the California Department of Food and Agriculture (CDFA) seed laboratory. All gravel and fill material used during project construction and maintenance shall be certified weed free by the County Agriculture Commissioner's Office. The removal site for all fill materials shall be examined for the presence of noxious weeds by the local County Agriculture Commissioner's Office. Material transported between counties shall be approved by the local County Agriculture Commissioner's Office in the county receiving the materials.**

- **Project landscaping shall conform to County and California Native Plant Society guidelines. Table 4.8-3 presents a list of species that should not be used for project landscaping.**

TABLE 4.8-3
PLANT SPECIES NOT TO BE USED IN PROJECT LANDSCAPING

Acacia (*Acacia* spp.)
Tree-of-heaven (*Ailanthus altissima)*
Giant reed (*Arundo donax)*
Bamboo (*Bambusa* spp., *et al)*
Pampas grass (*Cortaderia selloana)*
Cotoneaster (*Cotoneaster pannosa)*
French broom (*Cytisus monspessulanus)*
Scotch broom (*Cytisus scoparius)*
Blue gum (*Eucalyptus globulus)*
English ivy (*Hedera helix)*
Ice plant (*Mesembryanthemum chilensis)*
Mattress vine (*Muelenbeckia complexa)*
Tree tobacco (*Nicotiana glauca)*
Fountain grass (*Pennisetum setaceum*)
Pyracantha (*Pyracantha angustifolia*)
Castor bean (*Ricinus communis)*
Black locust (*Robinia pseudoacacia)*
German ivy (*Senecio mikianoides)*
Spanish broom (*Sparteum junceum)*
Tamarisk (*Tamarix* spp.)
Gorse (*Ulex europaeus*)
Periwinkle (*Vinca major)*

SOURCE: Environmental Science Associates

Significance After Mitigation

Less than significant.

Impact

4.8.5 The project would result in disturbance to, or direct mortality of, common wildlife species. This would be a less than significant impact.

Direct impacts to common wildlife species include both mortality of resident species and habitat loss and degradation. Mortality would include road kills, destruction of burrows of such species as ground squirrels and gophers, and destruction of nests of species such as western meadowlarks during both construction and operational phases of the proposed project. Habitat degradation associated with temporary construction-related disturbances may include displacement of animals due to construction noise and decreased water quality from oil and grease constituents. In addition, small-sized wildlife populations could be eliminated due to habitat modification. Fencing, if installed around lot lines, would hinder wildlife movement.

Operational impacts to common wildlife include increased human use and intrusion, harassment of native species by pets, and pest abatement. The change in plant composition on-site would result in a corresponding change in wildlife use. Wildlife species common to urban areas would not be as affected by the proposed development as much as species that require specific habitats located on-site, such as the dense, undisturbed forest community. It is not possible to predict the extent to which individual animal species would be affected by the proposed development.

Common wildlife species are generally abundant throughout their ranges and in the project vicinity. In addition, habitat for these species exists outside of the project boundaries, and open space will be retained within the project area that will provide on-site habitat for wildlife. These construction- and operational-related disturbances to common wildlife, therefore, would be considered adverse but not significant.

Mitigation Measures

4.8.5 Since no significant impact was identified, no mitigation is required.

Impact

4.8.6 Project development would result in a worst-case scenario the loss of up to 637 acres of California annual grassland. This would be a less than significant impact.

The loss of this community does not constitute a significant impact to biotic resources due to its relative abundance locally and regionally, and to the degraded nature of much of this community as a result of livestock grazing.

Mitigation Measures

4.8.6 Since no significant impact was identified, no mitigation is required.

Impact

4.8.7 **The proposed development would contribute incrementally to the cumulative loss and alteration of oak woodlands on a local and regional basis and habitat for sensitive and common plant and animal species. This would be a cumulatively significant impact.**

Oak woodland habitats are of high value to wildlife and are declining due to urban and suburban growth in the project site vicinity. The proposed Specific Plan would contribute to the regional loss of oak woodlands by developing infrastructure and other urban/suburban uses at the project site.

Mitigation Measures

4.8.7 **The project applicant shall implement mitigation measures 4.8.1, 4.8.3, and 4.8.4.**

Significance After Mitigation

Significant and unavoidable.

REFERENCES - Biological Resources

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4.9 GEOLOGY AND SOILS

4.9 GEOLOGY AND SOILS

4.9.1 SETTING

TOPOGRAPHY

The project site consists of slopes ranging from 20 percent to greater than 40 percent and rolling hills with slopes between 0 percent and 20 percent (**Figure 4.9-1**). The eastern and southern sections of the project site (proposed villages 5, 6, 7, and 8) consist of the steeper sloped areas. The project site, except for the northeastern section (proposed village 4), slopes to the west towards the City of Folsom. Elevations at the project site vary from 420 feet to 1,060 feet above mean level.

GEOLOGY

Regional Conditions

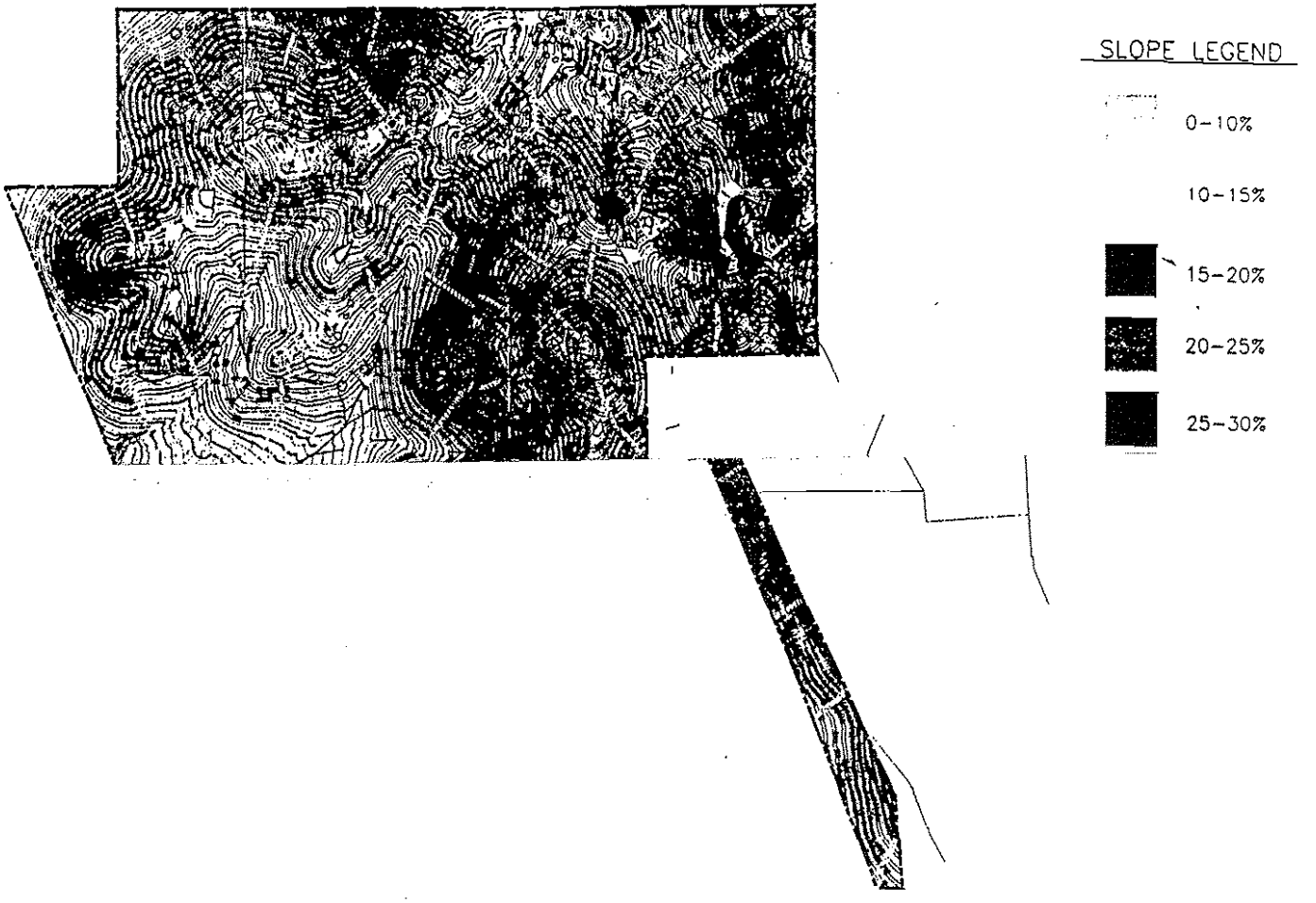
The project site is situated in the eastern portion of the Central Valley within the western edge of the Sierra Nevada Foothills. The valley is underlain by a great thickness of marine and terrestrial sedimentary rocks. The geologic structure of this portion of the Central Valley is characterized by relatively uniformly dipping sedimentary units that dip to the west, towards the axis of the valley. Cenozoic Era (up to 65 million years old) sedimentary rocks, volcanic mudflow deposits and unconsolidated sediments comprise the uppermost 4,000 feet of valley fill. Surface and near-surface rock formations in the project vicinity were primarily formed as deposits from rivers draining the western slope of the Sierra Nevada over the past three million years.

Project Site

While the proposed village center portion of the project site is underlain by alluvium, the majority of the project site area is underlain by volcanic bedrock, primarily the Copper Hill volcanics (Wagner, 1981). The Copper Hill volcanics consist of mafic to andesitic pyroclastic rocks, lava and pillow lava with subordinate porphyritic rocks. The alluvium deposits include Quarternary alluvium (less than 2 million years old) and consolidated Tertiary alluvial terrace deposits of the Laguna Formation (approximately 2-5 million years old).

SOILS

The project site consists of three soil types in the Auburn Soil Series based on soil mapping units identified by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (previously known as the Soil Conservation Service). This mapping information is intended for general land use planning. Site specific investigations should be performed to determine precise soil conditions and constraints.



SOURCE: Palisades, 1996

Figure 4.9-1
Site Topography

The Auburn soils are shallow, silty loams, layered one to two feet over bedrock. The Auburn soils identified on the project site consist of the following types, which are shown on **Figure 4.9-2**:

- Auburn silt loam (AwD) - 2 to 30 percent slopes, permeability is moderate, surface runoff is slow to moderate, erosion hazard is slight to moderate.
- Auburn very rocky silt loam (AxD) - 2 to 30 percent slopes; permeability is moderate, surface runoff is slow to moderate, erosion hazard is slight to moderate.
- Auburn very rocky silt loam (AxE) - 30 to 50 percent slopes, permeability is moderate, surface runoff is medium to rapid, erosion hazard is moderate to high.

Construction and road constraints for the Auburn soils are based on data provided in the USDA Soil Survey for the El Dorado Area (USDA, 1974). The low shrink-swell potential and low corrosive effects make the soils suitable for the placement of construction foundations. However, there are construction limitations of the soils due to their low to moderate shear strength and low to moderate stability. The use of Auburn soils for road fill is rated as fair due to the soils' tendency to erode on slopes, the moderate to high potential frost action, and the low shrink-swell capacity.

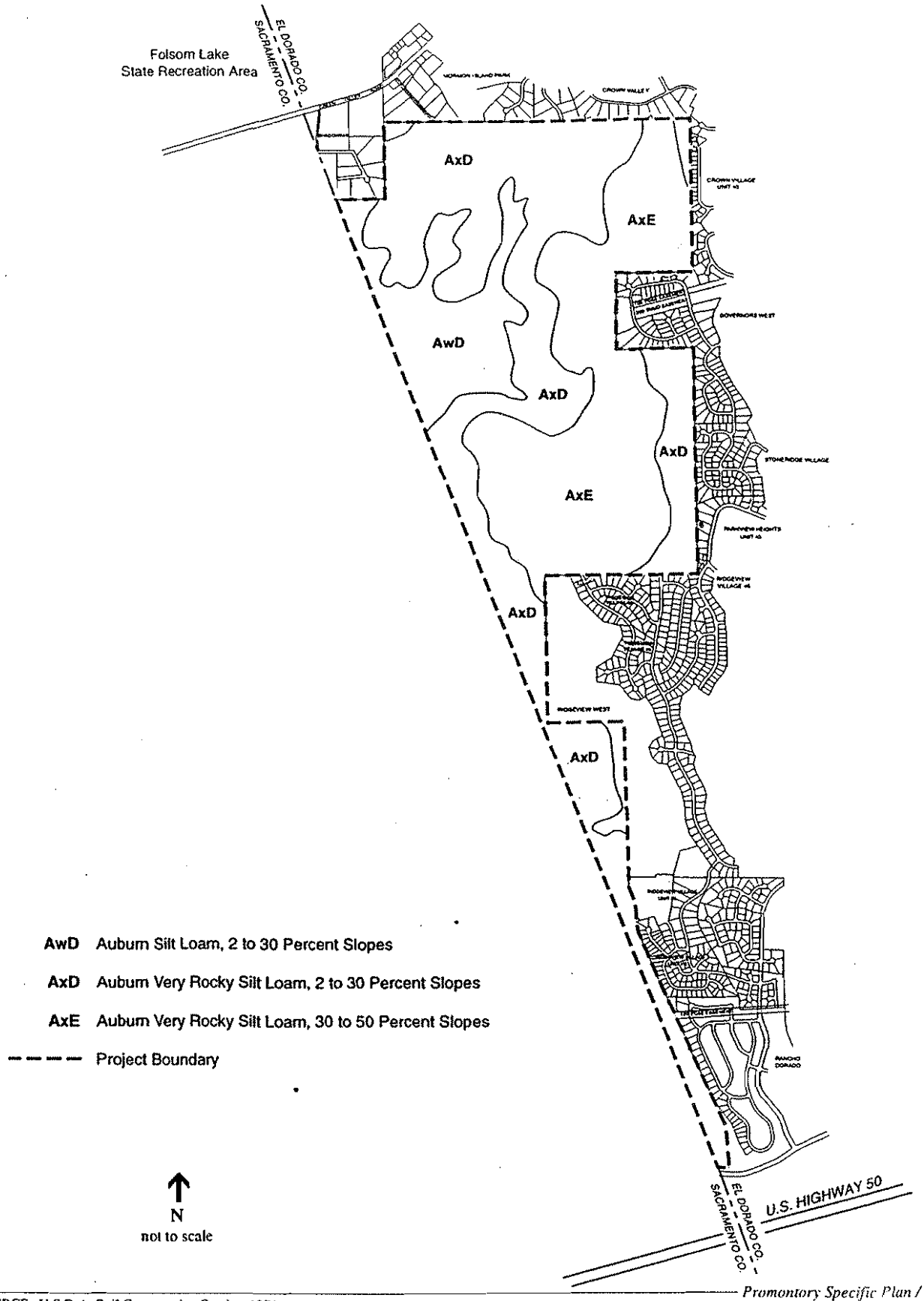
SEISMICITY AND SEISMIC HAZARDS

The Central Valley, like most of California, is a seismically active region, although it has a lower earthquake risk than many other areas of state. The severity of seismic events are typically described through the use of the Richter scale magnitude (M)[1].

Seismic regions in California have been mapped by the California Division of Mines and Geology (DMG). The DMG classifies faults as active if they have displaced soils within the last 10,000 years and as potentially active if they have produced earthquakes within the last two or three million years.

Table 4.9-1 shows the location of nearby faults and provides information, where available, on the year and magnitude of the most recent activity on the faults. Local faults include the Mormon Island Fault Zone south and west of the site, the Bear Mountains and New Melones Faults in the

[1] The earthquake magnitude (M) is a measure of the strain energy released at the source (focus) of the earthquake, and determined by seismographic observation of wave amplitude. The magnitude is expressed as a value on the Richter scale, developed by Charles F. Richter in 1935. The scale is a logarithmic scale, and each incremental (1.0) increase in Richter magnitude represents a 10-fold increase in ground wave amplitude and an approximately 32-fold increase in total energy release.



SOURCE: U.S.D.A. Soil Conservation Service, 1974

Figure 4.9-2
Project Site Soils

Sierra Nevada foothills just east of the site. Several large active earthquake faults are located in the Central Valley and San Francisco Bay Area, between 30 to 95 miles away. The fault zone along the eastern scarp of the Sierra Nevada, about 70 miles to the east, also could affect the project site.

TABLE 4.9-1
ACTIVE AND POTENTIALLY ACTIVE REGIONAL FAULTS

Fault	Nearest Location to the Project Site	Earthquake Year, Location	Historic Activity (Richter Magnitude)	MCE /a/
Mormon Island	0.5 miles SW	Mesozoic (70-220 million y.)		
Bear Mountains	0.5 miles E	1908	4.0	6.5
Foothills Fault System	0.5 miles E	1975, Oroville	5.7	6.5
New Melones	7.5 miles E	1960	3.0	6.5
Midland	33 miles W	1892, 1892	6.7 6.5	7.0
Dunnigan Hills*	35 miles NW	Holocene, (200-10,000 y.)		6.5-6.75
Coast Range Boundary	48 miles SW			7.0
Vacaville	50 miles SW	1892		6.7-7.0
Slinkard Valley	53 miles NE			6.25
Tahoe	53 miles NE			6.5
Antioch	55 miles SW			6.75
Cordelia	61 miles SW			6.5
Genoa	61.5 miles E			7.25
Hayward-Rodgers Creek - Healdsburg-Mayacamas	65 miles W	1868	6.8	7 +/- 2.5
Calaveras-Concord - Green Valley	65 miles SW	1986	6.1	7 +/- 2.5
San Andreas	95 miles SW	1989, Loma Prieta	7.1	8.3

* Evidence of Quaternary (i.e., less than 1.6 million years old) faulting is not definitive for this fault zone.
/a/ MCE is the Maximum Credible Earthquake, defined as the strongest earthquake that is likely to be generated along an active fault zone, based on the geologic character of the fault and the earthquake history.

SOURCES: City of Folsom, 1991; El Dorado County, 1996

Recorded fault activity closest to the project site occurred in 1908 during a magnitude (M) 4.0 earthquake on the Bear Mountains Fault within what is now Folsom Lake. The nearby Foothills Fault System is considered potentially active. Activity in this fault system is estimated to have a very long recurrence interval. However, a M4.0-4.9 earthquake occurred between 1900-1974

with an epicenter only 10 miles north of the project area (City of Folsom, 1991). Additionally, there was an M5.7 earthquake in Oroville in 1975 and between 1864 and 1869 there were four earthquakes of M4.0 to 5.0 in Nevada and Sierra counties. In addition to the Bear Mountains fault and the Foothills Fault System, the Sacramento County General Plan also indicates a presumably active fault in the vicinity of Citrus Heights, about 10 miles northwest of the site, of unknown extent and history of activity.

The primary earthquake hazards for the project site are the effects of ground shaking. Surface rupture is normally restricted to areas along the fault (for earthquakes larger than M5.5), but ground shaking may affect areas for hundreds of miles around the fault. The DMG's Maximum Expectable Earthquake Intensity Map places the project site in the low severity zone (Seismic Zone 3). Typical effects of the maximum ground shaking in Seismic Zone 3 include moderate structural damage to ordinary buildings, but negligible damage to buildings of good design and construction. Structures on alluvium are generally more susceptible to damage than structures on bedrock.

The greatest historical amount of ground shaking in the Folsom region occurred in April 1892 when two earthquakes, magnitudes 6.7 and 6.5, occurred in the vicinity of Vacaville and Winters. Damage in adjacent Sacramento County was limited to falling statuary and chimney cracks. The 1906 and 1989 earthquakes on the San Andreas Fault generated little shaking in the Folsom area and local damage was limited.

MINERAL RESOURCES

The California Division of Mines and Geology classifies the regional significance of mineral resources in accordance with the California Surface Mining and Reclamation Act of 1975 (SMARA). Mineral Resource Zones (MRZ) have been designated to indicate the significance of mineral deposits. The MRZ categories are as follows:

MRZ-1 Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2 Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.

MRZ-3 Areas containing mineral deposits the significance of which cannot be evaluated from available data.

MRZ-4 Areas where available information is inadequate for assignment to any other MRZ.

Although the El Dorado County General Plan Land Use Map does not identify the project site on the Mineral Resource (-MR) overlay, there is a small section of the project site in the proposed village center area that is classed MRZ-3a for placer gold deposits (DMG, 1984).

PLANS AND POLICIES

El Dorado County Grading, Erosion, and Sediment Control Ordinance

The El Dorado County Grading, Erosion, and Sediment Control Ordinance regulates grading on private property within the unincorporated areas of the County. The Ordinance states that no person shall perform, or permit to be performed, grading activities:

A. In such a manner that quantities of dirt, soil, rock, debris, or other material substantially in excess of natural levels are washed, eroded, or otherwise moved from the site, except as specifically provided for by a permit.

B. Prior to obtaining the required land use approvals (i.e., General Plan Amendment, Zoning change, Special Use Permit, and other applicable Land Use Ordinances).

The ordinance sets forth rules and regulations to control excavation, grading, and earthwork construction, including fills and embankments; establishes the administrative procedures for issuance of permits; and provides for approval of plans and inspection of grading construction. Where the grading of earthwork involves multiple parcels, parcel maps, subdivisions, land divisions, or roads, the "Design and Improvement Standards Manual" is used for design purposes. This manual includes Hillside Development Standards.

The Hillside Development Standards outline slope-specific grading requirements for subdivisions proposed in areas with natural cross-slopes of ten percent or greater. These requirements include minimum standards for frontage, setback, and lot size and maximum limits for development and building envelopes. Hillside road standards are also specified, including minimum design standards for vertical and horizontal road curves, road width, and maximum grades. The road standards are optional for areas with average cross slopes between 16 and 24 percent and mandatory for areas with cross slopes of 25 percent or greater.

Resource Conservation District

The El Dorado County Resource Conservation District (RCD), a local division of the California Association of Resource Conservation Districts, published an Erosion and Sediment Control Plan. The Erosion and Sediment Control Plan prescribes measures for controlling erosion and sediment during all stages of construction. The Plan assists developers in implementing appropriate practices specific to the project site and time of year. In addition, the Plan includes suggestions

for estimating and subsequently mitigating the peak storm runoff flow and the total storm runoff volume that would result from development of a site.

El Dorado County General Plan

Relevant El Dorado County General Plan goals, objectives, and policies related to geologic conditions include the following:

Goal 6.3: Geologic and seismic standards minimize the threat to life and property from seismic and geologic hazards.

Objective 6.3.2: County-Wide Seismic Hazards. Continue to evaluate seismic related hazards such as liquefaction, landslides, and avalanche, particularly in the Tahoe Basin.

Objective 7.1.2: Erosion/Sedimentation. Minimize soil erosion and sedimentation.

Policy 7.1.2.1: Discretionary development shall be discouraged on slopes exceeding 40 percent unless necessary for access. Slopes exceeding 30 percent and greater shall have a site specific review of soil type, vegetation, drainage contour, and site placement to encourage proper site selection and mitigation. Septic systems may only be located on slopes under 30 percent. Roads needed to complete circulation/access and for emergency access may be constructed on such cross slopes if all other standards are met.

Policy 7.1.2.2: Discretionary projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation. (El Dorado County, 1996a)

The project is generally consistent with these General Plan goals, objectives, and policies related to geologic conditions.

Measure A - El Dorado County Homeowners' Protective Initiative

The El Dorado County Homeowner's Protective Initiative, referred to as Measure A, was passed in 1984. The measure prohibits all new open pit or surface mining operations in the County within 10,000 feet of any existing or planned residential, church, hospital, or school use unless it is found and determined that:

A. Such a project will not have any adverse effect on the environment; and
B. The project will not discourage residential use.

4.9.2 IMPACTS AND MITIGATION

SIGNIFICANCE CRITERIA

Based on review of the project site and available geologic data, an impact would be considered significant if the project would result in:

- Substantial soil erosion or unstable ground conditions;
- Development in areas of unstable geologic conditions;
- Exposure of people or structures to major seismic hazards; or
- Prevention of the recovery of significant mineral resources.

Impact

4.9.1 Development of the project site would include substantial grading activities that would result in ground instability and soil erosion. This would be a potentially significant impact.

Development at the project site would include dwellings, an elementary school, commercial buildings, parks, roadways, and utilities. The following activities have the potential to cause erosion and/or ground instability if not addressed:

- Construction at the project site would remove vegetative cover and use heavy equipment and/or blasting to loosen soil and bedrock materials, which would expose the resulting sediment to accelerated wind and/or water erosion.

- Grading and cut and fill activities would be required, especially in areas which have slopes greater than 20 percent. Even though no evidence of landslides was observed within the project area, residual ground instability from grading and cut and fill activities would increase the likelihood and magnitude of landslides.

- Improper temporary storage and/or inappropriate reuse or disposal of excess soil from grading and cut and fill activities or of soil excavated to form the storm water detention basins would produce substantial amounts of soil erosion and sedimentation.

The grading plan (Section 3.6) in the Promontory Specific Plan (Palisades Development, 1997) includes standards to minimize the soil erosion and ground instability due to development at the project site.

Implementation of the grading plan standards would reduce the impacts to soil erosion and ground instability. However, given the steep slopes and the erosion potential of soils on the project site, additional measures are necessary to fully mitigate the impacts of the proposed development.

Mitigation Measures

4.9.1a Prior to approval of the improvement plans for site development, the project applicants shall hire an engineering geologist or equivalent professional to prepare a site specific geotechnical report that will include the following:

- **Identification of areas of potential slope hazards and measures to minimize the project's impacts to slope stability.**
- **Identification of areas susceptible to soil erosion and measures to minimize the project's impact on soil erosion.**
- **Determination of the suitability of excavated material as engineering fill, topsoil, or other type of reuse onsite.**

4.9.1b To the maximum extent practicable, project site development shall avoid areas determined by the site specific geotechnical report to have unstable ground conditions.

4.9.1c Prior to approval of the improvement plans for site development, the project applicant will submit an erosion control plan to the County. Erosion control measures will include techniques such as physical and vegetative stabilization measures and runoff diversion measures. Additionally the plan will specify measures for reuse or disposal of excavated material. If excavated material is suitable for use at the project site, the plan should minimize elapsed time between excavation and reuse and provide adequate stockpile coverage and protection from wind and water erosion during the entire storage period. If excavated material is unsuitable for reuse at the project site, the plan will include specific information regarding the eventual reuse or disposal site, transportation methods, disposal reuse management, and schedule. The plan will be consistent with the El Dorado County Grading, Erosion, and Sediment Control Ordinance and the El Dorado County Resource Conservation District's Erosion and Sediment Control Plan.

4.9.1d Stabilize grading areas left unprotected during the rainy season, as specified by the County Grading, Erosion, and Sediment Control Ordinance. Stabilization measures may include National Pollutant Discharge Elimination System (NPDES) Construction Activity best management practices such as hydroseeding, geotextiles and mats, and straw bale or sand bag barriers.

4.9.1e Implement water quality mitigation measures, including retention of vegetation and avoidance of grading activities near water channels to the maximum extent feasible. Water quality mitigation measures are described in detail in Section 4.10, Hydrology and Water Quality.

Significance After Mitigation

Less than significant.

Impact

4.9.2 Implementation of the proposed project would expose people and structures to major seismic hazards. This would be a potentially significant impact.

Regionally active and potentially active faults could produce an earthquake of M6.0 to 7.0 that would generate groundshaking within the project area. The risk of significant damage at the project site from such groundshaking is generally low due to the predominance of relatively stable older alluvial terraces and areas of hard granitic bedrock. At higher risk of damage are the portions of the project site with unconsolidated alluvium. The risk of significant damage at the project site due to ground rupture is low due to the lack of active faults on site.

Mitigation Measures

4.9.2a Prior to approval of the improvement plans for site development, a seismicity report will be completed by an engineering geologist or equivalent professional regarding possible damage from seismic shaking and secondary hazards such as landsliding, liquefaction and lateral spreading. This report will include:

- **An analysis of seismic hazards anticipated at the project site from regional faults.**
- **A discussion and recommendations for seismic mitigation at the project site. Recommendations may include use of reinforced concrete foundations and avoidance of potentially unstable foundation materials.**

4.9.2b The project applicant will incorporate the recommendations of the seismicity report into the design for all structures proposed at the project site. All structures will be designed for Seismic Zone 3 and will be designed to withstand the anticipated seismic hazards determined in the seismicity report. Plans for all structures shall be reviewed by the County prior to approval of the improvement plans and building permits.

Significance After Mitigation

Less than significant.

Impact

4.9.3 Implementation of the proposed project may affect mineral resources at the project site. This would be a less than significant impact.

The project site is not identified on the Mineral Resource (-MR) overlay of the County General Plan Land Use Map. There is a small section of the project site in the proposed village center area, that is classified MR2-3a for Placer gold deposits. Given that the County's Measure A prohibits new surface mining operations within 10,000 feet of residential areas, and that existing adjacent land uses include residential units, mining activities would not be permitted at the project site. Therefore, no prevention of the recovery of mineral resources would occur as a result of the proposed project.

Mitigation Measures

4.9.3 Since no significant impact was identified, no mitigation was required.

REFERENCES - Geology, Soils and Geologic Hazards

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4.10 HYDROLOGY AND WATER QUALITY

4.10 HYDROLOGY AND WATER QUALITY

4.10.1 SETTING

REGIONAL SETTING

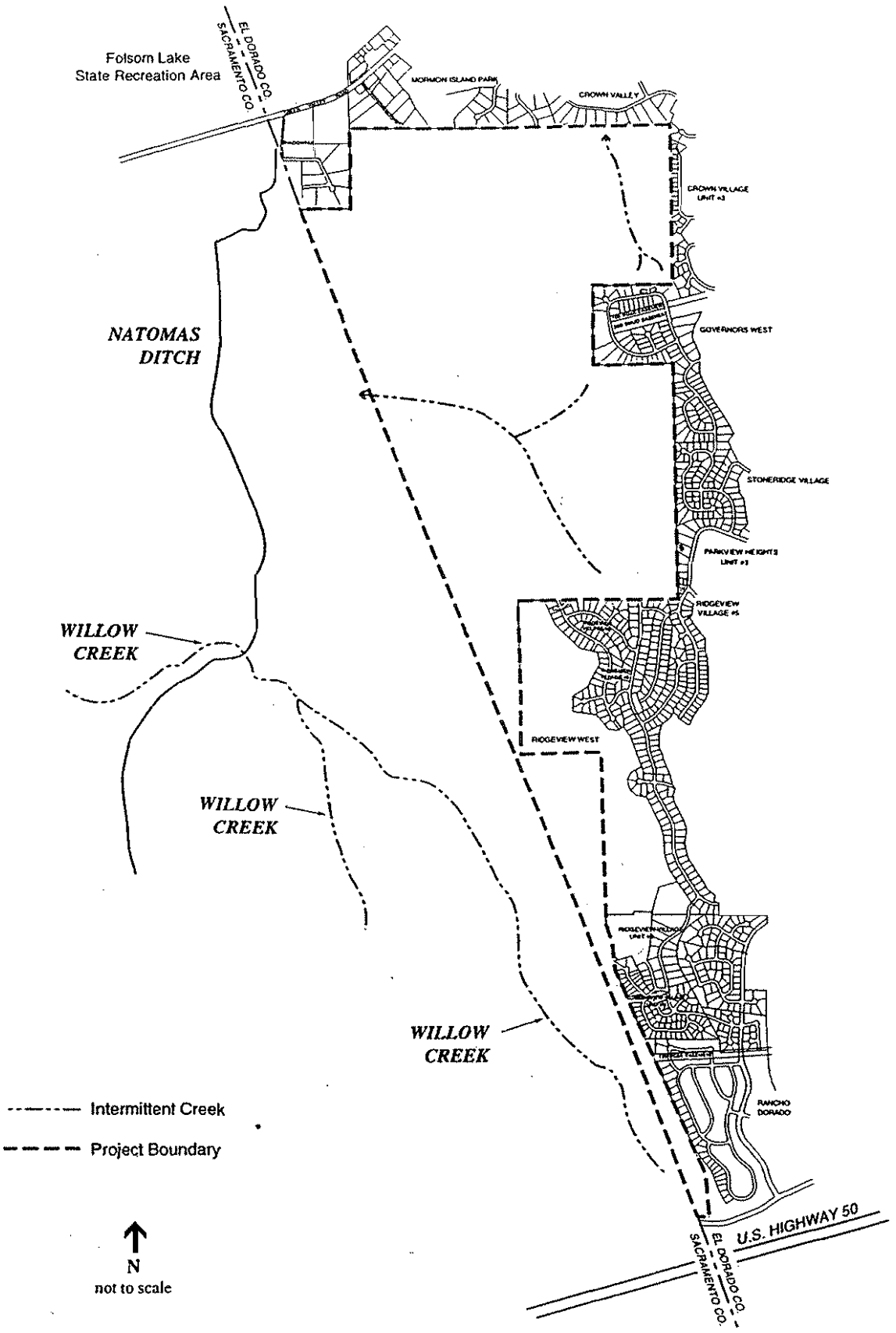
The project site is located approximately one half mile south of Folsom Lake, and east of Willow Creek. Willow Creek flows in the westerly direction from the vicinity of the project site to its confluence with Lake Natoma, approximately seven miles downstream. Willow Creek receives runoff from the project site, and also from several small tributaries, including Humbug Creek. Willow Creek and its tributaries are intermittent, flowing only during and immediately after the rainy season. The total Willow Creek watershed encompasses approximately 8,200 acres.

Site Hydrology

Precipitation is the principal source of runoff from the project site. Mean annual precipitation is approximately 26 to 28 inches per year. Most of the annual rainfall arrives during the winter storm season from November through March. Annual rainfall may vary widely from year to year, with less than 15 inches in critically dry years such as 1976 and 1988 and over 50 inches in unusually wet seasons such as 1982 and 1983. The most significant storm expected in an average year is estimated to produce 1.8 inches of rainfall in 24 hours. The 100-year storm (which has a 1 percent chance of happening in any given year) is estimated to produce 4.3 inches of rainfall in a 24-hour period.

Several drainages originating on or above the project site are tributary to Willow Creek, as shown in **Figure 4.10-1**. Approximately 87 percent of the project site drains via these channels. The natural channel of a north Willow Creek tributary appears to have been replaced by the Natomas Ditch, upstream of its confluence with the main channel of Willow Creek. Surface runoff over this relatively level area is not well channeled and overland flow occurs. A series of drainages in the northeast corner of the project site, representing approximately 13 percent of the total project area, drains in a northerly direction to Folsom Lake.

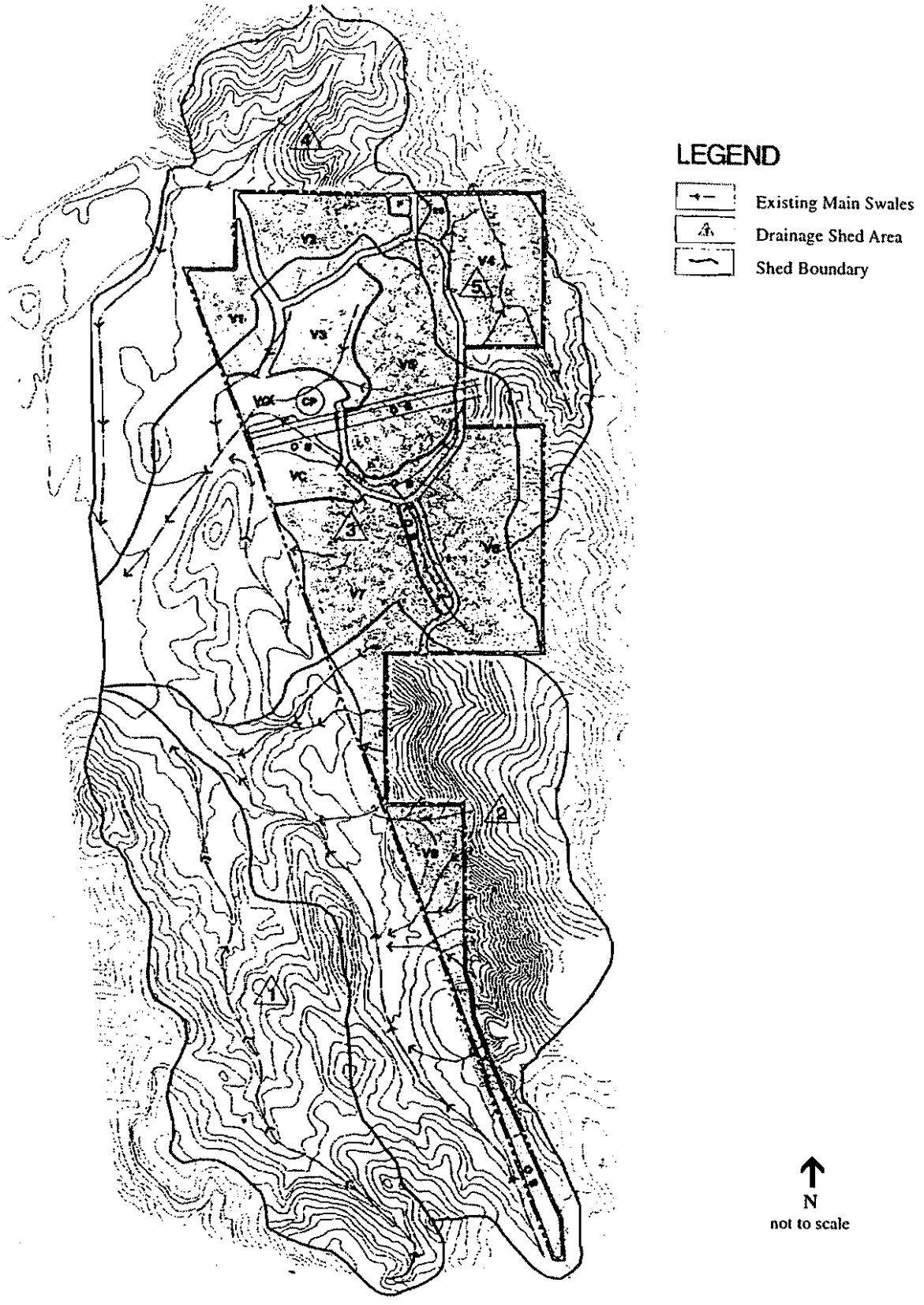
The topography of the project site and vicinity is such that it can be broken down into five major drainage sheds, as shown in **Figure 4.10-2**. Three of the project site drainage sheds (Drainage Shed Areas 2, 3, and 4) drain to the Willow Creek, while a fourth drainage shed (Drainage Shed Area 5) drains into Folsom Lake. Drainage Shed Area 1 is contained mostly within the proposed Russell Ranch development, which is expected to contribute significant runoff increases in the shed area. Although no perennial drainages occur on the project site, existing peak flows from the project site into Willow Creek are estimated at 2,188 cubic feet per second (Cooper, Thorne & Associates, 1991).



SOURCE: U.S. Department of the Interior, 1980

Promontory Specific Plan / 950107 ■

Figure 4.10-1
Willow Creek Hydrology



SOURCE: Palisades, 1996

Figure 4.10-2
Site Drainage

Flooding

Regional Flooding

Evidence flooding and flood hazards downstream of the project site has been presented in the Humbug/Willow Creek Parkway Master Plan (Harland Bartholomew and Associates, 1991). Certain reaches of Humbug and Willow Creeks currently have restricted channel capacities and cannot pass 100-year flows. The locations experiencing flooding are Humbug Creek from near the El Dorado/Sacramento County Line to Oak Avenue and Willow Creek between the El Dorado/Sacramento County Line and Prairie City Road (Harland Bartholomew and Associates, 1991). The Humbug/Willow Creek Parkway Master Plan suggests channel modifications and maintenance on Humbug and Willow creeks to provide additional capacity.

Local Flooding

Federal Emergency Management Agency (FEMA) flood hazard maps for the project area and vicinity were revised and published in 1995. The FEMA map covering the project site shows no flood plains within the project site.

Dam-failure inundation on some low-lying portions of the project site could result from failure of the Mormon Island Auxiliary Dam on Folsom Lake. Recent and on-going reinforcement projects by the U.S. Army Corps of Engineers are expected to eliminate the possibility of such a failure.

WATER QUALITY

Although water quality monitoring has not been conducted on the project site, the quality of surface runoff is expected to be relatively good, or at least equivalent to other natural drainage systems in the area. It is possible that some drainages contain sediments and other pollutants from automobile and truck traffic on existing roads, residences, livestock grazing, or land uses on adjacent properties. Based on previous, known land uses, pollutants such as hydrocarbons and heavy metals are likely to occur only in minimal concentrations. Nutrients such as phosphate and nitrogen compounds may be present at low levels.

GROUNDWATER RESOURCES

The project area is in the southeastern corner of the Sacramento Valley groundwater basin, adjacent to the Sierra Nevada foothills, and is without significant groundwater resources (California Department of Water Resources, 1990). The hydrogeology of the Sacramento Valley is characterized by both local unconfined and confined aquifers. The aquifers that are most significant near the project vicinity are in the Mehrten and Laguna formations and the young alluvial fans, stream channel deposits, flood plain and flood basin deposits. Hardpan and clay layers overlying these aquifers often reduce infiltration of water from the land surface. Aquifers

near the project vicinity are generally recharged along river and active stream channels where deposits of sand and gravels exist, and by boundary inflow.

The groundwater depth and gradient at the project site are not known. In addition, there are no designated groundwater basins identified in El Dorado County (El Dorado County, 1996a). No wells are known to exist at the site. Available information[1] also suggests that some groundwater in the area is found within bedrock fractures, alteration zones, and along the soil/bedrock interface, and is highly variable in depth and direction of flow. Potential on-site groundwater recharge areas most likely consist of the Willow Creek tributaries identified in **Figure 4.10-1**.

PLANS AND POLICIES

There are several agencies with jurisdiction over flood control and water quality activities in the project area. These agencies include El Dorado County, the Department of Water Resources (DWR), and the Federal Emergency Management Agency (FEMA).

El Dorado County General Plan

The El Dorado County General Plan outlines a county-wide drainage and flood management program to prevent flooding, protect soils from erosion, and minimize impacts on existing drainage facilities. The following General Plan policies pertain to this project:

Policy 5.4.1.1: Require storm drainage systems for new development that protect public health and safety, preserve natural resources, prevent erosion of adjacent and downstream lands, prevent the increase in potential for flood hazard or damage on either adjacent, upstream or downstream properties, minimize impacts to existing facilities, meet the National Pollutant Discharge Elimination System (NPDES) requirements, and preserve natural resources such as wetlands and riparian areas.

Policy 5.4.1.2: Discretionary development shall protect natural drainage patterns, minimize erosion, and ensure existing facilities are not adversely impacted while retaining the aesthetic qualities of the drainage way.

Policy 6.4.2.1: Apply a zoning overlay for areas located within dam failure inundation zones, as identified in the El Dorado County Operation Area Multi-Hazard Functional Emergency Operations Plans.

1 Youngdahl & Associates Inc. Phase I Soils Report. Project No. 92163.A, May 1992

Policy 6.4.2.2: No new critical or high occupancy structure (e.g., schools, hospitals) should be located within the inundation area resulting from failure of dams identified in the El Dorado County Operation Area Multi-Hazard Functional Emergency Operations Plans.

Policy 7.1.2.2: Discretionary projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation.

Policy 7.3.1.1: Encourage the use of Best Management Practices, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.

Policy 7.3.2.2: Projects requiring a grading permit shall have an erosion control program approved, where necessary.

Policy 7.3.2.3: Where practical and when warranted by the size of the project, parking lot storm drainage shall include facilities to separate oils and salts from storm water in accordance with the recommendations of the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbooks (1993).

Policy 7.3.4.1: Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.

Policy 7.3.4.2: Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.

The proposed project is generally consistent with the General Plan policies described above.

Federal Emergency Management Agency

El Dorado County is a participant in the National Flood Insurance Program (NFIP), a federal program administered by the Federal Emergency Management Agency (FEMA). Participants in the NFIP must satisfy certain mandated flood plain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection that developments should be protected from flood water damage of the Intermediate Regional Flood (IRF), which is defined as a flood which has an average frequency of occurrence on the order of once in a 100 years, although such a flood may occur in any given year. The County is occasionally audited by the California Department of Water Resources (DWR) to insure implementation of FEMA floodplain management regulations.

Regional Water Quality Control Board Discharge Permits

The Central Valley Regional Water Quality Control Board (RWQCB) issues permits for activities that could cause impacts to surface waters and groundwater in the vicinity of the project site, including construction activities. Typically, General Construction National Pollutant Elimination System (NPDES) permits are issued by the RWQCB for grading activities that disturb over five acres of land. NPDES General permits require adherence to Best Management Practices (BMPs) for the control of erosion and other potential water quality pollutants associated with construction activity. These BMPs consist of the following:

- "Site Planning Considerations" such as preservation of existing vegetation.
- "Vegetation Stabilization" through methods such as seeding and planting.
- "Physical Stabilization" through use of dust control and stabilization measures.
- "Diversion of Runoff" by utilizing earth dikes and temporary drains and swales.
- "Velocity Reduction" through measures such as slope roughening/terracing.
- "Sediment Trapping/Filtering" through use of silt fences, straw bale and sand bag filters, and sediment traps and basins.

Russell Ranch Specific Plan

The Russell Ranch development, immediately adjacent to the project site, addressed water quality and flooding issues as part of its approval process. The following conditions of approval (City of Folsom Resolution No. 3899) are relevant to flood prevention and water quality protection for the project site:

Condition #26: All future transportation facilities adjacent to or crossing the El Dorado - Sacramento County line may be coordinated with the City of Folsom / El Dorado County Joint Powers Authority and the El Dorado County Department of Transportation to ensure consistency and coordination of plans along the county line, and to ensure that appropriate grading, drainage, and other sound engineering practices will be implemented.

Condition #117: All future drainage facilities within local watersheds that cross the El Dorado and Sacramento County line shall be reviewed by and coordinated with the Joint Powers Authority to ensure that appropriate drainage design will be implemented. Individual projects in upper watershed areas shall be designed to limit runoff flows to pre-development levels, thus reducing the possibility of flooding or the need for enlarged detention basins in downstream watershed areas.

4.10.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

A hydrologic, flooding, or water quality impact of the proposed project would be considered significant if it met any of the following criteria, adapted from CEQA guidelines, Appendix G.

- Generate substantial storm water runoff,
- Contaminate a public water supply,
- Substantially degrade water quality,
- Substantially degrade or deplete groundwater resources.
- Cause substantial flooding, erosion, or siltation,
- Expose people or structures to flood hazards,

Impact

4.10.1 Construction of subsequent projects under the Specific Plan would result in temporary degradation of downstream surface water quality of Willow Creek, Humbug Creek, Lake Natoma, and Folsom Lake. This would be a significant impact.

Construction activities would consist of substantial grading and vegetation removal activities, which would increase soil erosion rates on the site. This increase in soil erosion would result in sedimentation of downstream surface waters, especially during the winter and spring months (periods of high winds and precipitation). The severity of sedimentation on downstream surface waters is dependent several factors including soil erosion potential and construction practices, timing, magnitude, and proximity to drainage ways.

In addition, construction activities and equipment typically use many chemicals and compounds that can adversely affect water quality and are potentially hazardous to aquatic life. These chemicals and compounds usually include gasoline, oils, grease, solvents, lubricants, and other petroleum products.

The grading plan in the Promontory Specific Plan provides measures to prevent erosion and sedimentation. The grading plan would adhere to the El Dorado County Grading, Erosion, and Sediment Control Ordinance, the Resource Conservation District and Erosion and Sediment Control Plan, and Erosion and Sediment Best Management Practices for Construction Activity.

Project proposed measures would reduce adverse water quality effects from construction activities, however, further mitigation is required.

Mitigation Measures

4.10.1 Prior to approval of improvement plans for site development, the project applicant shall submit erosion control plans and hazardous materials control program to the County consistent with El Dorado County's Grading, Erosion, and Sediment Control Ordinance and El Dorado Resource Conservation District's Erosion and Sediment Control Plan. The plan should include Best Management Practices to minimize and control pollutants in storm water runoff. Suggested water quality control practices should include the following:

Construction Measures

- **Native vegetation will be retained where possible. Grading and excavation activities will be limited to the immediate area required for construction.**
- **Stockpiled topsoil shall be placed in disturbed areas outside of natural drainageways. Stockpile areas shall be designated on project grading plans.**
- **No construction equipment or vehicles will disturb natural drainageways without temporary or permanent culverts in place. Construction equipment and vehicle staging areas will be placed on disturbed areas and will be identified on project grading plans.**
- **If construction activities are conducted during the winter or spring months, storm runoff will be regulated by temporary on-site detention basins.**
- **Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) will be employed for disturbed slopes until permanent revegetation is established.**
- **No disturbed surfaces will be left without erosion control measures during the winter and spring months.**
- **Sediment will be retained on-site by a system of sediment basins, traps, or other appropriate measures.**
- **Immediately after the completion of grading activities, erosion protection will be provided for finished slopes. This may include revegetation with native plants (deep-rooted species for steep slopes), mulching, hydroseeding, or other appropriate methods.**
- **Energy dissipaters will be employed where drainage outlets discharge into areas of erodible soils or natural drainageways. Temporary dissipaters may be used for temporary storm runoff outlets during the construction phase.**

- **A spill prevention an countermeasure plan will be developed identifying proper storage, collection, and disposal measures for pollutants used on-site. No-fueling zones shall be indicated on grading plans and shall be situated at least 100 feet from natural drainageways.**

Operation Measures

- **All storm drain inlets will be equipped with silt and grease traps to remove oil, debris, and other pollutants, which will be routinely cleaned and maintained. Storm drain inlets will also be labeled "No Dumping - Drains to Streams and Lakes".**

- **Parking lots will be designed to allow as much runoff as feasible to be directed toward vegetative filter strips to help control sediment and improve water quality.**

- **Storm runoff from service stations or other similar uses will be treated with an oil/water separator.**

- **Permanent energy dissipaters will be included for permanent outlets.**

- **The detention/retention basin system on the site will be designed to provide effective water quality control measures. Design and operation features of detention/retention basins will include:**

  1. **Construct basins with a total storage volume that permits adequate detention time for settling of fine particles even during high flow conditions.**

  2. **Maximize the distance between basin inlets and outlets to reduce velocities, perhaps by using an elongate basin shape.**

  3. **Incorporate some below grade area within the main detention basin for sediment settling.**

  4. **Allow vegetation to reduce velocities and naturally filter water by encouraging vegetation establishment and ensuring adequate water supply to maintain vegetation cover.**

  5. **Establish basin maintenance responsibility and schedules to periodically remove basin sedimentation, excessive vegetation growth, and debris that may clog basin inlets and outlets.**

Significance After Mitigation

Less than significant.

Impact

4.10.2 Operation of the project site would result in long-term water quality degradation from urban runoff. This would be a significant impact.

Implementation of the proposed project would result in a substantial alternation of the project site from its existing conditions. Downstream surface water quality in Willow Creek, Humbug Creek, Lake Natoma, and Folsom Lake would be affected by urban runoff from the project site. Urban runoff usually consists of oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals), pesticides, herbicides, and other household pollutants. Pollutant concentrations in urban runoff are typically at their highest during the first winter storms following the summer months when these pollutants build up.

Since the proposed project would result in the increase in the amount of impervious surfaces on-site and a decrease in vegetation which assists in improving water quality, the project would result in an increase urban runoff pollutant loading of Willow Creek, Humbug Creek, Lake Natoma, and Folsom Lake.

The Promontory Specific Plan provides several measures to assist in the reduction of water quality impacts. The Specific Plan designates two on-site tributaries to Willow Creek as public open space. These channels would not be directly impacted by development. In addition, the Specific Plan includes the following measures:

- Allow for growth of riparian vegetation in existing channels to the extent that functioning is not impaired.

- Retention/detention basins will be used to filter out sediments. Due to the topography and steep terrain within the project site, a mutual agreement between the project applicants and the neighboring Russell Ranch development for the location and sizes of shared detention facilities has been arranged. A retention/detention facility is planned in the village center at the project site, while two retention/detention facilities are planned in the Russell Ranch community.

The measures included in the Promontory Specific Plan would reduce the impacts to surface quality, but would not eliminate the possibility of downstream contamination.

Mitigation Measures

4.10.2 Implement Mitigation Measure 4.10.1 (operation measures).

Significance After Mitigation

Less than significant.

Impact

4.10.3 Implementation of the proposed project would result in the increase of impervious surfaces on the site, limiting areas for groundwater recharge. This would be a less than significant impact.

As previously described, groundwater sources on the project site are likely to be limited and would be located within bedrock fractures, alternation zones, and along soil/bedrock interfaces, and is highly variable in depth and direction of flow. Areas of potential groundwater recharge are the two intermittent tributaries of Willow Creek in the northern portion of the project site. As shown in **Figure 3-3**, these drainageways would be designated as public open space and would not be developed which would allow for groundwater recharge.

Mitigation Measures

4.10.3 Since no significant impact was identified, no mitigation was required.

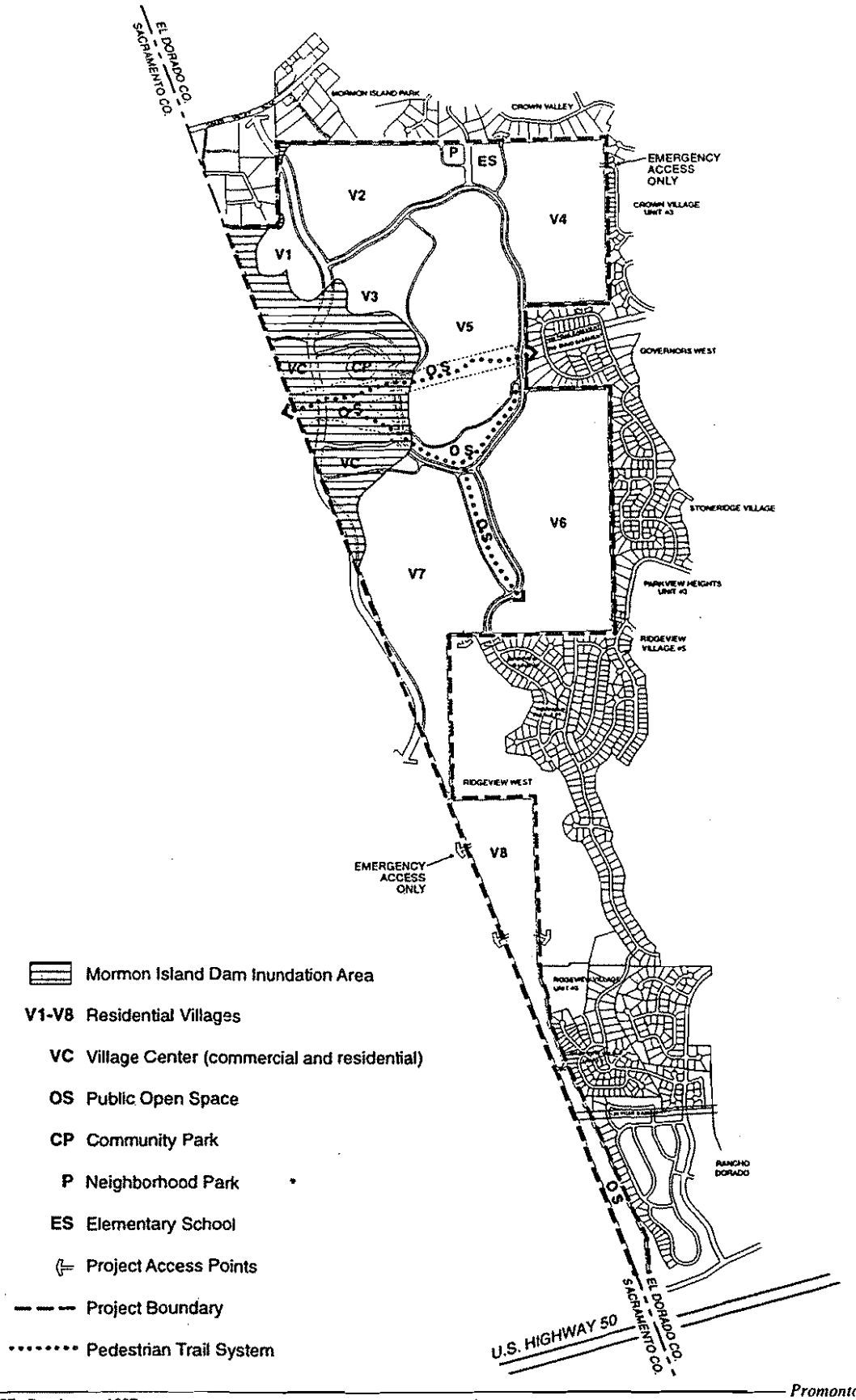
Impact

4.10.4 Implementation of the proposed project would expose future residents and structures to inundation in the event of the failure of the Mormon Island Dam. This would be a potentially significant impact.

The project site is located south of Folsom Lake and the Mormon Island Dam. As shown in **Figure 4.10-3**, the proposed village center and portions of villages 1, 2, 3, 5, and 7 would be inundated in the event of failure of Mormon Island Dam (Pennington, 1997). Dam failure would most likely occur with adequate time to evacuate residents, but would result in substantial damage to structures.

Mitigation Measures

4.10.4 Prior to approval of improvement plans for site development, the project applicant, in coordination with the El Dorado County Office of Emergency Services and the U.S. Bureau of Reclamation, will develop an evacuation plan for the project site. The evacuation plan will include the establishment of protocol in the event of the failure of Mormon Island Dam and will be consistent with the El Dorado County Operation Area Multi-Hazard Functional Emergency Operations Plan.



SOURCE: Pennington, 1997

Promontory Specific Plan / 950107 ■

Figure 4.10-3

Mormon Island Dam Inundation Area

Significance After Mitigation

Less than significant.

Impact

4.10.5 Implementation of the proposed project, in conjunction with approved and proposed developments in the El Dorado Hills area and the City of Folsom, would result in increased flows in Willow and Humbug creeks in the City of Folsom. This cumulative increase in flows could result in on-site and downstream flooding in the City of Folsom. This would be a cumulatively significant impact.

Conversion of the undeveloped lands to urban/suburban uses on the project site would increase the area of impervious surfaces. As shown in **Table 4.10-1**, a maximum of 36 percent of the land surface at the project site would be impervious at full build-out. The increased area of impervious surfaces such as roads, parking lots, sidewalks, and buildings prevents natural infiltration to the soil and thus creates higher runoff volumes. More rapid transport of runoff over smooth artificial surfaces and drainage facilities, combined with the higher volume of runoff, would result in elevated peak flows.

TABLE 4.10-1
IMPERVIOUS SURFACES ON THE PROJECT SITE AT FULL BUILD-OUT

Planned Land Use	Gross Acres /a/	Percent Impervious Surface /b/
Residential	820.8	35
Commercial	54.7	85
Schools	10.0	50
Parks/Open Space	113.5	15
Total	999.0	
Weighted Average		35.6

/a/ Gross acres includes road areas allocated with adjacent land use.
/b/ Based on Marsh, William M. 1991. Landscape Planning, Environmental Applications. New York, John Wiley & Sons, Inc.

SOURCE: Environmental Science Associates

A drainage study by Cooper, Thorne & Associates (Cooper, Thorne & Associates, 1991) identifies that development at the project site would increase total peak runoff flow into Willow Creek from 2,188 cubic feet per second (cfs) to 2,351 cfs (7 percent increase) and increase total storm runoff flow from 248.6 ac-ft to 257.8 ac-ft (4.2 percent increase). These increases in flows could also result in localized on-site flooding, especially within the lower elevation areas in the village center.

In addition to the project site, urban development in the El Dorado Hills area (outside of the project site), at full build-out, would result in a total of approximately 370 acres of impervious land surface[2] that would also drain into Willow Creek. Development in the eastern and southern portions of the City of Folsom consisting of, but not limited to, Russell Ranch, The Parkway, and Prairie Oaks Ranch would also contribute increased flows to Willow and Humbug creeks.

Increases in storm runoff into Willow and Humbug would likely increase flooding along those creeks. Reaches of Willow and Humbug creeks currently have restricted channel capacities and problems passing 100-year flows.

The Promontory Specific Plan proposes several measures to minimize increased drainage effects. These measures include bank improvements, water velocity reduction measures, and retention/detention basins and sharing of retention/detention capacities with the planned Russell Ranch project.

Specific Plan proposed measures would assist in reducing peak storm run-off flows from project development, but does not ensure that flows will not increase over existing conditions.

Mitigation Measure

4.10.5a Prior to approval of improvement plans for site development, El Dorado County shall coordinate with the City of Folsom and the City of Folsom/El Dorado County Joint Powers Authority in developing a formal drainage agreement identifying shared drainage facilities and volumes, pre- and post-development runoff volumes that maintain existing 100-year storm drainage flows, and a review process of future project-specific drainage plans. The drainage agreement shall be approved by both the City of Folsom and El Dorado County.

4.10.5b Prior to approval of improvement plans for site development, the project applicant shall prepare a hydrologic study in conformance with the El Dorado County Drainage Manual which would support the project drainage plans. The project applicant shall submit both the hydrologic study and drainage plans to the County for review and approval. These drainage plans shall clearly demonstrate that build-out peak storm runoff flows from the project site will remain at or below existing peak storm runoff flows. The drainage plan will provide details on ultimate location and design of retention/detention basins and other drainage facilities, as well as a maintenance program for all drainage facilities. The drainage plan shall also identify the 100-year floodplain on the project site, or verify that no 100-year flood zones will exist on the site. The

[2] Impervious land surface calculated assuming the percent land surface at other developments in the region would roughly equal the weighted average impervious surface percentage at the project site.

drainage plan shall be in conformance with the El Dorado County Drainage Manual, as well as any additional requirements set forth the City of Folsom/El Dorado County drainage agreement described in Mitigation Measure 4.10.5a.

4.10.5c Prior to County approval, the County shall submit project drainage plans to the City of Folsom for review and comment.

4.10.5d If the drainage plan described in Mitigation Measure 4.10.5b identifies 100-year flood plain on the project site, project development shall not occur in those areas identified, unless flood protection improvements approved by the County are implemented.

Significance After Mitigation

Less than significant.

Impact

4.10.6 Implementation of the proposed project would result in an increase in storm runoff flows in a northern drainageway that drains into Folsom Lake. An increase in flows could result in flooding of residential areas north of the project site. This would be a potentially significant impact.

As shown in **Figure 4.10-2**, the northeastern portion of the project site drains north off the project site through existing residential areas of El Dorado Hills eventually into Folsom Lake. Development of the northeastern portion of the project site would result in increased storm runoff flows into this drainage. No data is currently available on existing and future peak runoff flows of this portion of the project site. However, increased flows could result in the flooding of some residents north of the project site.

Mitigation Measure

4.10.6 Implement the procedures outlined in Mitigation Measure 4.10.5b, specifically with regards to the northern drainageway.

Significance After Mitigation

Less than significant.

REFERENCES - Hydrology and Flooding

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4.11 CULTURAL RESOURCES

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4.11.1 SETTING

INTRODUCTION

Cultural resources that could exist at the project site, or in the project site vicinity, include both archaeological resources and historical resources. Archaeological resources are classified as either prehistoric archaeological resources, which are subsurface resources associated with human occupation prior to European settlement, or historic archaeological resources, which are subsurface resources associated with human occupation after European settlement. Historical resources also are above-surface resources, such as buildings and structures, that are associated with human occupation after European settlement.

ARCHAEOLOGICAL RESOURCES

A record search covering the project site was conducted in 1988 at the California Archeological Inventory, North Central Information Center at Sacramento State University. The sources reviewed included all previous cultural resource surveys within one mile of the project site, the National Register of Historic Places, the California Register of Historic Resources, and the California Historical Landmarks list. The record search indicated that four cultural resources are known to exist within the project site (Russo, 1988). These resources, which were first recorded in a 1980 survey, include CA-ELD-451, CA-ELD-452, CA-ELD-453, AND CA-ELD-454. A description of each of these resources follows (the location of the resource is not provided to prevent any disturbance of the resource). In addition, the records search indicated that there is a low possibility of other Native American archaeological resources at the project site (Russo, 1988).

CA-ELD-451

This resource is considered to be the most important of the four archaeological resources at the project site. The survey conducted in 1980 indicated that the resource consisted of a midden mound of undetermined depth that included a habitation mound with apparent burials or cremations (Derr, 1990). In addition, a bedrock morter area was identified near the midden mound. The resource is in the general area of the proposed open space in the village center (see **Figure 3-3**). The resource was considered to be significant because it had the potential to yield important information on the native peoples of the area and their contact with Euro-Americans, especially since it is the only known Native American habitation site in this general area south of the American River (Derr, 1990).

On the basis of recommendations that resulted from the information obtained from the survey, a stabilization plan was proposed to protect the significance of this resource (Derr, 1990). The project applicant authorized the implementation of the stabilization plan and the stabilization plan was implemented by the Archaeological Conservancy after extensive consultation with the Native American Heritage Commission (Weigel and Hardy, no date). Materials found at the project site during the implementation of the stabilization plan included shell beads, flaked stone, and glass beads. As a result of this effort by the project applicant Archaeological Conservancy, this archaeological resource has been catalogued and the work completed at the project site has resulted in the permanent protection of CA-ELD-451.

CA-ELD-452, CA-ELD-453, and CA-ELD-454

These resources are bedrock mortars that are within the proposed open space corridors on the project site. These resources are considered significant in that the resources prove that Native Americans used the area and that the resource could indicate the type and amount of food preparation activities that occurred in the area. However, since these resources have been recorded, measured, and mapped; no further information is likely to be obtained from these resources (Derr, 1990).

HISTORICAL RESOURCES

No historical resources were identified as part of the record search (Russo, 1988). Thus, no buildings or structures at the project site are currently listed on the National Register of Historic Places or the California Register of Historic Resources.

REGULATORY FRAMEWORK

The Conservation and Open Space Element of the El Dorado County General Plan provides the following objectives and policies related to cultural resources:

> **Objective 7.5.1**: Protection of Cultural Heritage. Creation of an identification and preservation program from the County's cultural resources.
>
> **Policy 7.5.1.3**: Cultural resource studies shall be conducted prior to approval of discretionary projects. Studies may include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, field surveys, subsurface testing and/or salvate excavations. The avoidance and protection of site shall be encouraged.
>
> **Objective 7.5.4**: Protection of Cemeteries. Identification, preservation, and protection of existing cemeteries including access and parking.

Policy 7.5.4.1: Protect access routes and parking at existing cemeteries. Development proposals will be evaluated to ensure that they do not interfere with cemeteries of their access and parking.

Consistency with County Objectives and Policies

The project applicant has implemented a stabilization plan associated with resource CA-ELD-451. Thus, the completion of this stabilization plan has resulted in the permanent protection of this resource. In addition, the proposed project would not directly affect the existing Mormon Island cemetery northwest of the project site.

4.11.2 IMPACTS STATEMENTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

A determination of significance is commonly based upon the criteria of importance as listed in Appendix K of the CEQA Guidelines. Important considerations in these criteria focus upon a cultural property's research potential, uniqueness and integrity (relative to other cultural resources similar in kind). A resource is considered to have integrity when it retains sufficient physical character to convey to the viewer an association with prehistoric or historic patterns, persons, designs, or technologies. A significant property must have the potential to contribute important information towards scholarly research, which can then be conveyed to the general public.

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association.

For the purposes of this EIR, an important archaeological resource is one that meets one or more of the following criteria:

A. is associated with an event or person of (1) recognized significance in California or American history or (2) recognized scientific importance in prehistory;

B. can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;

C. has a special or particular quality, such as oldest, best example, largest, or last surviving example of its kind;

D. is at least 100 years old and possesses substantial stratigraphic integrity; or

E. involves important research questions that historical research has shown can be answered only with archaeological methods.

Impact

4.11.1 The proposed project would result in the development of the open space and recreational areas in the location of the four archaeological resources. This would be a less than significant impact.

The proposed project would not result in the disturbance of the four known archaeological resources at the project site. These resources would be within open space areas where no excavation or other earthmoving activities would occur. In addition, the implementation of the stabilization plan associated with CA-ELD-451 would result in the continued protection of this archaeological resource.

Indirect impacts could occur from the introduction of the general public into the area of the archaeological resources. Since the stabilization plan associated with CA-ELD-451 has been implemented, disturbance of this archaeological resource would not occur. The three other resources (CA-ELD-452, CA-ELD-453, and CA-ELD-454) are bedrock mortars and are considered durable and resist most adverse impacts (Derr, 1990). Therefore, this is considered to be a less-than-significant impact.

Mitigation Measures

4.11.1 Since no significant impact was identified, no mitigation was required.

Impact

4.11.2 Previously undiscovered historic or prehistoric archaeological resources could be encountered during project-related construction activities. This would be a significant impact.

Although no additional archaeological resources have been identified in the immediate project site vicinity, it is possible that such resources do exist at the project site. These resources could be prehistoric resources associated with habitation by Native Americans at the project site. Construction-related earthmoving activities at the project site could disrupt or destroy any of these previously undiscovered subsurface resources.

Mitigation Measures

4.11.2 In the event that any prehistoric or historic subsurface cultural resources are discovered during construction-related earthmoving activities, all work within 20 meters of the resources shall be halted and the project applicant shall consult with a qualified archaeologist to assess the significance of the find. If any find

were determined to be significant by the qualified archaeologist, then representatives of the project applicant, El Dorado County, and the qualified archaeologist would meet to determine the appropriate course of action. If the discovery includes human remains, Section VIII of CEQA Guidelines Appendix K would be followed, requiring coordination with the Native American Heritage Commission if the human remains are of Native American origin. All significant cultural materials recovered would be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.

Significance After Mitigation

Less than Significant.

Impact

4.11.3 The proposed project would contribute to the population growth anticipated within the County. As stated in the County's General Plan EIR, this increase in population would increase the likelihood for persons to vandalize or desecrate the existing Mormon Island Relocated Cemetery. This would be a cumulatively significant impact.

The existence of the Mormon Island Relocated Cemetery would be known to additional persons as a result of an increase in population at the project site. Although the proposed project would not directly affect the cemetery, additional persons in the vicinity of the cemetery could result in an increased likelihood that vandalism or desecration would occur. The existing cemetery does not have substantial physical barriers to prevent entry by unauthorized persons. Therefore, the proposed project would contribute to this County-wide significant impact.

Mitigation Measures

4.11.3 If the County establishes a program to provide fencing or other physical barriers around existing cemeteries to prohibit unlawful entry, the project applicant would contribute a pro-rata share to construct a fence or physical barrier around the existing Mormon Island Relocated Cemetery.

Implementation of this mitigation measure is not considered feasible since the County has not established such a funding program.

Significance After Mitigation

Significant and Unavoidable.

REFERENCES - Cultural Resources

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4.12 PUBLIC SERVICES

4.12 PUBLIC SERVICES

4.12.1 SETTING

FIRE PROTECTION AND AMBULANCE SERVICES

El Dorado Hills Fire Department

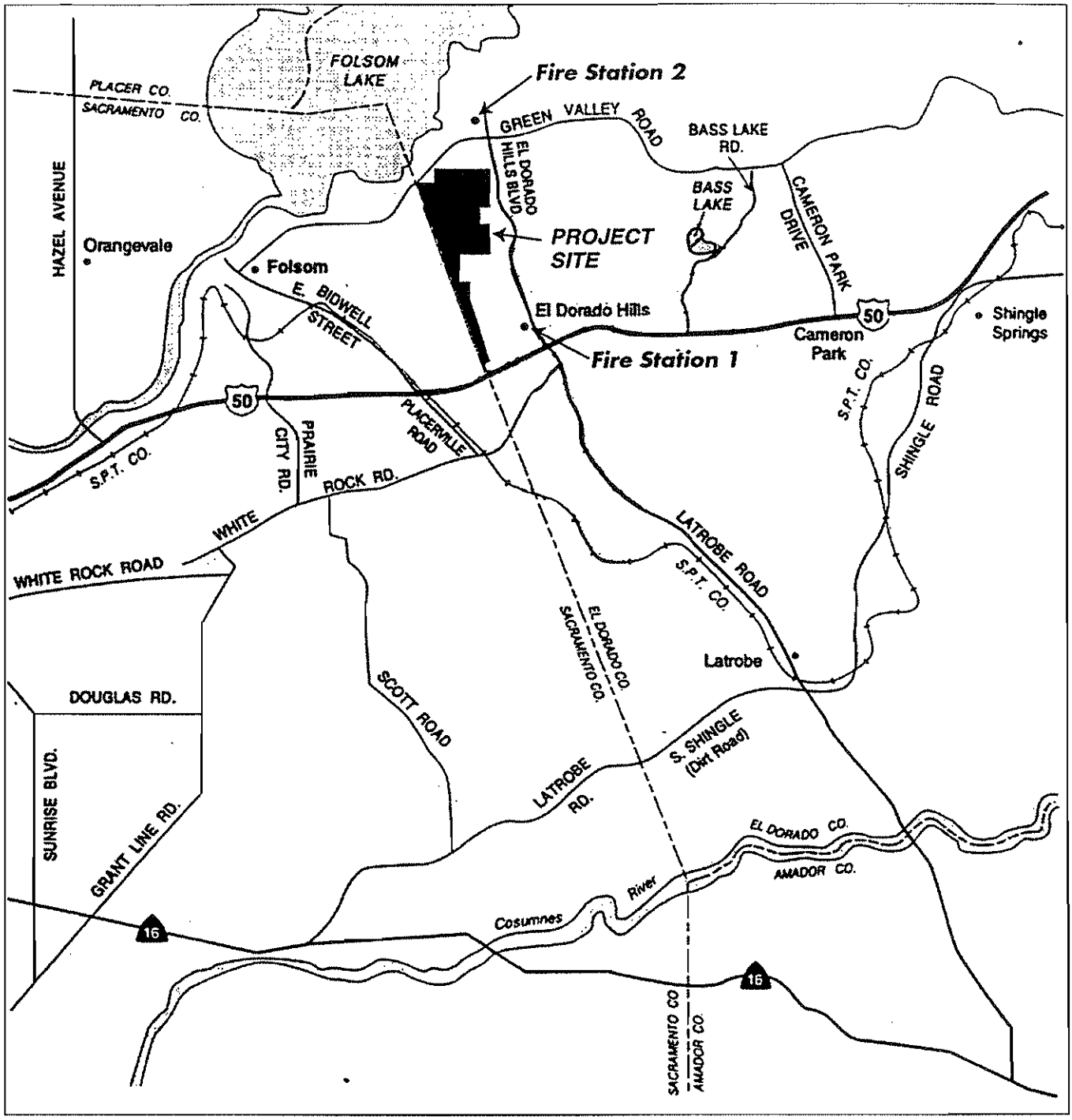
Current Conditions

Fire protection and emergency medical services (basic life support) to the El Dorado Hills area are provided by the El Dorado Hills Fire Department (Department), under the direction of the El Dorado Hills County Water District. The County Water District, which was formed in 1963 to provide water and sewer service to El Dorado Hills, established the El Dorado Hills Fire Department in 1963. The proposed project is within the Department's service area sphere of influence for fire protection and emergency medical services, which encompasses approximately 30,000 acres (47 square miles) and serves an estimated population of 15,500. The Department engages in mutual and automatic aid agreements with surrounding and adjacent fire departments. These departments include the other 11 fire departments in the County, the City of Folsom and Sacramento County Fire Departments, and the California Department of Forestry Fire Department.

The Department currently operates two stations: Station One located at 990 Lassen Lane, and Station Two located at 2180 Francisco Drive (**Figure 4.12-1**). The Department's overall staffing consists of 21 paid firefighters and 25 volunteers (El Dorado Hills Fire Department, 1995). The current firefighter to population ratio is 1.9 firefighters per 1,000 population, based on 3 volunteer firefighters equal to one paid firefighter. This ratio exceeds the Department's goal of 1.5 firefighters per 1,000 residents.

The Department's equipment includes 3 Type I (1,250-1,500 gallons per minute [gpm] capacity) fire engines that are typically used for structural fires; 3 Type III (350-500 gpm capacity) fire engines that are typically used for extinguishing wildland fires; and 1 utility vehicle (El Dorado Hills Fire Department, 1996). **Table 4.12-1** summarizes the staff and equipment serving Stations 1 and 2.

Average response times to emergency incidents are 5 minutes or less from Stations One and Two to the western portion of the service area. Response times to the eastern portion of the service area range from 5 to 10 minutes. The Department has set an optimum driving response time of 5 minutes or less to 80 percent of the population (El Dorado Hills Fire Department, 1996).



SOURCE: El Dorado County, 1996; Environmental Science Associates

Figure 4.12-1
Facilities Location Map

TABLE 4.12-1
STAFF AND EQUIPMENT AT STATIONS ONE AND TWO

Staff and Vehicles	Station One	Station Two
Firefighters	12	9
Captains	3	3
Engineers	3	3
Firefighter/Paramedics	6	3
Vehicles	9	3
Engines	3	3
Staff Vehicles	5	
Utility Vehicles	1	
Administrative Staff	7	

SOURCE: El Dorado Hills Fire Department, 1996

Funding

The El Dorado Hills Fire Department has a current operating budget of approximately $2.4 million (El Dorado Hills Fire Department, 1996). The Department is funded through a combination of property taxes and development fees. In the annual revenue forecasts in the Department's Ten Year Plan, property taxes account for 80 to 90 percent of Department revenue. Development fees for residential dwelling units is determined by dividing the projected capital expenditures that are related to the impact of growth by the projected number of dwelling units and commercial development over a five year period. The calculated development fee in 1996 was $977 per dwelling unit. However, the Board of Directors elected to only assess a $500 per dwelling unit fee, with the remainder to be recuperated by property taxes (El Dorado Hills Fire Department, 1996). Current development fees for non-residential structures are $0.14 (with sprinklers) or $0.28 (without sprinklers) per square foot.

Planned Upgrades

The El Dorado Hills Fire Department's 1996-2006 Ten-Year Plan provides a schedule for obtaining the staff, equipment, and facilities that would be needed to enable the Department to accommodate the projected population growth in the service area. Additional equipment purchases scheduled in the Ten-Year Plan includes two Type III fire engines for future Station Three, an aerial ladder truck for Station One, and a staff vehicle for Station Two.

In addition to equipment, the Department plans to open Station Three in the Bass Lake area by 1999/2000 to accommodate growth in the eastern portion of the service area. Station Three would also provide an additional medic unit for the service area. The Department anticipates that

with Station Three fully staffed, average response times to approximately 80 percent of the service district would be within optimum levels (five minutes or less) (El Dorado Hills Fire Department, 1996).

The Department also plans to open Station Four in the El Dorado Hills Business Park. Station Four is anticipated to become operational once the El Dorado Hills Business Park reaches one-half to two-thirds of projected buildout (El Dorado County, 1996).

Fire Protection Standards for New Development

The Department has fire protection requirements and standards for new development projects. These requirements include standards for hydrant spacing, fire flow, and fuel modification zone requirements (Veercamp, 1996). Hydrants are required to be spaced strategically in order to locate a hydrant within 250 feet of each dwelling unit. Fire flow standards require 1,000 gallon per minute (gpm) flow capability, providing a sustainable flow for two hours with a minimum pressure of 20 pounds per square inch (psi). Fuel modification zone requirements include the assessment of development sites and the implementation of a plan which would reduce natural fire hazards such as overgrown vegetation areas. A California Fire Safe Fuel Modification Zone Plan must be submitted to the Department for review and approval prior to site development (Veercamp, 1996).

LAW ENFORCEMENT

El Dorado County Sheriff-Coroner's Department

Law enforcement services are provided to the El Dorado Hills area by the El Dorado County Sheriff-Coroner's Department (Sheriff's Department). The Sheriff's Department's headquarters are located in the City of Placerville at 300 Fair Lane, approximately 18 miles east of the project site. Other Sheriff's Department facilities include a station in South Lake Tahoe, a substation in Georgetown, and the El Dorado Hills area satellite station (El Dorado County, 1996).

The project site lies within service Zone 2, a 400-square-mile area bounded by Folsom Lake and the South Fork American River to the north, Greenstone Road to the east, the Cosumnes River to the south, and the Sacramento County line to the west. Zone 2 is currently served by the El Dorado Hills area satellite station, which is located at the northwest corner of the Governor Drive/El Dorado Hills Boulevard intersection, less than two miles east of the project site. The satellite station is currently open Monday through Saturday from 8 a.m. to 5 p.m. and is staffed by one to two volunteer retirees per shift. Twelve sheriff deputies are assigned to Zone 2 patrol duty, with two deputies patrolling during any given work shift (Adams, 1996). Sheriff deputies are generally on patrol during their shifts and use the El Dorado Hills satellite station to prepare reports or other paperwork.

The Sheriff's Department is currently staffed with 300 employees, of which 140 are sworn officers (Adams, 1996). The current ratio of sworn officers to County residents is 0.9 per 1,000, which is slightly lower than the Department's goal of 1 sworn officer to 1,000 residents. The availability of patrols in the County depends on the time of day and concurrent service calls within the Sheriff's Department's service area. Average response time to Priority 1 calls (highest priority) in Zone 2 is approximately nine minutes (El Dorado County, 1996). The Sheriff's Department currently engages in mutual assistance programs with the California Highway Patrol and the law enforcement forces of all adjacent jurisdictions (Adams, 1996).

The Sheriff's Department is currently seeking funding from the State and through the Federal Crime Bill to achieve the goal of 1 officer per 1,000 residents. The Federal Crime Bill currently is funding 50 percent of the salary for six officers and 75 percent of the funding for two community service officers.

PUBLIC SCHOOLS

The project site is located within three school districts: Rescue Union School District (RUSD) and Buckeye School District (BUSD), which operate elementary and middle schools; and the El Dorado Union High School District (EDUHSD).

The majority of the project site is located within the RUSD, with the remainder of the site within the BUSD. Preliminary talks were initiated in 1994 concerning a possible boundary line adjustment between the two districts so that the project site would fall entirely within the RUSD (Wright, 1994). In December of 1996, it was decided by the school districts and the project developer to split the project site, using the proposed village borders as boundary lines between districts (Schwarzbach, 1996). Villages 6, 7, and 8 would be in the BUSD, with the remainder of the villages in the RUSD.

Rescue Union School District

The Rescue Union School District office is located in Rescue, an unincorporated community east of the El Dorado Hills area. RUSD serves both Rescue and El Dorado Hills. The District includes four elementary schools (Rescue, Green Valley, Jackson, and Forest) and one middle school (Marina Village). The existing student enrollment for the District is 2,751, while the capacity is 3,080 (including extra capacity due to use of multi-track school years in Green Valley and Lake Forest schools) (Rescue Union School District, 1995). **Table 4.12-2** shows the enrollment and capacities for each of the schools in the District.

TABLE 4.12-2
SCHOOL DISTRICT ENROLLMENT AND CAPACITY

District/School	Grades	Current Capacity	Current Enrollment	Remaining Capacity (Capacity Shortage)
Rescue School District /a/		**3,080**	**2,751**	**329**
Green Valley	K-6	696*	640	56
Jackson	K-6	522	478	44
Lake Forest	K-6	673*	539	134
Marina Village	7-8	638	608	30
Rescue	K-6	551	486	65
Buckeye School District /b/		**3,496**	**3,451**	**45**
Buckeye	K-6	712	664	48
Brooks	K-6	462	373	89
Blue Oak	K-6	727*	816	(89)
Silva Valley	K-6	711*	699	12
Camerado Springs	7-8	884	509	(15)
Rolling Hills**	7-8		390	
El Dorado Union High School District /c/		**6,329**	**6,027**	**302**
El Dorado High School	9-12	1,904	1,794	110
Oak Ridge High School	9-12	1,884	1,839	45
Ponderosa High School	9-12	2,144	2,020	124
Ponderado Alternative Education Center		150	90	60
Independent High School/Learning Center		247	284	(37)

/a/ Rescue Union School District Facility Master Plan
/b/ Buckeye Union School District, School Facility Fee Justification Report & 1996 Ten Year School Facilities Plan
/c/ El Dorado Union High School District Facilities Master Plan 1996/97 - 2000/01
* Capacity is based on a 20% increase in traditional capacity due to space created by using a multi-track schedule.
** Rolling Hills Middle School shares existing facilities on the Camerado Springs site.

SOURCE: Rescue Union School District, 1995; Buckeye Union School District, 1996; El Dorado Union High School District, 1996

Expansion plans for the District include the addition of three schools: a middle school that would be constructed as part of a joint venture project with the El Dorado Union High School District (EDUHSD); an elementary school in the Bass Lake area; and an elementary school at the proposed project site (Rescue Union School District, 1995). The planned middle school, which would accommodate 1,200 students, would be located on a 24.4-acre site on Green Valley Road west of the Bass Lake Road intersection. RUSD would purchase the middle school site in conjunction with EDUHSD, which would purchase the adjoining 50-acre site for a new high

school. The planned elementary school in the Bass Lake area would be located on 12 acres set aside for the RUSD as part of the El Dorado Hills Specific Plan. According to RUSD's 1995 Facility Master Plan, this elementary school would have a capacity of 800 students on a multi-track, year-round calendar. In addition, the project applicant has set aside 10-acres in the northern portion of the Promontory site for an elementary school to serve the project and surrounding residential areas.

Buckeye Union School District

The Buckeye Union School District office is located in neighboring Shingle Springs. The District consists of four elementary schools (Buckeye, Brooks, Blue Oaks, Silva Valley) and two middle schools (Camerado Springs and Rolling Hills). Rolling Hills School currently shares facilities at the Camerado Springs School. The existing enrollment for the District is 3,451, while the capacity is 3,496, including extra capacity due to the multi-track school year calendar employed by Blue Oak and Silva Valley schools (Buckeye Union School District, 1996). **Table 4.12-2** shows the enrollment and capacities for each of the schools in the District.

Expansion plans for the BUSD include the construction of separate facilities for the Rolling Hills Middle School. This school is currently being constructed on Silva Valley Parkway and is scheduled to open in 1998. The initial capacity will be 700 students, with expansion planned to accommodate a capacity of 900 students, as necessary.

El Dorado Union High School District

The El Dorado Union High School District (EDUHSD) office is located in Placerville. EDUHSD includes three high schools: El Dorado High School, Oak Ridge High School, and Ponderosa High School. The District also contains two continuation/alternative institutions (Ponderado Alternative Education Center and Independent High School/Learning Center) (El Dorado County, 1996b). Including the use of portable classrooms, District capacity for the 1996/97 school year to 6,329 students (**Table 4.12-2**) (El Dorado Union High School District, 1996).

The EDUHSD Facilities Master Plan for 1996/97 - 2000/01 predicts student enrollment will exceed 6,600 by the 2000/2001 school year (El Dorado Union High School District, 1996). To accommodate this increase in demand, the District is planning to construct two new high schools with capacities of 1,220 to 1,600 students per school. The proposed El Dorado Township High School, which would be located on a 50-acre site on Union Mine Road, would have an initial capacity of 1,218 students and would eventually be expanded to accommodate 1,600 students. Site work drawings for El Dorado Township High School received final approval from the Division of the State Architect on November 4, 1994; however, construction has been postponed due to lack of funding. In addition, EDUHSD is planning to purchase a 45.3-acre site south of

Green Valley Road and west of the proposed realignment of Bass Lake Road for the proposed Joint Venture High School. In conjunction with this project, the RUSD would purchase an adjacent 24.4-acre site for a proposed middle school, as discussed above. According to the EDUHSD Facilities Master Plan 1996/97 - 2000/2001, the Joint Venture High School would have a capacity of 1,218 students. The EDUHSD Board of Trustees approved a preliminary site plan for this school on September 14, 1993, and the EIR for the project was certified on June 13, 1994. However, the Board of Trustees postponed the cash purchase of the 50-acre site on February 22, 1994, pending review of District cash flow requirements.

Existing Funding Mechanisms

Currently, the primary source of funding for the construction of schools is the State School Building Program (Rescue Union School District, 1995). However, funds from this program are often used for operational expenses, making construction funds scarce. Alternative sources of funds include assessment of development impact fees and creation of Mello-Roos Districts. School districts can require development impact fees from new developments to generate revenue to accommodate the students associated with regional growth. Currently, $7,797 per new residential development is collected by the County (Jackson, 1996). A fee of $0.28 per square foot can be assessed for commercial/industrial space. Mello-Roos Districts assess taxes on residential and commercial development over an extended period of time are also used for school funding purposes. Typical terms for these taxes are $25 to $30 per year for 20 to 25 years (Jackson, 1996).

PARKS, RECREATION, AND COMMUNITY SERVICE

Regional Context

Park and recreation facilities in El Dorado County are maintained by Federal, State, and County agencies, as well as by local Community Services Districts (CSDs). El Dorado County provides a variety of recreational activities including, but not limited to, sightseeing, hiking, biking, water sports, and camping. Regional recreation opportunities are provided by the El Dorado National Forest, managed by the U.S. Forest Service, as well as the Folsom Lake State Recreation Area, Marshall Gold Discovery State Historic Park, and the Auburn State Recreation Area, managed by the California Department of Parks and Recreation (El Dorado County, 1996b).

In addition, El Dorado County owns and operates a variety of regional recreation areas and facilities. Notable facilities include the El Dorado County Fairgrounds, Finnon Lake, Henningsen/Lotus Park, and Pioneer Park. The County is also involved in several joint development projections in cooperation with local school districts (El Dorado County, 1996b).

Local Park Services

The El Dorado Hills Community Services District (EDHCSD) service area covers approximately 28.2 square miles, including the project site. The EDHCSD currently provides 16 recreation sites and various recreation programs within its service area. Existing EDHCSD facilities include the 40-acre El Dorado Hills Community Park, the 10.76-acre Bertelsen Park, and the 6-acre Tennis Court Park. Currently, EDHCSD has a total of 90.3 acres developed and 25.9 acres of undeveloped park and recreation facilities. EDHCSD's current ratio of active parklands to population is approximately 6.1 acres per 1,000 persons (Gambles, 1997).

The Quimby Act (Government Code 66477) provides jurisdictions a method of acquiring parkland or payment of fees in lieu of parkland dedication ("in lieu" fees) on any discretionary project which involves the division of land. EDHCSD requires developments to dedicate 5 acres of active park and recreation land per 1,000 population, assuming an average of 3.3 persons per household (Gambles, 1996).

LIBRARY SERVICE

Regional Context

The El Dorado County Library (County Library) provides services to El Dorado County. The County Library participates in State and Federal network programs through the California State Library network and through regional systems such as the Mountain-Valley Library System. The El Dorado County Library system consists of six branches: a main branch located in Placerville, and five smaller facilities located in South Lake Tahoe, Cameron Park, Pollock Pines, Georgetown, and El Dorado Hills (Oak Ridge High School Branch).

Local Facilities

Oak Ridge High School Branch (El Dorado Hills)

The El Dorado Hills area is currently served by a 5,800-square-foot branch library located at Oak Ridge High School on 1120 Harvard Way in El Dorado Hills, less than 2 miles east of the project site. This library is jointly operated by the County Library and El Dorado Union High School District. This facility includes County library materials and District library materials, including videos and audio-visual equipment. The Oak Ridge School Branch currently contains approximately 6,000 County volumes and 15,000 District volumes, as well as 20 magazine titles (El Dorado County, 1996b).

Cameron Park Branch

The Cameron Park Branch is located at 2500 Country Club Drive in Cameron Park, approximately 5 miles east of the project site. The Cameron Park branch consists of

approximately 24,000 volumes, with an ultimate capacity of 52,000 volumes (El Dorado County, 1996b).

Planned Library Facilities

A new branch library is planned for the El Dorado Hills area along Silva Valley Road. This proposed branch would be approximately 20,000 square feet in size and is anticipated to open in 1998. Once this branch is constructed, the Oak Ridge High School joint-use agreement will be terminated (El Dorado County, 1996). The service area of the planned branch would include the project site. However, the planned El Dorado Hills branch may not be feasible due to lack of funding (Amos, 1996). Potential alternative to the El Dorado Hill branch would be the rental of office space in the area rather than the costly development of a new facility (Amos, 1996).

A new library branch would ultimately be funded through a benefit assessment on improved parcels. El Dorado Hills currently has in place a voter-approved library assessment, not to exceed $25 per single-family dwelling per year. The assessment is currently in the second year of the ten year approved assessment period (Amos, 1996).

PLANS AND POLICIES

El Dorado County General Plan

The El Dorado County General Plan provides the following policies regarding public services relevant to the proposed project.

General

Goal 5.1: Provision of Public Services - Provide and maintain a system of safe, adequate, and cost-effective public utilities and services; maintain an adequate level of service to existing development while allowing for additional growth in an effective manner; and, ensure a safe and adequate water supply, wastewater disposal, and appropriate public services for rural areas.

Policy 5.1.2.2: Provision of public services to new discretionary development shall not result in a reduction of services below minimum established standards to current users, pursuant to the table below (**Table 4.12-3**).

Policy 5.1.2.3: New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent required by State law. Lack of available public or private services or adequate infrastructure to serve the project which cannot be satisfactorily mitigated shall be grounds for denial of any project or

cause for reduction of size, density, and/or intensity otherwise indicated on the General Plan land use map to the extent allowed by State law.

TABLE 4.12-3
MINIMUM LEVELS OF SERVICE

	Community Region	Rural Center and Rural Region
Schools	As determined appropriate by the school districts	As determined appropriate by the school districts
Park	Specific plan for new communities or Quimby Fee/dedication program for tentative maps	Quimby Fee/dedication program for tentative maps
Fire District Response	8-minute response to 80% of the population	15-45 minute response
Sheriff	8-minute response to 80% of the population	No standard
Ambulance	10-minute response to 80% of the population	20-minute response in rural regions and "as quickly as possible" in wilderness areas* * In accordance with state standards

SOURCE: El Dorado County, 1996a

Fire Protection and Ambulance Services

Policy 5.7.1.1: Prior to approval of new development, the applicant will be required to demonstrate that adequate emergency water supply, storage, conveyance facilities, and access for fire protection either are or will be provided concurrent with development.

Policy 5.7.4.1: Prior to approval of new development, the applicant shall be required to demonstrate that adequate medical emergency services are available and that adequate emergency vehicle access will be provided concurrent with development.

Goal 6.2: Fire Hazards - Minimize fire hazards in both wildland and developed areas.

Objective 6.2.1: Defensible Space - All new development and structures shall meet "defensible space" requirements and adhere to fire code building requirements to minimize wildland fire hazards.

Policy 6.2.1.1: Implement Fire Safe ordinance to attain and maintain defensible space through conditioning of tentative maps and in new development at the final map and/or building permit stage.

Objective 6.2.3: Adequate Fire Protection - Application of uniform fire protection standards to development projects by fire districts.

Policy 6.2.3.1: As a requirement of approving new development, the applicant must demonstrate that, concurrent with development, adequate emergency water flow, fire access, and fire fighting personnel and equipment will be provided in accordance with applicable State and local fire district standards.

Policy 6.2.3.2: As a requirement of new development, the applicant must demonstrate that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area.

Law Enforcement

Policy 5.7.3.1: Prior to approval of new development, the Sheriff's Department shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.

Public Schools

Objective 5.8.1: School Capacity - Require that adequate school capacity exists and/or appropriate mitigation consistent with State law to serve new residents concurrent with development.

Policy 5.8.1.1: School districts affected by a proposed development shall be relied onto evaluate the development's adverse impacts on school facilities or the demand therefor. No development that will result in such impacts shall be approved unless:

1. The applicant and the appropriate school district(s) have entered into a written agreement regarding mitigation of impacts to school facilities; or

2. The impacts to school facilities resulting from the development are mitigated, through conditions of approval, to the greatest extent allowed by State law.

The County shall condition or deny a request for a quasi-legislative approval, including any such request necessary for a proposed development, if the development impact fees allowed by State law for development projects would not result in the full avoidance or reduction to an acceptable level of the impacts of the approval or development on school facilities or the demand therefor, or the County shall condition or deny such a request, unless the applicant or

developer enters into a development agreement with the County requiring that the applicant or developer enter into a written agreement with the appropriate school district(s) for the mitigation of impacts to school facilities or the demand therefor.

Policy 5.8.1.3: Whenever feasible, develop joint (shared) school facilities, recreational facilities, and educational and service programs between school districts and other public agencies.

Policy 5.8.1.4: In developing conditions of approval for projects with adverse impacts on school facilities or the demand therefore, the County should consider the use of Mello-Roos Districts, where appropriate, to lessen or avoid such impacts.

Policy 5.8.1.5: When the County, in granting a quasi-adjudicatory approval, has determined that the limited school impact mitigation allowed by State law has not resulted in the full avoidance or reduction to an acceptable level of the impacts to school facilities or the demand therefor resulting from a proposed development, the County shall consider the reduction of residential densities, the phasing of the development, or the use of development agreements to achieve whatever additional mitigation is necessary to avoid or reduce to acceptable levels the fiscal and physical impacts of the contemplated development on school facilities or the demand therefor.

Objective 5.8.2: Land For School Facilities - Support the identification and acquisition of land for the purpose of siting new school facilities to serve existing and future residents.

Policy 5.8.2.1: Where feasible, elementary schools shall be centrally located within the communities they serve.

Policy 5.8.2.2: The affected school district shall be relied upon to review development applications to determine the ability of the district to serve the new development. The level of educational services shall not be reduced below acceptable levels as a consequence of new development to the extent permitted by State law.

Policy 5.8.2.4: Specific plans for Planned Communities shall identify and set aside land for new schools approvable under Title 5 Standards to serve new communities. A funding mechanism for site acquisition and construction shall be provided. School site dedication shall be considered as part of the funding mechanism.

Parks, Recreation, and Community Services

Policy 9.1.1.1: The County shall assist in the development of regional, community, and neighborhood parks, ensure a diverse range of recreational opportunities at a regional, community, and neighborhood level, and provide park design guidelines and development

standards for park development. The following national standards (**Table 4.12-4**) shall be used as guidelines for the acquisition and development of park facilities. The parkland dedication/in-lieu fees shall be directed towards the purchase and funding of neighborhood and commercial parks.

TABLE 4.12-4
GUIDELINES FOR THE ACQUISITION AND DEVELOPMENT OF PARK FACILITIES

Park Types	Developed
Regional Parks	1.5 acres/1,000 population
Community Parks	1.5 acres/1,000 population
Neighborhood Parks	2.0 acres/1,000 population
Specific Standards (Neighborhood and Community Parks)	
Cameron Park Community Services District	5.0 acres/1,000 population
El Dorado Hills Community Services District	5.0 acres/1,000 population
Planned Communities	5.0 acres/1,000 population

SOURCE: El Dorado County, 1996

Policy 9.1.1.2: Neighborhood parks shall be primarily focused on serving children's walk-to or bike-to recreation needs. When possible, neighborhood parks should be adjacent to schools. Neighborhood parks are generally 2 to 10 acres in size and may include a playground, tot lot, turf areas, and picnic tables.

Policy 9.1.1.3: Community parks and recreation facilities shall provide a focal point and gathering place for the larger community. Community parks are generally 10 to 44 acres in size, are for use by all sectors and age groups, and may include multi-purpose fields, ball fields, group picnic areas, playground, tot lot, multi-purpose hardcourts, swimming pool, tennis courts, and a community center.

Policy 9.1.1.5: Parkland dedicated under the Quimby Act must be suitable for active recreation uses and:

A. Shall have a maximum average slope of 10 percent;

B. Shall have sufficient access for a community or neighborhood park; and

C. Shall not contain significant constraints that would render site unsuitable for development.

Policy 9.1.1.11: Focus park acquisition on recreation oriented facilities as opposed to open space.

Policy 9.1.2.4: Evaluate every discretionary application as well as public facilities planning with regard to their ability to implement the Hiking and Equestrian Trails Master Plan and the Bikeway Master Plan.

Policy 9.1.3.1: Linear parks and trails may be incorporated along rivers, creeks, and streams, wherever possible.

Policy 7.6.1.1: The General Plan land use map shall include an Open Space land use designation. The purpose of this designation is to implement the goals and objectives of the Land Use and the Conservation and Open Space Elements by serving one or more of the purposes stated below. In addition, the designations on the land use map for Rural Residential and Natural Resources areas are also intended to implement said goals and objectives. Primary purposes of open space include:

A. Conserving natural resource areas required for the conservation of plant and animal life including habitat for fish and wildlife species; areas required for ecological and other scientific study purposes; rivers, streams, banks of rivers and streams and watershed lands;

B. Conserving natural resource lands for the managed production of resources including forest products, rangeland, agricultural lands important to the production of food and fiber; and areas containing important mineral deposits;

C. Maintaining areas of importance for outdoor recreation including areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes including those providing access to lake shores, beaches and rivers and streams; and areas which serve as links between major recreation and open space reservations including utility easements, banks or rivers and streams, trails and scenic highway corridors;

D. Delineating open space for public health and safety including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection and enhancement of air quality; and

E. Providing for open space to create buffers which may be landscaped to minimize the adverse impact of one land use on another.

Policy 7.6.1.2: The County will provide for Open Space through:

A. The designation of land as Open Space;

B. The designation of land for low-intensity land uses as provided in the Rural Residential and Natural Resource land use designations;

C. Local implementation of the Federal Emergency Management Agency's National Flood Insurance Program;

D. Local implementation of the State Land Conservation Act Program; and

E. Open Space land set aside through Planned Developments (PDs).

Library Service

Policy 5.9.1.2: New libraries shall be funded through Community Services Districts, assessment districts, zones of benefits, or other sources. (El Dorado County, 1996a).

Table 4.12-5 identifies the project's consistency with General Plan Public Services and Utilities Element and Parks and Recreation Element.

TABLE 4.12-5
PROJECT CONSISTENCY WITH THE GENERAL PLAN

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Goal 5.1	Yes	The proposed project would ensure the provision of adequate public services to future residents of the project site, while not diminishing public services to existing area residents as identified in the established standards in Policy 5.1.2.2. Maintenance of adequate public services would include the payment of development impact fees, property taxes, participation in facility improvements, and assessment districts.
Policy 5.1.2.2	Yes	The proposed project would ensure the provision of adequate public services to future residents of the project site, while not diminishing public services to existing area residents as identified in the established standards in this policy. Maintenance of adequate public services would include the payment of development impact fees, property taxes, participation in facility improvements, and assessment districts. See Objective 5.8.1 and relevant policies for consistency discussion regarding public schools.
Policy 5.1.2.3	Yes	The Specific Plan identifies proposed infrastructure improvements to serve the project site, as well as phasing and potential financing programs to pay for the project's share of infrastructure costs.
Policy 5.7.1.1	Yes	The Specific Plan includes a water plan identifying infrastructure improvements proposed to serve the fire protection needs of the project site. In addition, the project includes emergency access points for additional access and is in close proximity to El Dorado Hills Fire Department Station One and Two.

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Policy 5.7.3.1	Yes	The proposed project would be subject to review by the El Dorado County Sheriff-Coroner's Department. The Department's recommendations would be incorporated into the project prior to final design.
Policy 5.7.4.1	Yes	The proposed project is within the sphere of influence of the El Dorado Hills Fire Department service area. Upon annexation, the project site will be within close proximity to both Station One and Station Two. Project streets will be designed to County emergency vehicle standards.
Objective 5.8.1	Yes	The proposed project includes the reservation of a 10-acre elementary school site. Development impact fees, as part of project development and subsequent agreements between the project applicant and the school districts, would be paid to reduce the impacts associated with the project's student generation. However, these subsequent agreements have yet to be formalized.
Policy 5.8.1.1	No	The proposed project would provide a 10-acre elementary school site to serve new residents. In addition, development impact fees, as part of project development and subsequent agreements between the project applicant and the school districts, would be paid as well to reduce the impacts associated with the project's student generation. However, these subsequent agreements have yet to be formalized.
Policy 5.8.1.3	Yes	The proposed elementary school site is located adjacent to a park to allow for joint use of facilities.
Policy 5.8.1.4	Yes	The Specific Plan includes a financing program that could consist of developing a Mello-Roos Community Facilities District to obtain funding for the construction of new school facilities or expansion of existing facilities that would be required to serve the project. However, financing for school facilities has not yet been identified.
Policy 5.8.1.5	No	The proposed project would provide a 10-acre elementary school site to serve new residents. In addition, development impact fees, as part of project development and subsequent agreements between the project applicant and the school districts, would be paid as well to reduce the impacts associated with the project's student generation. However, these subsequent agreements have yet to be formalized.
Objective 5.8.2	Yes	The project site plan identifies a 10-acre elementary school site on the project site.
Policy 5.8.2.1	Yes	The project site plan identifies a 10-acre elementary school site in the northern portion of the project site to serve project students as well as the surrounding community.

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Policy 5.8.2.2	No	The proposed project would provide a 10-acre elementary school site to serve new residents. In addition, development impact fees, as part of project development and subsequent agreements between the project applicant and the school districts, would be paid as well to reduce the impacts associated with the project's student generation. However, these subsequent agreements have yet to be formalized.
Policy 5.8.2.4	Yes	The proposed project includes the designation of a 10-acre elementary school site in the northern portion of the project area. In addition, development impact fees would be paid as part of the project.
Policy 5.9.1.2	Yes	Specific funding mechanisms for public services have not been determined for the project. The Specific Plan identifies special assessment districts and Mello-Roos Community Services Districts as potential sources of funding.
Goal 6.2	Yes	The hillside development standards for the proposed project includes the use of fuel modification zones for steep sloped areas. The proposed project would be subject to review by the El Dorado Hills Fire Department.
Objective 6.2.1	Yes	The hillside development standards for the proposed project includes the use of fuel modification zones for steep sloped areas. The proposed project would be subject to review by the El Dorado Hills Fire Department.
Policy 6.2.1.1	Yes	The hillside development standards for the proposed project includes the use of fuel modification zones for steep sloped areas. The proposed project would be subject to review by the El Dorado Hills Fire Department.
Objective 6.2.3	Yes	Additional firefighting personnel and equipment needed to serve the project would be funded through payment of development fees and property tax revenues. The El Dorado Hills Fire Department would maintain adequate service to existing developments within its service area.
Policy 6.2.3.1	Yes	Additional firefighting personnel and equipment needed to serve the project would be funded through payment of development fees and property tax revenues. Final alignment and design of project site would be subject to review by the El Dorado Hills Fire Department.
Policy 6.2.3.2	Yes	The proposed Circulation Plan identifies project access points and the circulation network. Final alignment and design of project accesses into the City of Folsom would be subject to review by the El Dorado Hills Fire Department.
Policy 7.6.1.1	Yes	The proposed project includes designation of 99.8 acres of public open space that would provide for preservation and enhancement of wetlands and natural habitat as well as a future trail system for passive recreation opportunities.
Policy 7.6.1.2	Yes	The proposed project would set aside 99.8 acres of public open space.

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Policy 9.1.1.1	Yes	The proposed project includes designation of 13.6 acres of parkland, which is 9.3 acres less than required by El Dorado Hills Community Services District standards. However, the 13.6 acres of parkland included in the project together with existing parkland within EDHCSD would provide an adequate amount of parkland for project residents and would maintain EDHCSD's standards for its overall service area.
Policy 9.1.1.2	Yes	The proposed project includes a 3.6-acre neighborhood park that would be adjacent to the planned elementary school site.
Policy 9.1.1.3	Yes	The proposed project includes a 10-acre community park centrally located in the village center. This park would provide a variety of recreational activities, and would be accessible from surrounding single-family neighborhoods.
Policy 9.1.1.5	Yes	The proposed park sites meet the criteria for dedication under the Quimby Act.
Policy 9.1.1.11	Yes	The proposed project would designate 99.8 acres of public open space and 13.6 acres of recreational parks; however, the proposed open space would include a trail system for passive recreation activities.
Policy 9.1.2.4	Yes	The proposed project would include off-street pedestrian trails within the proposed open space areas, consistent with County Hiking and Equestrian Trails Master Plan. Bicycle lanes would be provided along Russell Ranch Boulevard which would connect to planned bikeways from the City of Folsom.
Policy 9.1.3.1	Yes	The proposed project includes a linear open space along the easement that extends through the site from east to west.

El Dorado County Hiking and Equestrian Trails Master Plan

The Hiking and Equestrian Trails Master Plan recognizes 11 Federal trails, one state trail, and one regional trail, and designates 14 County trail corridors (El Dorado County, 1990). There is a County-wide trail planned along the power transmission line right-of-way that bisects the project site (Gambles, 1996). However, there are no completed sections of this trail.

The goals of the plan are as follows:

1. To provide a safe, functional and cost-effective Countywide hiking and equestrian trails system in El Dorado County.

2. To integrate existing and proposed National, State, Regional, County, City, and local hiking and equestrian trails for public use.

3. To link existing and planned residential and employment areas with existing and planned parks, recreation and open space areas within the County and to abutting counties.

4. To maximize use of the trail system by the physically handicapped and developmentally disabled. (El Dorado County, 1990)

The following policies from the Hiking and Equestrian Trails Master Plan pertain to the proposed project:

Policy 1c: Evaluate every General Plan Amendment, Rezoning, Tentative Map, and other discretionary entitlement as well as public facilities planning and other County actions with regard to their ability to help implement the Trails Master Plan.

Policy 1d: Approval of such discretionary entitlements for parcels containing the existing and proposed trails, as delineated on the "Trails Master Plan" map shall be conditioned to provide an irrevocable offer to dedicate an easement for public access to and along the designated trail.

4.12.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Fire Protection and Ambulance Services

A significant impact to fire protection and ambulance services would occur if implementation of the proposed project would result in one or more of the following:

- Development that would result in a reduction in levels of fire protection and emergency service to the service area below minimum levels established in **Table 4.12-3** of the El Dorado County General Plan or El Dorado Fire Department standards;
- Subject future project residents to fire hazards; and
- An inconsistency would result between the proposed project and the El Dorado General Plan.

Law Enforcement Services

A significant impact to law enforcement services would occur implementation of the proposed project would result in one or more of the following:

- Creates a substantial demand for law enforcement services without increasing staffing and equipment that would result in a lower ratio than the Sheriff's Department's goal of 1 sworn officer per 1,000 residents; and

- Results in a reduction of Sheriff's Department service levels below the minimum service levels described in **Table 4.12-3** of the El Dorado County General Plan.

Public Schools

According to Appendix I of the CEQA Guidelines, a project would have a significant impact on school services if it would result in the need for new or altered facilities, or adversely affect existing school services.

Parks, Recreation, and Community Services

A significant impact to parks, recreation, and community services would occur if implementation of the proposed project would result in one or more of the following:

- Dedication of less than 5 acres of developed parklands for every 1,000 population generated, as identified in **Table 4.12-4** in General Plan Policy 9.1.1.1; and

- An inconsistency between the project and the El Dorado County General Plan.

Library Service

A significant impact to library service would occur if implementation of the proposed project would result in one or more of the following:

- Generate demand for library service in excess of available resources; and

- An inconsistency between the project and the El Dorado County General Plan.

IMPACTS AND MITIGATION MEASURES

Fire Protection and Ambulance Services

Impact

4.12.1 Implementation of the proposed project would result in an increased demand in fire and medical services. The proposed project would also increase the level of funding for these services via new development fees and property taxes. The El Dorado Hills Fire Department Ten Year Plan, which incorporates factors associated with growth, forecasts revenue surpluses while maintaining adequate service through the 2005/06 fiscal year. This would be a less than significant impact.

As stated in Section 4.4, Population, Housing, and Employment, development of the project site would result in a population increase of approximately 3,884 people in the area, generating an increased demand for fire and emergency medical services. Based on the Department's goal of 1.5 firefighters per 1,000 population, development of the project site would generate the need for up to 6 new firefighters.

The Department's Ten Year Plan addresses the increasing demand for fire and medical services that would result from the population growth that is expected to occur in the El Dorado Hills area through the fiscal year 2005/2006. According to the Ten Year Plan, the Department has funding mechanisms in place to provide the additional personnel and equipment that would be needed to serve project residents. Development fees, property tax revenues, and interest on Department accounts are forecast in the Department's Ten Year Plan to exceed Department expenses through the fiscal year 2005/06.

The proposed project is not currently within the Department's service area, and thus is not included in the Ten Year Plan's estimate of future growth. Therefore, the demand for fire and medical services associated with the proposed project would require more personnel and equipment than is estimated in the Ten Year Plan. As part of the project, the applicant has requested that the project site be annexed to the El Dorado Hills Fire Department service area. According to the fiscal impact study prepared for the project, the additional costs to serve the project would be substantially less than the property tax revenues generated by the project (EPS, 1997). Therefore, the Department would be able to provide adequate service to the project, in compliance with General Plan Policies 5.7.4.1 and 6.2.3.1. Since the proposed project would generate sufficient property tax revenue to pay for the personnel and equipment needed to serve the project, it would not affect the Department's ability to serve existing residents in the service area. Therefore, the project would be consistent with General Plan Policy 5.1.2.2.

Mitigation Measures

4.12.1 Since no significant impact was identified, no mitigation is required.

Impact

4.12.2 The project site would increase demand for emergency water supply, storage, and conveyance facilities. The project site would be accessible to fire and emergency service vehicles and is located within the 8-minute fire and 10-minute medical emergency response zones for community regions. This would be a less than significant impact.

The proposed project would provide or would have access to emergency water supply, storage, and conveyance facilities, as required by General Plan Policy 5.7.1.1. The proposed water system and water supply impacts for the project site is discussed in detail in Section 4.13, Public Utilities. The proposed system would comply with fire department regulations concerning new developments, as discussed in the Fire Protection and Ambulance Services setting section above. Since the proposed project would provide adequate emergency water supply, storage, and conveyance facilities for the project, the project would not adversely affect the level of service to existing development within the El Dorado Hills Fire Department's service area.

The project site is currently located within the El Dorado Hills Fire Department's response time goal of 5 minutes for fire and medical emergencies. Therefore, the proposed project would be consistent with the County's fire and medical emergency response minimum levels of service (General Plan Policy 5.1.2.2). As stated in Impact 4.12.1 above, the project would not adversely affect the level of service to existing development because the additional personnel and equipment needed to provide adequate service to the project would be provided.

Mitigation Measures

4.12.2 Since no significant impact was identified, no mitigation is required.

Impact

4.12.3 Implementation of the proposed project would locate homes on steep terrain next to open space. Placing homes in this area could increase the potential for wildland fire hazards in the area. The steep terrain within Villages 4 through 8 could impede emergency access and/or response time to these areas. This would be a significant impact.

The proposed project would construct approximately 667 dwelling units on steep terrain located within proposed Villages 4 through 8. Increasing the human population next to open space areas would increase the potential for wildland fires in the area. Responding to fires at the project site could be difficult because of the steep terrain in these portions of the site.

Mitigation Measures

4.12.3a Prior to approval of tentative subdivision maps and improvement plans, the project applicant shall submit project design plans to the El Dorado Hills Fire Department for review and approval to ensure that project site design meets Department standards. All project roadways and access points shall be designed according to El Dorado Hills Fire Department and El Dorado County

Department of Transportation standards to ensure adequate emergency access, in accordance with General Plan Policies 5.7.1.1, 5.7.4.1, 6.2.3.1, and 6.2.3.2.

4.12.3b Prior to subsequent tentative map approval for Villages 4 through 8, the project applicant shall prepare and submit a fuel modification plan to the El Dorado Hills Fire Department for review and approval. This plan shall include measures to reduce natural fire hazards, such as removal of overgrown vegetation near homes, and shall conform to Department and State standards.

Significance After Mitigation

Less than significant.

Law Enforcement

Impact

4.12.4 Implementation of the proposed project would increase demand for law enforcement services. This would be a less than significant impact.

Implementation of the proposed project, at full buildout, would result in a population increase of almost 4,000 residents. In order to maintain the existing level of service in the County and provide adequate service to the project, four additional deputies would be required. This number would maintain the current county-wide ratio of one sworn deputy per 1,000 residents.

According to the fiscal impact study prepared for the, the additional costs to serve the project would be substantially less than the property tax revenues generated by the project (EPS, 1997). Therefore, the El Dorado County Sheriff-Coroner's Department would have sufficient funding to provide adequate service to the project, in compliance with General Plan Policies 5.7.3.1. Since the proposed project would generate sufficient property tax revenue to pay for the personnel and equipment needed to serve the project, it would not affect the Department's ability to serve existing residents in the service area. Therefore, the project would be consistent with General Plan Policy 5.1.2.2.

The project would be subject to review by the Sheriff's Department prior to approval to ensure the Department would be able to provide adequate protection services to the project without diminishing levels of service to existing development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.

Mitigation Measures

4.12.4 Since no significant impact was identified, no mitigation was required.

Public Schools

Impact

4.12.5 Implementation of the proposed project would increase student enrollment in the local school districts beyond current capacity. This would be a significant impact.

The proposed project, at full buildout, would increase the student enrollment in the Rescue Union School District (RUSD), the Buckeye Union School District (BUSD), and the El Dorado Union High School Districts (EDUHSD). These districts use generation factors of 0.46 student per household for elementary school students; 0.13 student per household for middle school students; and 0.23 student per household for high school students (Wright, 1996). The proposed project would result in the addition of 1,387 households. Using the school districts' forecasting factors, approximately 638 elementary school students, 180 middle school students, and 319 high school students would be generated by the project, as shown in **Table 4.12-6**. These estimates are conservative since they assumed that all 1,387 residences would be single-family households, which generate more students than multi-family residences.

The number of new students that would be generated by the project would exceed the available capacities of the local school districts shown in **Table 4.12-2**. As part of the project, a 10-acre elementary school site would be provided in the northern portion of the project site to serve project students. This school, which would be operated by RUSD, would accommodate approximately 800 students on a year-round schedule. All 638 elementary students that would be generated by the project could be accommodated at this school.

TABLE 4.12-6
NEW STUDENTS DUE TO DEVELOPMENT OF PROJECT SITE

Number of Residential Units	Grade Level	Average Number of Students/Unit	Students
1,387	K-6	.46	638
	7-8	.13	180
	9-12	.23	319

SOURCE: Wright, 1996

The project would generate approximately 180 middle school students. As shown in **Table 4.12-6**, the existing middle schools in RUSD and BUSD are near or over capacity, and therefore would not be able to serve project students. However, the new

facility for Rolling Hills Middle School, currently under construction, will accommodate 700 students when it opens in 1998. Since the school currently has 390 students at its shared facilities at the Camerado Springs Middle School, the school would have an available capacity of 310 students. In the future, BUSD plans to expand Rolling Hills Middle School to increase its overall capacity to 900 students, which would further increase its available capacity. RUSD plans to increase its enrollment capacity by constructing a new middle school that would accommodate 1,200 students. The new RUSD middle school would be located on a 24.4-acre site adjoining a new high school that is planned by EDUHSD. As discussed below, the project applicant would contribute funds for construction of new facilities.

The proposed project, which would generate approximately 319 high school students, would increase enrollment within EDUHSD. Since the number of high school students generated by the project would exceed the current capacity of EDUHSD, new facilities would be required. The project applicant and EDUHSD have held preliminary discussions regarding the donation from the project applicant to EDUHSD of 50 acres of land to be used for a future high school site.

The project applicant would pay the state-mandated school impact fee, which requires developers to pay up to $1.84 per square foot of residential space, and $0.30 per square foot of commercial space. These fees, at the maximum rate of $7,797 per residential unit for 1,387 units, would contribute approximately $10.8 million towards construction of new school facilities. However, these fees may not be sufficient to provide adequate school facilities for project students. Additional funding for new school facilities would come from state funds and from infrastructure improvements funded by the project applicant.

Mitigation Measures

4.12.5 Prior to approval of tentative subdivision maps, Rescue Union School District, Buckeye Union School District, El Dorado Union High School District, and the project applicant shall enter into a formal agreement regarding mitigation of project impacts on school facilities. This agreement shall specifically identify mechanisms to construct new school facilities, coordination of timing of new school facilities and build-out of the project site, and construction of the proposed elementary school site.

Significance After Mitigation

Less than significant.

Parks, Recreation, and Community Services

Impact

4.12.6 The proposed project would increase demand for parks and recreational facilities. The 13.6 acres of parkland included in the project and existing parkland in the El Dorado Hills Community Service District would provide an adequate amount of parkland for project residents. This would be a less than significant impact.

Development of 1,387 dwelling units in the proposed project would increase demand for parks and recreational facilities. The El Dorado Hills Community Service District (EDHCSD), which operates parks and recreational facilities in El Dorado Hills, requires new developments to dedicate 5 acres of active park and recreation land for every 1,000 new residents. EDHCSD uses an average household population of 3.3 persons per residential unit to determine the number of new residents that would be generated by proposed development. Therefore, the project would be required to provide up to 22.9 acres of parkland or park in-lieu fees to meet EDHCSD standards.

The project applicant proposes to provide 13.6 acres of parkland and the equivalent park in-lieu fees for 9.3 acres to meet the parkland dedication requirement of 22.9 acres, subject to approval by the EDHCSD. Since the EDHCSD park dedication requirement would be met, this impact would be a less than significant impact.

Mitigation Measures

4.12.6 Since no significant impact was identified, no mitigation is required.

Impact

4.12.7 The proposed project is generally consistent with the El Dorado County General Plan policies relevant to parks, recreation, and community services. This would be a less than significant impact.

Development at the project site is generally consistent with the El Dorado County General Plan policies on parks, recreation, and community services, as shown in **Table 4.12-5**. The project would provide a 10-acre community park and a 3.6 acre neighborhood park on the project site, which would be consistent with General Plan policies 9.1.1.2, 9.1.1.3, and 9.1.1.5. In addition, the project would designate 99.8 acres of public open space in conjunction with the natural drainage system of the site, which would help the County achieve open space goals stated in policies 7.6.1.1 and 7.6.1.2.

As stated in Impact 4.12.5 above, the project would not meet the parkland dedication requirements contained in General Plan policy 9.1.1.1, which requires 5 acres of

parkland for every 1,000 residents. However, this inconsistency would be mitigated by payment of in-lieu development fees for the purchase and development of an additional 9.3 acres of park and recreational facilities. Therefore, the project would be generally consistent with the County General Plan.

Mitigation Measures

4.12.7 Since no significant impact was identified, no mitigation was required.

Impact

4.12.8 Implementation of the proposed project would be generally consistent with the El Dorado County Hiking and Equestrian Trails Master Plan. This would be a less than significant impact.

The circulation plan for the Promontory Specific Plan identifies a pedestrian system for the project site. The primary trail system is associated with the roadway and will allow residents an alternative to automobile travel within the community. The secondary trail system will run through the designated open space and park areas, connecting to the sidewalk system associated with the roads. One of these trails is a trail in the open space area between the power lines. This trail would provide the first link in the County-wide trail planned within the strip of land between the power lines.

Mitigation Measures

4.12.8 Since no significant impact was identified, no mitigation was required.

Library Service

Impact

4.12.9 Implementation of the proposed project would result in increased demand for library service. Residents in the El Dorado Hills area, including future project residents, are assessed up to $25 per family to provide library service. This would be a less than significant impact.

Project build-out would result in approximately 3,884 additional residents in the El Dorado Hills area. Project residents would increase demand for service at the local libraries, particularly the Oak Ridge High School Branch.

The El Dorado County Library plans to open a new branch in El Dorado Hills in 1998 that would be funded through a benefit assessment. The El Dorado Hills area is currently in the second year of a ten-year library assessment period. In accordance with General Plan policy 5.9.1.2, future residents in the El Dorado Hills area, including

future project residents, would be assessed up to $25 per single-family dwelling per year to fund library services.

Mitigation Measures

4.12.9 Since no significant impact was identified, no mitigation is required.

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4.13 Utilities and Service Systems

4.13 UTILITIES AND SERVICE SYSTEMS

4.13.1 SETTING

WATER SERVICE

Overview

Water service in El Dorado County is provided by the El Dorado County Water Agency (EDCWA) and five water purveyors. The primary responsibilities of the EDCWA are to ensure that an adequate water supply is available throughout the County and that this supply can be delivered to water users by the County's water purveyors. The five individual water purveyors hold jurisdiction and responsibility for their respective service areas (El Dorado County, 1996b).

El Dorado Irrigation District

Service Area

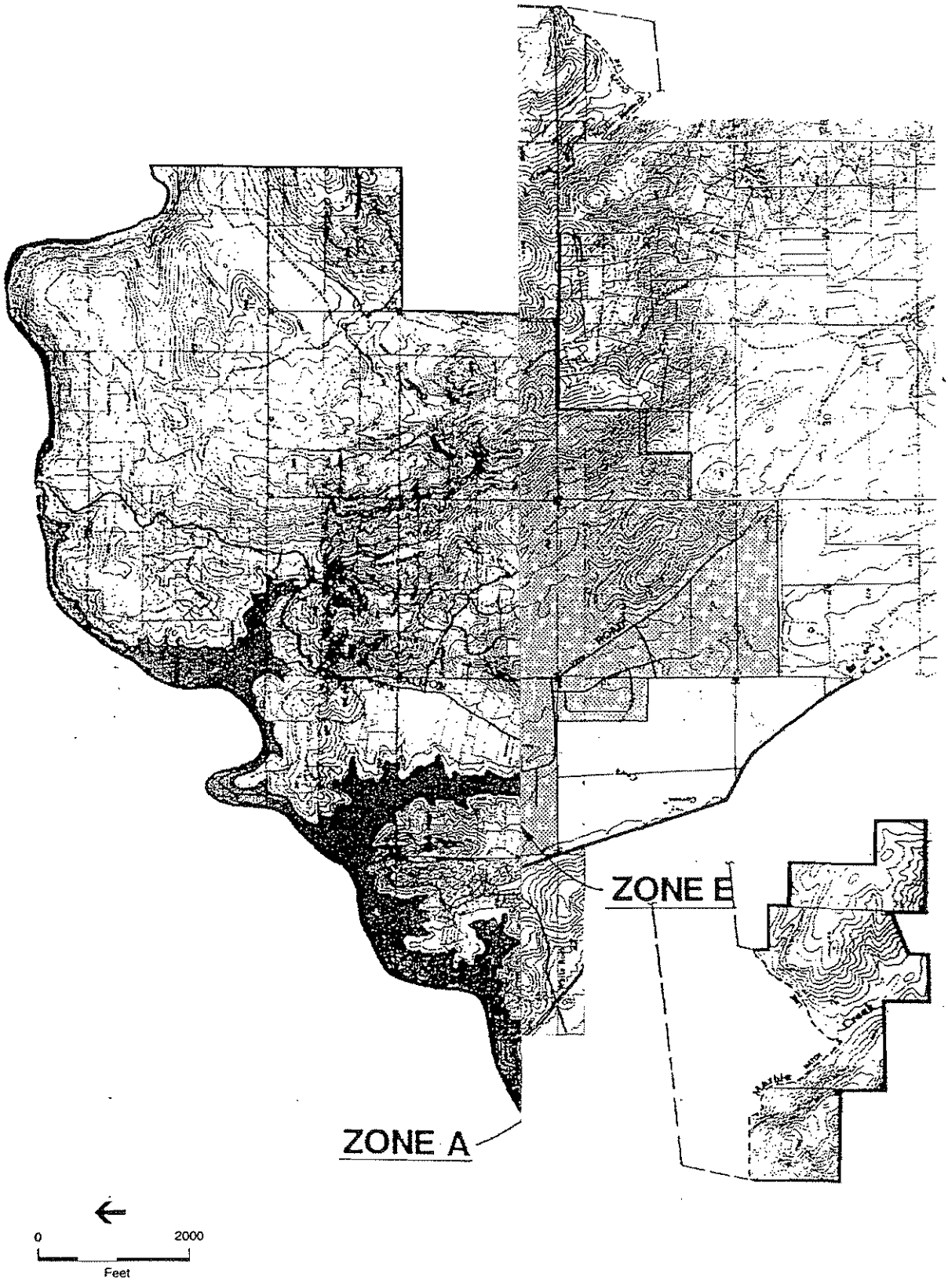
El Dorado Irrigation District (EID) is the primary purveyor and supplier of domestic, agricultural, and industrial water to western El Dorado County, serving approximately 60,000 people. The EID service area extends along the U.S. Highway 50 corridor from El Dorado Hills to Kyburz (see **Figure 4.13-1**).

The project site is currently outside the EID service area, but is within EID's sphere of influence. As part of the project, the applicant has requested that the El Dorado County Local Agency Formation Commission (LAFCO) approve annexation of the site into EID's service area. The project site also is located within EID Assessment District Number 3 (AD No. 3). A new assessment district, AD No. 12, is tentatively planned for completion in early 1998 (Archuletta, 1996). AD No. 12 likely will cover the area of the current AD No. 3 plus surrounding undeveloped areas, which includes the project site (Fraser, 1996).

Water Supply

The system firm yield for the EID is 41,700 acre-feet, which, using the EID's basis of 0.6 acre-feet per equivalent dwelling unit (EDU), is equivalent to roughly 69,500 EDUs (El Dorado Irrigation District, 1996).[1] An EDU is the average annual single-family household water demand in the EID service area. The project applicant has purchased 106 EDUs from AD No. 3. No additional EDUs are available within AD No. 3 (Fraser, 1996). EDUs in the new AD. No. 12 could be obtained after a subdivision map is approved and with the payment of appropriate fees.

[1] The system firm yield is defined as the annual quantity of water which a source or project can make available with no shortages in 95 years out of 100, based on historic hydrological conditions and restrictions. In the remaining 5 years out of 100, shortages of up to 20 percent will be accepted. Firm yield of a source is assumed to be measured at the point of water release.



SOURCE: CH2M Hill, 1995

Figure 4.13-1
El Dorado Irrigation District Service Area

The EID has contracts with the United States Bureau of Reclamation (USBR) to receive 7,550 acre-feet of water per year from Folsom Lake to service the El Dorado Hills Service Area. The 7,550 acre-feet is a contract yield, not a hydrological firm yield. At the beginning of 1996, the EID had a total of 4,900 acre-feet (8,166 EDUs) available for the El Dorado Hills Service Area. Currently there is approximately 4,700 acre-feet (7,845 EDUs) of water still available for use in the service area (Fraser, 1996). There are several other pending or approved projects in the El Dorado Hills Service Area (see **Figure 3-1** and **Table 3-1**). These projects, if fully built out, would place an additional 12,000 to 15,000 residential units in the service area. These units would increase demand in the El Dorado Hills Service Area by 7,000 to 9,000 acre-feet per year. The amount of demand created by buildout of these projects could vary depending on the final number of units constructed at each project.

Future Water Supply Sources

EID's recent efforts to obtain new water supply have focused on two sources: the El Dorado Project and the Central Valley Project (CVP). The El Dorado Project, which would permit the diversion of up to 17,000 acre-feet of water per year from the American River at Folsom, was approved by the Water Resources Control Board (WRCB) in October 1996 (Fraser, 1996). Various parties subsequently filed petitions seeking the WRCB's reconsideration of its decision. As of April 1997, no final decision has been made by the WRCB regarding the 17,000 acre-foot annual diversion (Santarosa, 1997). While the WRCB may alter its approval of the 17,000 acre-feet, and its final decision could be challenged in court, this water is currently the most likely new source of water for EID (El Dorado County, 1997). Additionally, the EID has been granted a share of 15,000 acre-feet per year of CVP Contract Water, under the direction of the Bureau of Reclamation. The 15,000 acre-feet of water has been divided between the EID and the Georgetown Water District. With a firm yield of 11,250 acre-feet per year, the EID firm yield portion of this allotment would be 5,625 acre-feet per year (Fraser, 1996). The EIR/EIS for the CVP Contract Water is currently being drafted and will be reviewed in 1997.

Distribution Facilities

Existing water supply infrastructure surrounding the project includes a 10-inch water main stubbed out to the southeast boundary of the project site at Powers Drive. Two 8-inch water line stub-outs are located to the east near Hensley Circle and Gillett Drive. An 8-inch line and a 6-inch line are located approximately 100 feet north of the project site. A 10-inch main exists in Ridgeview Estates near the southern site boundary (Cooper, 1997).

The proposed project would be served by at least three pressure zones. In addition, a one million gallon storage tank and a 16-inch water line are planned for the project area as part of the Phase 5 water facility improvements in the El Dorado Hills Master Facilities Plan (El Dorado Irrigation

District, 1995). EID has determined that existing facilities have sufficient capacity to meet the initial residential and commercial needs of the project.

Treatment Facilities

Water delivered to the El Dorado Hills Service Area is treated at the El Dorado Hills Water Treatment Plant. The water treatment capacity of the El Dorado Hills Water Treatment Plant was expanded in 1994 from 5.7 million gallons per day (mgd) to 12 mgd, with the ability for future expansion to 20 mgd (Fraser, 1996). The EID determined that the expansion to 12 mgd increased the treatment capacity by roughly 9,000 acre-feet per year. This new capacity increases the ability of the EID to treat the additional water that would be required to serve planned and approved development within the service area (see **Table 3-1**).

Water Conservation Programs

EID has engaged in active water conservation programs since 1981 (El Dorado County, 1996). EID maintains an approved water conservation program called the "Four-Stage Water Supply Matrix and Water Shortage Response Measures," which establishes four stages of water conservation measures to respond to differing severities of water shortage. In previous drought years, implementation of these measures reduced regional water consumption by up to 30 percent.

EID submitted its water conservation plan to the USBR in 1993. The USBR approved the plan in November 1994 and has since selected EID's plan as a model for combination urban and agricultural districts in the western United States. EID implements all of the Best Management Practices (BMPs) designated in the Memorandum of Understanding regarding Urban Water Conservation in California (El Dorado County, 1997). EID's Water Efficiency Program has produced savings of 1,200 acre-feet per year through implementation of efficiency and water loss reduction measures, such as metering of the entire water system, monitoring by Water Patrol staff, conducting audits of the water system to detect leaks, and adoption of the Urban Water Management Plan (Fraser, 1996).

WASTEWATER SERVICE

Overview

In addition to providing water service, EID provides wastewater collection, treatment, and disposal services to the El Dorado Hills area. Existing wastewater facilities in the project area consist of a collection system and the El Dorado Hills Wastewater Treatment Plant (EDHWTP).

El Dorado Irrigation District

Service Area

As stated above, the EID service area extends along U.S. Highway 50 from El Dorado Hills to Kyburz, and serves approximately 60,000 people.

Wastewater Treatment Facilities

Wastewater generated in the project area is treated at the El Dorado Hills Wastewater Treatment Plant (EDHWTP). At the EDHWTP, the wastewater is subjected to a secondary level of treatment, and the reclaimed wastewater is currently piped to several users in the El Dorado Hills area (El Dorado County, 1996a,b).

The EDHWTP treats wastewater from approximately 3,620 sewer connections in the El Dorado Hills area. The EDHWTP has a capacity of 1.6 million gallons per day (mgd) (7,200 EDUs) average dry weather flow (ADWF) and is currently being upgraded. The expansion, scheduled to be complete by December 1998, will increase the EDHWTP capacity to 3.0 mgd (14,500 EDUs).

Wastewater Conveyance Facilities

Two existing sewage lift stations are located to the north of the project site: the Marina lift station approximately 3,800 feet to the north; and Amy's Lane lift station, approximately 500 feet to the northwest. According to EID, these lift stations do not have adequate capacity to serve the project site. A new lift station, identified as Lift Station A of the Phase 1 wastewater improvements in the El Dorado Hills Master Facilities Plan, would be required south of the Marina lift station along Green Valley Road. In addition, the Amy's Lane lift station must be upgraded if it is used to serve the project site.

A 10-inch force main is located in Weststar Lane at the southern site boundary. This 10-inch forcemain and the downstream gravity facilities are sized to accommodate the proposed project. On-site lift stations would be required to pump wastewater out to the existing forcemain.

SOLID WASTE DISPOSAL

Solid Waste Collection

Solid waste collection services in El Dorado Hills is provided by El Dorado Disposal Service, Inc., (El Dorado Disposal), under a franchise agreement with the El Dorado Hills Community Services District (EDHCSD).

El Dorado Disposal provides solid waste collection services for the western portion of El Dorado County from the Sacramento County border to Pollock Pines. El Dorado Disposal provides

curbside pick-up and transport of solid waste to the Diamond Springs Materials Recycling Facility and a Nevada landfill until roads to the Union Mine Disposal site that were damaged by winter storms are repaired (El Dorado County, 1996).

Disposal Facilities

Union Mine Disposal Site is a Class II landfill located at 5700 Union Mine Road in El Dorado owned by El Dorado County and operated under contract by El Dorado Landfill, Inc. (El Dorado County, 1996b). Landfills are assigned Class designations by the Regional Water Quality Control Board based on the types of wastes they are designed to accommodate and allowed to accept. Class II landfills are allowed to accept all designated wastes specified in the Waste Discharge Requirements (WDRs) for the landfills, as well as non-hazardous wastes.

The Union Mine Disposal Site is the only active landfill in its service area, which consists of approximately 955,000 acres of western El Dorado County. The landfill serves an estimated population of 111,900 people and receives approximately 72,300 tons of solid waste per year, with an estimated capacity of 4,860,000 cubic yards (Dutra, 1996). The landfill has recently been expanded and converted to a bale fill system, extending its life expectancy from 5 to 7 years to 32 years, with additional land available for future expansions. The bale fill system removes recyclable material and then compacts the remaining trash. The resulting trash requires much less landfill space as well as requiring less cover material. The increased capacity of the Union Mine Disposal Site will allow the provision of service to the County to the year 2028 (Dutra, 1996).

Source Reduction Programs

Assembly Bill 939 requires local agencies to implement source reduction, recycling, and composting activities at landfills. Specifically, the bill requires recycling plans to be prepared and adopted that achieve a 25 percent reduction in solid wastes by January 1, 1995, and 50 percent reduction by January 1, 2000. In accordance with AB 939, El Dorado County has prepared a Source Reduction and Recycling Element as part of its Integrated Waste Management Plan (El Dorado County, 1996a,b). Achieving the reduction and recycling goals set out in AB 939 would increase the life of the Union Mine Disposal Site.

El Dorado Disposal currently offers a source reduction program consisting of "buy back centers" for aluminum, metal, glass, and plaster containers located in numerous locations within the service area, a curbside collection program, and newspaper and cardboard drop-off centers. To meet the requirements of AB 939, El Dorado Disposal opened a new materials recovery facility (MRF) in December of 1996 in the Diamond Springs area to increase the percentage of solid waste diverted from landfills through source reduction, recycling, and composting (Dutra, 1996). The MRF removes recyclable materials from waste sources before the material is landfilled. County

recycling programs have been successful in reducing the amount of waste sent to the landfill between 1990 and 1995 by 34 percent.

ELECTRICITY AND NATURAL GAS SERVICE

Electricity and natural gas services to the project area are provided by Pacific Gas & Electric Company (PG&E). Underground service stubs are available to the project site at various access points from the existing surrounding subdivisions. The nearest points of connection for electricity and natural gas service are located in the Ridgeview East and Governors West subdivisions.

TELEPHONE AND CABLE TELEVISION SERVICE

Telephone

The project site is within the service area of Pacific Bell Telephone Company (Pacific Bell). There are various connection points to telephone service in the surrounding subdivisions, including the Ridgeview East and Governors West subdivisions.

Cable Television

Cable television service in western El Dorado County is provided by Continental Cable, located in Diamond Springs. Continental currently provides cable service to the El Dorado Hills area north of U.S. Highway 50. Existing Continental Cable facilities consist of underground cables. There are potential connection points located at Ridgeview East and Governors West subdivisions.

Continental Cable is planning to engineer a new cable system in the surrounding area in 1997 and to rebuild the system in 1998 (Miller, 1996). To expand service into the project area, Continental requires a density of 40 houses per mile or 8 houses within 500 feet of an existing cable conduit.

PLANS AND POLICIES

El Dorado County General Plan

The El Dorado County General Plan provides the following goals, objectives, and policies regarding public utilities and services relevant to the proposed project. **Table 4.13-2** describes the project's consistency with these goals, objectives, and policies.

General

> **Goal 5.1:** Provision of Public Services - Provide and maintain a system of safe, adequate, and cost-effective public utilities and services; maintain an adequate level of service to existing development while allowing for additional growth in an effective manner; and, ensure a safe and adequate water supply, wastewater disposal, and appropriate public services for rural areas.

Policy 5.1.2.2: Provision of public services to new discretionary development shall not result in a reduction of services below minimum established standards to current users, pursuant to the table below (**Table 4.13-1**).

TABLE 4.13-1
MINIMUM LEVELS OF SERVICE

	Community Region	Rural Center and Rural Region
Public Water Source	As determined by purveyor	As determined by purveyor, when applicable
Private Wells	Environmental Management	Environmental Management
Public Water Treatment Capacity	As determined by purveyor	As determined by purveyor
Public Sewer Treatment Capacity	As determined by purveyor	As determined by purveyor
On-site Sewage Disposal	Environmental Management	Environmental Management
Storm Drainage	Department of Transportation	Department of Transportation
Solid Waste	Environmental Management	Environmental Management

SOURCE: El Dorado County, 1996a

Policy 5.1.2.3: New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent required by State law. Lack of available public or private services or adequate infrastructure to serve the project which cannot be satisfactorily mitigated shall be grounds for denial of any project or cause for reduction of size, density, and/or intensity otherwise indicated on the General Plan land use map to the extent allowed by State law.

Water Service

Policy 5.2.1.2: An adequate quantity and quality of water for all uses, including fire protection, shall be provided for with discretionary development.

Policy 5.2.1.3: All medium-density residential, high-density residential, multifamily residential, commercial, industrial and research and development projects shall be required to connect to public water systems when located within Community Regions and to either a public water system or to an approved private water system in Rural Centers.

Policy 5.2.1.4: Rezoning and subdivision approvals in Community Regions or other areas dependent on public water supply shall be subject to the availability of a permanent and reliable water supply.

Policy 5.2.1.8: The preparation and approval of specific plans may occur without the availability of water guarantees. The timing for water guarantees shall be established within the policies of each specific plan consistent with Policy 5.2.1.4.

Wastewater Service

Objective 5.3.1: Wastewater Capacity - Ensure the availability of wastewater collection and treatment facilities of adequate capacity to meet the needs of multifamily, high, and medium density residential areas, and commercial and industrial areas.

Policy 5.3.1.1: High-density and multifamily residential, commercial, and industrial projects shall be required to connect to public wastewater collection facilities as a condition of approval except in Rural Centers.

Solid Waste Disposal

Objective 5.5.2: Recycling, Transformation and Disposal Facilities - Ensure that there is adequate capacity for solid waste processing, recycling, transformation, and disposal to serve existing and future users in the County.

Policy 5.5.2.1: Concurrent with the approval of new development, evidence will be required that capacity exists within the solid waste system for the processing, recycling, transformation, and disposal of solid waste.

Electricity and Natural Gas/Telephone and Cable Television Service

Objective 5.6.1: Provide Utility Services - Community Regions shall be provided with adequate and reliable utility services such as gas, electricity, communication facilities, satellite and/or cable television, and water distribution facilities, while recognizing that levels of service will differ between Community Regions, Rural Centers, and Rural Regions.

TABLE 4.13-2
PROJECT CONSISTENCY WITH THE GENERAL PLAN

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Goal 5.1	Yes	The proposed project would ensure the provision of adequate public services to future residents of the project site, while not diminishing public services to existing area residents as identified in the established standards in Policy 5.1.2.2. Maintenance of adequate public services would include the payment of development impact fees, property taxes, participation in facility improvements, and assessment districts.

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Policy 5.1.2.2	Yes	The proposed project would ensure the provision of adequate public services to future residents of the project site, while not diminishing public services to existing area residents as identified in the established standards in this policy. Maintenance of adequate public services would include the payment of development impact fees, property taxes, participation in facility improvements, and assessment districts.
Policy 5.1.2.3	Yes	The Specific Plan identifies existing and future infrastructure facilities and improvements to serve the project site, as well as phasing and potential financing programs to pay for the project's share of infrastructure costs.
Policy 5.2.1.2	Yes	Prior to approval of the final subdivision map or issuance of building permits, the applicant must prepare a Facility Plan Report and obtain water meters or equivalent guarantees from EID to ensure that an adequate water supply is available prior to project development.
Policy 5.2.1.3	Yes	As shown in **Figure 4.13-2**, the proposed water system for the project site would connect all commercial and medium- and high-density residential uses to the public water system via existing water distribution facilities adjacent to the project site.
Policy 5.2.1.4	Yes	Prior to approval of the final subdivision map or issuance of building permits, the applicant must prepare a Facility Plan Report and obtain water meters or equivalent guarantees from EID to ensure that an adequate water supply is available prior to project development.
Policy 5.2.1.8	Yes	Prior to approval of the final subdivision map or issuance of building permits, the applicant must prepare a Facility Plan Report and obtain water meters or equivalent guarantees from EID to ensure that an adequate water supply is available prior to project development.
Objective 5.3.1	Yes	The project sewer plan includes wastewater conveyance facilities to serve the project site.
Policy 5.3.1.1	Yes	The project site would be connected to existing wastewater conveyance system, conveys flows to the El Dorado Hills Wastewater Treatment Plant located off Latrobe Road south of Highway 50.
Objective 5.5.2	Yes	The capacity of the Union Mine Disposal Site was recently expanded to extend the landfill's life expectancy to the year 2028. Additional land is available for future expansions. Therefore, the landfill has adequate capacity to serve the project.

General Plan Goals, Policies, Objectives	Consistency With General Plan	Analysis
Policy 5.5.2.1	Yes	The capacity of the Union Mine Disposal Site was recently expanded to extend the landfill's life expectancy to the year 2028 to handle planned development in the County. El Dorado Disposal offers a source reduction program that includes buy back centers, a curbside collection program, and newspaper and cardboard drop-off centers. In addition, El Dorado Disposal opened a new materials recovery facility in December 1996 to increase source reduction, recycling, and composting.
Objective 5.6.1	Yes	Gas and electric, telephone, cable television services would be provided to the project by PG&E, Pacific Bell, and Continental Video, respectively. These utilities have existing infrastructure in the project area. Water distribution facilities are located near the project site to the north, east, and south.

El Dorado Irrigation District Policy Statements

The following El Dorado Irrigation District Policy Statements are relevant to the proposed project (complete copies of these policy statements have been included in this EIR as **Appendix F**).

Policy No. 22: El Dorado Irrigation District Policy No. 22 establishes the procedure by which an applicant, who is requesting an extension of new water and/or sewer services, can obtain service from the District. The following criteria are required to be met for an applicant to receive a Meter Award Letter, which entitles the applicant to water and/or sewer service:

- Submission of a Facility Improvement Letter and an approved Facility Plan Report, if required.
- Submission of Extension of Facilities Application and Fee, if required.
- Submission of Engineered Improvement Plans and associated fees.
- Submission of all required environmental documents.
- All applicable water, sewer and other connection fees paid.
- Approval of Annexation; if required.
- All agreements approved by EID Board of Directors and signed.
- All land rights being conveyed or guaranteed to be conveyed to the District.
- All Engineered Improvement Plans approved by the District Engineer.
- Compliance with all construction and maintenance bonding requirements.

- All other District requirements being met.

Facility Improvement Letters are issued by the District to applicants for water and sewer service. The applicants request for service must be in writing and must contain the Assessor's parcel number(s), current zoning, proposed zoning, General Plan land use classification (existing and/or proposed), and other information regarding water and/or sewer services as applicable. Additional requirements may be necessary.

Policy No. 41: El Dorado Irrigation District Policy No. 41 establishes standards by which the adequacy of water supplies and the risks of water shortages may be determined. The policy provides a basis for subsequent and ongoing efforts to maintain an appropriate relationship between supply and demand, as stated in it's Water Reliability Policy:

The Water Reliability Policy endeavors to provide water supplies having a System Firm Yield greater than or equal to the normal, unrestricted, water demands of the District's system. (The System Firm Yield is the annual quantity of water which the integrated water supply system can theoretically make available 95 percent of the time. In the remaining 5 percent of the time, shortages calculated not to exceed twenty percent annually will be allowed.) The policy accepts shortages when available supplies are insufficient to supply the unrestricted normal demands of the system and allows imposition of voluntary or mandatory conservation measures as the District deems appropriate in the circumstances. To mitigate these measures where possible, the policy gives priority to and seeks means for the provision of supplies over the curtailment of demands.

El Dorado Irrigation District Policy No. 41 requires the District to prepare an Annual Updated Water Supply and Demand Report. The following measure of the policy, to be implemented by the District Manager, pertains to new developments:

1. Monitor on a daily basis the amount of remaining firm supply that can be made available to new customers through either issuance of meter award letters per Policy No. 22 or meter sales per Policy No. 14.

4.13.2 IMPACTS AND MITIGATIONS

SIGNIFICANCE CRITERIA

Water Service

For the purposes of this EIR, implementation of the proposed project would be considered to result in significant impacts to water service if it would:

- cause a substantial increase in demand for water service above that for which the affected agency or utility has planned; or

- require the extension of a public utility to an area not currently planned for water service in a manner that is inconsistent with County General Plan goals, objectives, and policies.

Wastewater Service

For the purposes of this EIR, implementation of the proposed project would be considered to result in significant impacts to wastewater services if it would:

- cause a substantial increase in demand for wastewater service above that for which the affected agency or utility has planned; or

- require the extension of a public utility to an area not currently planned for service in a manner that is inconsistent with County General Plan goals, objectives, and policies.

Solid Waste Disposal

Implementation of the proposed project would be considered to result in significant impacts to public utilities if it would:

- cause a substantial increase in demand for solid waste disposal service above that for which the affected agency or utility has planned; or

- require the extension of a public utility to an area not currently planned for service in a manner that is inconsistent with County General Plan performance standards for growth management.

Electrical, Natural Gas, Telephone, and Cable Television Service

Appendix F of the CEQA Guidelines states that a project would normally have a significant effect on the environment if it would:

- cause a substantial increase in demand for service above that for which the affected agency or utility has planned; or

- require the extension of a public utility to an area not currently planned for service in a manner that is inconsistent with County General Plan goals, objectives, and policies.

IMPACTS AND MITIGATION MEASURES

Water Service

Impact

4.13.1 Implementation of the project would increase demand for water service in the EID service area. This would be a significant cumulative impact.

The project site is currently outside of the EID service area, but is within AD No. 3. EID cannot provide water service to the project until it is annexed into its service area. The project applicant has requested annexation into the service area as part of the project.

The proposed project would require approximately 1,400 equivalent dwelling units (EDUs) (4,700 acre-feet per year) of water. The project applicant currently owns 106 EDUs in AD No. 3. Additional EDUs likely would be available to the project applicant in the proposed AD No. 12. The El Dorado Irrigation District currently has 7,845 EDUs of water available for use in the El Dorado Hills Service Area. While this amount of water is adequate to serve the proposed project, there are several other approved or pending projects in the service area which would place additional demand upon the water supply in the El Dorado Hills Service Area. At full buildout, these projects would require 12,000 to 15,000 EDUs (7,000 to 9,000 acre-feet per year) of water, exceeding the current available supply of 7,845 EDUs.

In October 1996, the Water Resources Control Board approved the El Dorado Project, which would permit the diversion of up to 17,000 acre-feet of water per year from the American River at Folsom to the EID service area. Impacts associated with this entitlement are addressed in the El Dorado Project EIR. In addition, EID has been granted a share of 15,000 acre-feet per year of contract water from the Central Valley Project, which is under the direction of the U.S. Bureau of Reclamation. The 15,000 acre-feet of water has been divided between EID and the Georgetown Water District. With a firm yield of 11,250 acre-feet per year, the EID firm yield portion of this allotment would be 5,625 acre-feet per year. The EIR/EIS for the CVP contract water is currently being drafted and will be reviewed in 1997.

Fireflow requirements for the project would be 1,000 gallons per minute (gpm) for a 2-hour duration with 20 pounds per square inch (psi) of residual pressure (Veercamp, 1996). The project's water distribution system design would be required to meet EID and El Dorado Hills Fire Department standards for fire flow.

General Plan policies 5.2.1.2, 5.2.1.3, and 5.2.1.4 require that adequate water supply be provided for a proposed development prior to approval of that development. As discussed in the Carson Creek Final EIR Addendum, a project is not automatically inconsistent with these policies simply because the existing supply does not meet expected project demand. General Plan policies 5.2.1.2, 5.2.1.3, and 5.2.1.4 are

interpreted to mean that the applicant must obtain a permanent and reliable water supply only at the final subdivision map and building permit stages. The General Plan water supply policies are intended to recognize the practicalities of the water development process by allowing water supply development to occur while development planning moves from the plan- and zoning-level towards issuance of final subdivision maps and building permits. Final and full analysis of impacts on water supply would be the responsibility of EID, the proposed water service provider (El Dorado County, 1997). Therefore, the project would be consistent with General Plan water resources policies, even though an adequate supply of water for project buildout is not yet guaranteed.

EID provides water service to new consumers on a first-come, first-served basis (EID Policy Statements 22 and 41). The owners of existing approved parcels that have obtained water meters, even if the meters have not yet become active, would not be adversely affected by EID providing service to the project because their supply is already reserved. The project applicant would obtain the remaining EDUs needed to serve the project from additional unreserved supplies or as EID develops new supplies (El Dorado County, 1997). Therefore, current water users in the EID service area would not be affected by the project.

As stated under Mitigation Measure 4.13.1a below, EID would require preparation of a Facility Plan Report (FPR) for the project to address the expansion of water and sewer facilities to serve the project and the specific fire flow requirements for all phases of the project. In addition, installation of water-efficient housing features, such as low-flow plumbing fixtures, and efficient irrigation systems would be required to reduce water consumption.

Mitigation Measures

4.13.1a In accordance with EID Policy Statement No. 22, the project applicant shall prepare a Facility Plan Report (FPR) for the proposed project. The FPR shall address the expansion of the water and sewer facilities and the specific fire flow requirements for all phases of the project.

4.13.1b In accordance with General Plan Objective 4.5.1, water-efficient housing features, such as low-volume and low-flow plumbing fixtures, shall be installed to reduce water consumption.

4.13.1c Efficient irrigation systems shall be installed in common landscaped areas to minimize runoff and evaporation and maximize the water that will reach plant roots. One or any combination of the following methods of increasing irrigation efficiency shall be employed: drip irrigation, soil moisture sensors, and automatic irrigation systems. Mulch shall be used extensively in all common

landscaped areas. Drought resistant and native vegetation shall be used in common landscape areas.

As previously discussed, prior to approval of the final subdivision map or issuance of building permits, the project applicant must obtain water meters or equivalent guarantees from EID to ensure that an adequate water supply is available to serve the project.

Implementation of the above mitigation measures would reduce potential project impacts on water supply. As stated above, EID would be responsible for final analysis of impacts on water supply. Therefore, the project's impact on water consumption would be less than significant.

Significance After Mitigation

Less than significant.

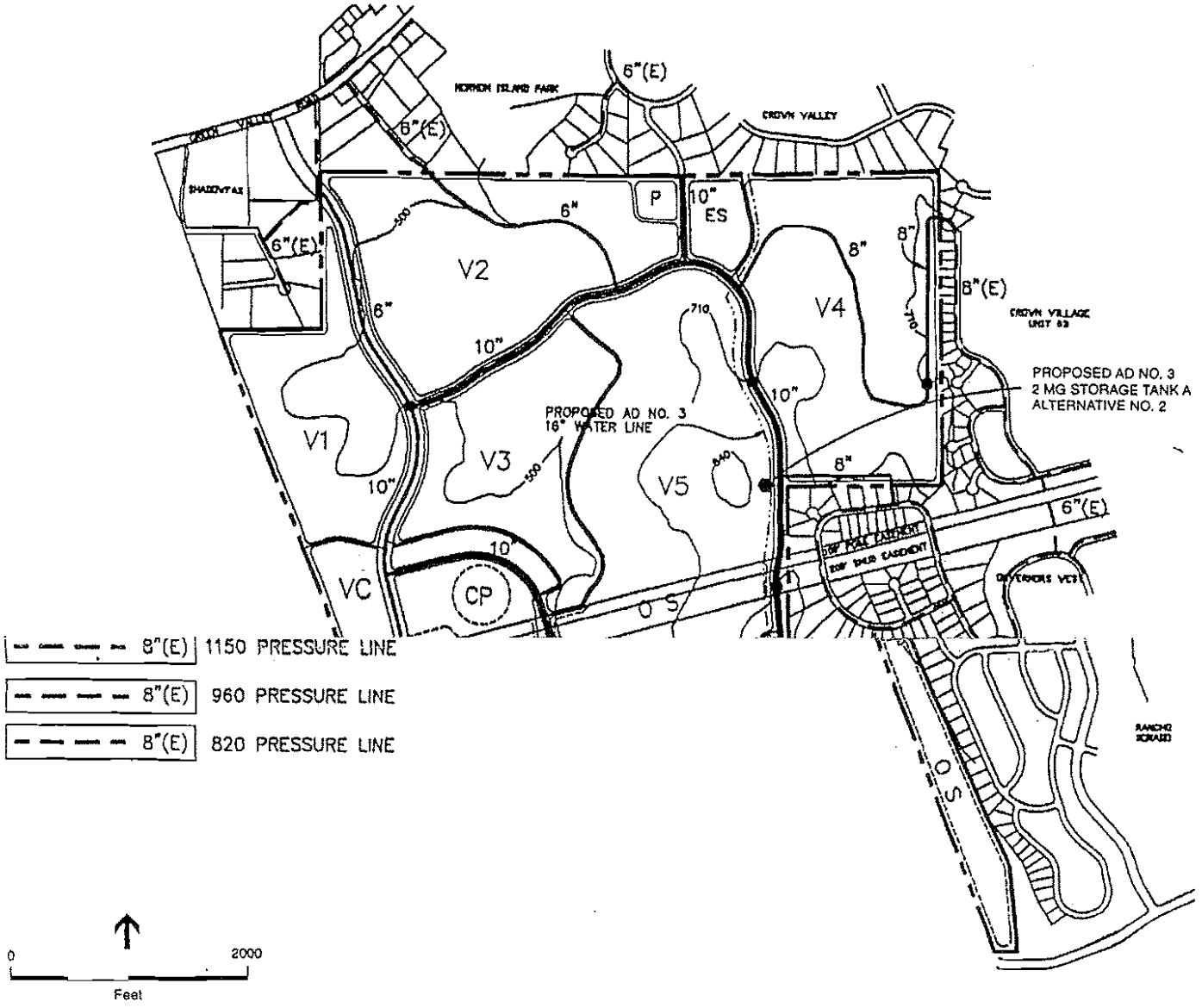
Impact

4.13.2 Implementation of the proposed project would require the extension of the existing water distribution infrastructure to the project site. The proposed water system identifies the necessary on-site water distribution infrastructure. This would be a less than significant impact.

EID has determined that existing facilities have sufficient capacity to meet the initial residential and commercial needs of the project (Cooper, 1997). The 1-million-gallon storage tank and 16-inch water line planned for the project area as part of the Phase 5 water facility improvements in the El Dorado Hills Master Facilities Plan would be required to meet future demand at project buildout.

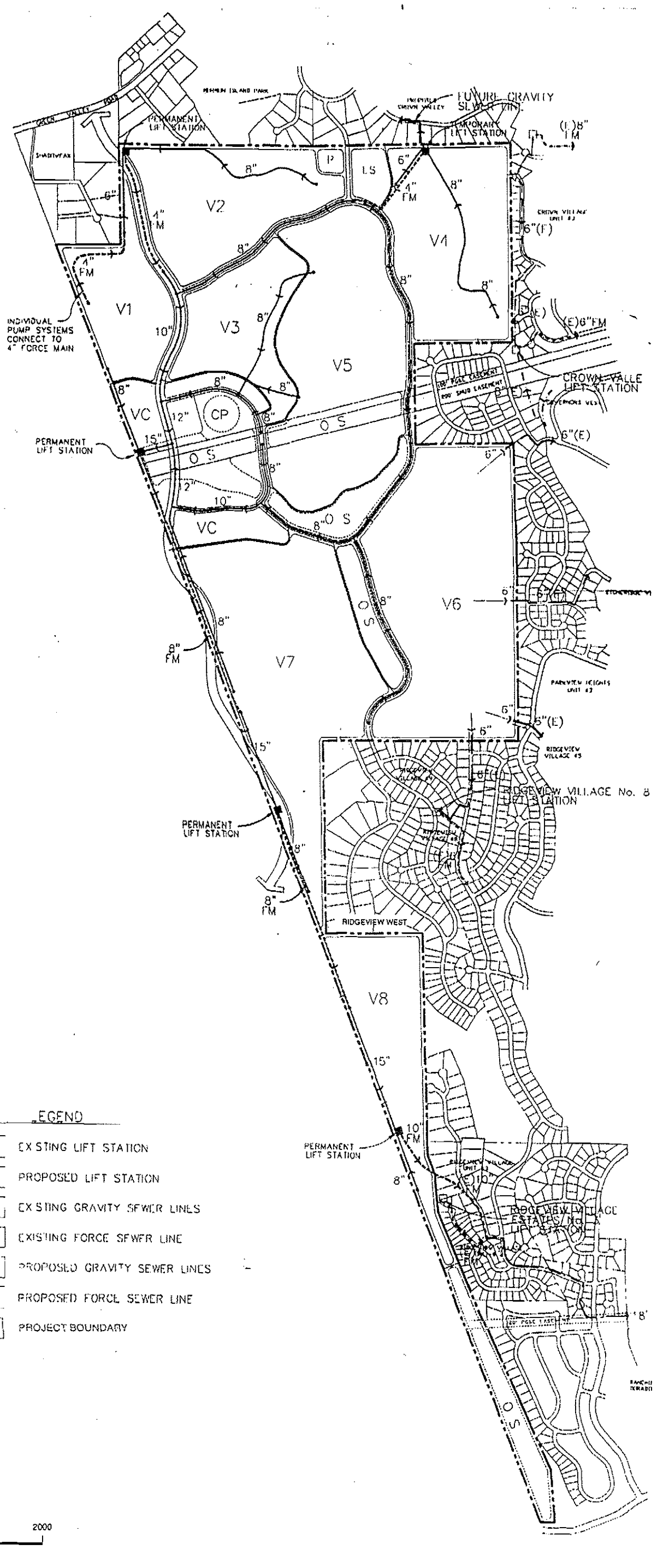
The proposed water system for the project site (**Figure 4.13-2**) shows that service will be provided by the extension of 8-inch and 10-inch diameter water lines into the site. Pressure reducing stations have been proposed to reduce pressures to acceptable EID requirements.

In accordance with District Policy Statement No. 22, Water/Sewer Procurement, a Facility Plan Report would be prepared for the project and submitted to EID for review. This report shall identify the necessary water and sewer facility improvements



SOURCE: Palisades, 1996

Figure 4.13-2
Proposed Water System



SOURCE: Palisades, 1996

Figure 4.13-3
Proposed Sewer Plan

required to serve the proposed development. All identified facility improvements would be paid for by the applicant.

Mitigation Measures

4.13.2 Since no significant impact was identified, no mitigation is required.

Wastewater Service

Impact

4.13.3 Implementation of the proposed project would require the extension of wastewater infrastructure to the project site. Currently there are adequately sized off-site conveyance facilities to handle project wastewater flows. This would be a less than significant impact.

Development of the project site would result in the increased need for wastewater services in the EID service area.

The proposed wastewater system required for the project site is shown in **Figure 4.13-3**. All new lines within the community will be designed to be gravity-fed as much as possible. The gravity-fed lines will range in sizes from 6-inches to 15-inches in diameter. Permanent and temporary lift stations are proposed on the site with force mains ranging from 4-inches to 10-inches in diameter. All facilities other than the lift stations will be installed in street rights-of-way or within EID easements. Construction of on-site lift stations and upgrade of any existing lift stations would be paid by the applicant.

Individual pump sewer services may be necessary in certain areas within the development and sewer services along lot lines will be required in areas where downhill access to homes is required.

As stated above in Mitigation Measure 4.13-1a, a Facility Plan Report would be prepared for the project and submitted to EID for review. This report shall identify the necessary water and sewer facility improvements required to serve the proposed development. All identified facility improvements would be paid for by the applicant.

Mitigation Measures

4.13.3 Since no significant impact was identified, no mitigation was required.

Impact

4.13.4 Implementation of the proposed project would generate additional wastewater flows that would be treated at the El Dorado Hills Wastewater Treatment Plant (EDHWTP). This would be a less than significant cumulative impact.

The project applicant estimates that development at the project site would generate 0.42 million gallons per day (mgd) of effluent. The EDHWTP capacity is currently being expanded from 1.6 mgd to 3.0 mgd, providing an additional 6,300 equivalent dwelling units (EDUs) of wastewater capacity. This additional capacity would be able to handle the additional effluent generated by buildout of the project site and maintain existing levels of service to the remainder of the EDHWTP service area (Powell, 1996). However, there are several other approved or pending projects in the area that would place additional demand on the EDHWTP (see **Table 3-1**).

As explained above under Impact 4.13-1, the project applicant is not required to obtain a guarantee of wastewater service for the project until the final subdivision map and building permit stages. EID provides wastewater service to new consumers on a first-come, first-served basis. The owners of existing approved parcels that have wastewater service would not be adversely affected by EID providing service to the project because EDHWTP capacity is already reserved for those parcels. Therefore, current users in the EID service area would not be affected by the project.

Mitigation Measures

4.13.4 Since no significant impact was identified, no mitigation was required.

Solid Waste Disposal

Impact

4.13.5 Implementation of the proposed project would result in an increase in the amount of solid waste accepted at the Union Mine Disposal Site. This would be a less than significant impact.

Solid waste disposal service to the project area would be provided by El Dorado Disposal. Buildout of the site would result in approximately 3,884 residents. Based on an average waste generation factor of 3.7 pounds per person per day, as provided by the El Dorado County Solid Waste and Hazardous Materials Division, buildout of the project site would generate up to approximately 7.2 tons per day (not including waste generated by commercial, office, park, and elementary school uses).

The application of existing El Dorado Disposal source reduction programs to the project site could reduce the amount of waste sent to the landfill. The Materials Recovery Facility (MRF) in Diamond Springs is planning to increase its capacity to process solid waste (Dutra, 1996). The Union Mine Disposal Site has recently

expanded, extending its life expectancy from 5 to 7 years to 32 years. Additionally, the disposal site has land available for future expansions. The MRF and the Union Mine Disposal Site would provide adequate capacity for the processing, recycling, transformation, and disposal of solid waste generated on the project site, as required by El Dorado County General Plan Policy 5.5.2.1. The generation of solid waste on the project site would have a less than significant impact (Dutra, 1996).

Mitigation Measures

4.13.5 Since no significant impact was identified, no mitigation was required.

Electrical and Natural Gas Service

Impact

4.13.6 Implementation of the proposed project would result in increased demand for electrical and natural gas service. This would be a less than significant impact.

Buildout of the project site would generate up to 1,387 additional residential units, as well as commercial, office, school, and park uses, resulting in increased demand for electrical and natural gas services in the El Dorado Hills area.

Electricity and natural gas at the project site would be provided by PG&E. PG&E would connect the project site with the existing electricity and natural gas infrastructure in the surrounding subdivisions. PG&E shall be consulted regarding proposed project infrastructure to ensure compatibility with PG&E specifications. System upgrades may be required of the project applicants in order to accommodate the increased electrical flow (Luna, 1996). PG&E would be able to meet the increased electricity and natural gas demand from the proposed project (Luna, 1996).

Mitigation Measures

4.13.6 Since no significant impact was identified, no mitigation is required.

Telephone and Cable Television Service

Impact

4.13.7 Implementation of the proposed project would result in increased residential, commercial, and industrial demand for telephone services in the El Dorado Hills area. This would be a less than significant impact.

Telephone facilities to the project site would be provided by Pacific Bell. The project site would be connected with infrastructure in the surrounding subdivisions (Willard, 1996). Pacific Bell would install the necessary main line facilities that would be required to serve the site at buildout of the proposed project. Pacific Bell shall be consulted regarding placement of infrastructure to ensure compliance with other utility

installations. Since no major extension of infrastructure would be required, this would be a less than significant impact.

The project's contribution to the cumulative increase in demand for telephone service resulting from approved and planned projects in El Dorado Hills would not adversely affect telephone services. Existing Pacific Bell customers would not be affected. Therefore, the proposed project would have a less than significant impact on telephone services (Willard, 1996).

Mitigation Measures

4.13.7 Since no significant impact was identified, no mitigation was required.

Impact

4.13.8 Development at the project site would result in increased demand for cable television service. This would be a less than significant impact.

Existing Continental Cable facilities consist of underground cables located in surrounding subdivisions. Potential connection points to the project site are located at the Ridgeview East and Governors West subdivisions. The project site would have sufficient density to meet Continental Cable's requirement of 40 houses per mile or 8 houses within 500 feet of an existing cable conduit.

Continental Cable is planning to engineer a new cable system in the surrounding area in 1997 and to rebuild the system in 1998. Project residents requesting cable service would be connect to this new system (Miller, 1996).

El Dorado County Code Section 16.16.010 requires a joint trenching agreement with the cable franchise and power and communication utility systems as a condition of tentative map approval to coordinate installation of underground cable, power, and communication systems for the proposed project.

Mitigation Measures

4.13.8 Since no significant impact was identified, no mitigation was required.

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4.14 Public Health and Safety

4.14 PUBLIC HEALTH AND SAFETY

4.14.1 SETTING

For this EIR, the term "hazardous material" includes any material that, because of its quantity, concentration, or physical, chemical, or biological characteristics, poses a considerable present or potential hazard to human health or safety, or to the environment. It refers generally to hazardous chemicals,[1] radioactive materials,[2] and biohazardous materials.[3] "Hazardous waste," a subset of hazardous material, is material that is to be abandoned, discarded, or recycled, and includes chemical, radioactive, and biohazardous waste (including medical waste[4]).

EXISTING HAZARDS

Contaminated Property

The project site is located in western El Dorado County, portions of which have been used as range land for cattle. A Phase I Environmental Assessment was prepared for the project site in May of 1992 (Youngdahl & Associates, 1992). Historical research of the project site performed for the Phase I Assessment found no historic use of the project site other than as range land for cattle. Adjacent lands were also used as range land or for low-density residential development. Existing and previous uses of the project site would not be suspected of having been engaged in the use, storage, or disposal of hazardous materials or hazardous wastes.

There are six state and federal lists that document known or suspected locations of hazardous material releases. These lists include the following:

- "Calsites" - California Dept. of Health Services/Cal EPA.
- Cortese List - Office of Planning and Research.
- Leaking Underground Storage Tanks (LUST) - Regional Water Quality Control Board.
- CERCLIS - US EPA Superfund sites.

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1 The term "chemical" refers to most substances, but this EIR generally uses the term "hazardous chemical" to exclude radioactive materials and biological materials, which are discussed separately.

2 A "radioactive material" is a special type of hazardous material that contains atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability.

3 A "biohazardous material" could contain infectious agents (microorganisms, bacteria, molds, parasites, or viruses that normally contribute to human mortality) or certain recombinant DNA molecules. ("DNA" stands for "deoxyribonucleic acid," the primary genetic material; recombinant DNA molecules are made outside a living cell by joining natural or synthetic DNA together with DNA that a living cell can copy.)

4 "Medical waste" refers to both biohazardous waste and sharps waste (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass). Medical waste does not include waste containing microbiological cultures associated with food processing or biotechnology that are not otherwise considered to be infectious.

- National Priority List (NPL) - US EPA Priority Superfund sites
- Annual Work Plan (AWP) - California EPA.

The project site was not found during a review of the above six lists performed for the Phase I Assessment. The project site was not found during a review of the most recent version of the Cortese List (as required under CEQA). Site inspections performed during the Phase I Site Assessment in 1992 and as a part of this analysis in 1996 did not reveal any observable indications of contamination, dumping or underground fuel tanks on the project site.

Hazardous Materials Use

Because the project site is currently undeveloped, hazardous material use does not currently take place on the project site.

Hazardous Waste Generation

Hazardous materials are not used on the project site which would generate hazardous byproducts to be handled and disposed of as hazardous waste. No indications of dumping of hazardous wastes were observed during an inspection of the project site.

REGULATORY SETTING

The use of hazardous materials is subject to numerous laws and regulations at all levels of government. **Table 1** in **Appendix B** provides a brief overview of these laws and regulations.

Physical Safety Hazards

Two parallel 230 kV electrical transmission lines, which are operated by Pacific Gas & Electric (PG&E) and Sacramento Municipal Utility District (SMUD), and a 12 kV transmission line bisect the project site (see **Figure 3-3** for the location of these transmission lines). These electrical transmission lines pose a physical hazard of shock and fire potential if damaged or encroached upon.

Electric power lines and other devices that handle alternating current produce electric and magnetic fields (EMF) that, in the United States, cycle at a frequency of 60 Hz (60 cycles per second). The strength of the EMF generated by alternating current varies with line voltage, wire type, spacing, height, and other factors. Field strength, measured in units of gauss (a measurement of magnetic induction), decreases rapidly with distance from the power lines or other source. EMF at 60 Hz is produced by high voltage transmission lines, as well as by power lines in the street, house wiring, and all electrical appliances. Intensities of ambient EMF exposures from home appliances and from electric power lines fall roughly within the same orders of magnitude at commonly exposed distances (California Dept. of Health Services, 1990).

In past years, some observers noted a possible correlation between disease and exposure to EMF, and researchers have been motivated to investigate the possibility of a cause-and-effect relationship between EMF and certain biological effects (Polk, 1986; California Public Utilities Commission, 1989; U.S. Congress, 1989). Suspected health risks included the promotion of cancer, birth defects and other reproductive or developmental abnormalities, and various neurological effects such as chronic depression. Scientific studies of the purported health risks have not yielded conclusive results. Reportedly, there was evidence that 60 Hz fields can produce various hormonal and nerve system changes in living things, but it has not been demonstrated that these changes pose potential risks to public health (California Dept. of Health Services, 1990; Morgan, 1989). It has been reported that mechanical functions of certain models of cardiac pacemakers can be affected by very strong 60 Hz fields, but pacemakers apparently are unaffected by the much weaker fields generated by power lines or Earth's magnetic field (Morgan, 1989).

It is not known what aspects of 60 Hz fields could pose health risks (e.g., intensity, duration, or proximity of field), nor does there seem to be a mechanism that could explain how weak magnetic fields could bring about biological changes in the body. Compared to other types of electromagnetic radiation (such as magnetic resonance imaging machines), 60 Hz fields have very low energy, and are not strong enough to break chemical bonds, ionize molecules, or heat body tissue. Some evidence suggested that within the range of field strengths commonly encountered by people, stronger fields may have no greater effects than weaker fields. This means that an assumption that exposure to a stronger force might pose a greater risk than exposure to a weaker force may not be correct assumption for EMF exposure (California Dept. of Health Services, 1990; Morgan, 1989).

Most published health risk studies have involved correlation between cancer incidence in humans and exposure to EMF from power lines, home electrical systems, and occupational equipment. No causal relationships have been established between EMF and health problems. Critics of the studies raise questions of experimental design and interpretation. All experts do not agree whether 60 Hz fields are a risk to public health and, if they are, how serious that risk might be (California Department of Health Services, 1990; Morgan, 1989).

In 1991, the California Public Utilities Commission (PUC) launched an investigation of the possible health effects of exposure to electromagnetic fields created by electrical power systems. The results of the investigation, published in 1992 by the California EMF Consensus Group, did not finally resolve questions related to possible health effects of EMF exposure, but did include a series of public policy recommendations. The recommendations called for further research on issues such as policy options, dose exploration/replication, biological mechanisms, human

exposure assessment, and mitigation (California EMF Consensus Group, 1992). Other recommendations of the study called for greater public education on electricity and magnetism.

More recently, published articles and reviews have increased doubts that electric and magnetic fields pose, or ever could pose, any real health threats. A recent scientific review in *Science & Medicine,* pointed out that fields induced in the body from power lines and appliances are small compared to natural and unavoidable fields that persons are exposed to all the time, and that earlier reports that aroused public concern were statistically weak (Bennett, 1995). In addition, the Orange County Superior Court recently dismissed a suit claiming transformers of a utility company had caused cancers in three individuals. The judge found that the plaintiffs "cannot show causation by any generally accepted scientific principle in the medical community" (Orange County Superior Court, 1995).

In a 1995 statement by the Council of the American Physical Society, which is the highest technical authority on the subject in the United States (American Physical Society, 1995), the Council's introductory letter states:

> *"The scientific literature and the reports of reviews by other panels show no consistent, significant link between cancer and power line fields. This literature includes epidemiological studies, research on biological systems, and analysis of theoretical interaction mechanisms... From this standpoint, the conjectures relating cancer to power line fields have not been scientifically substantiated.*
>
> *"These unsubstantiated claims, however, have generated fears of power lines in some communities, leading to expensive mitigation efforts, and, in some cases, to lengthy and divisive court proceedings. The costs of mitigation and litigation relating to the power line-cancer connection have risen into the billions of dollars and threaten to go much higher. The diversion of these resources to eliminate a threat which has no persuasive scientific basis is disturbing to us."* (American Physical Society, 1995)

Most recently, in October of 1996, the National Research Council submitted a three-year study assessment report on the effects of EMF exposure. The 16-member committee reviewed over 500 studies and found that "...no conclusive and consistent evidence shows that exposures to residential electric and magnetic fields produce cancer, adverse neurobehavioral effects or reproductive and development effects." Three members of the committee issued a qualifying, though not dissenting statement.

EMF Regulations

Lack of conclusive data has constrained experts from recommending health-based standards for permissible exposures to EMF. With the evidence that is now available, it is not possible to

establish an "unsafe field" standard based on scientific facts (Morgan, 1989). The Pacific Gas and Electric Company (PG&E) lists acceptable land uses within transmission corridors, but these are based on access considerations and not on health risks. Residences and other structures are prohibited within rights-of-way. The American National Standards Institute (ANSI) and the Occupational Safety and Health Administration (OSHA) have established standards for higher-frequency (i.e., non-60 Hz) electromagnetic fields for industrial workers, but these are not applicable to transmission corridors (ANSI, 1991; FCC, 1989).

TABLE 4.14-1
AUTHORITIES THAT LIMIT FIELD INTENSITIES ON TRANSMISSION LINE RIGHTS-OF-WAY

Authority	Maximum Field Limit /a/	Measurement Location /a/
Montana	1 kV/m	Edge of RoW in residential neighborhood
Minnesota	8 kV/m	In RoW
New Jersey	3 kV/m	Edge of RoW
New York	1.6 kV/m	Edge of RoW
North Dakota	9 kV/m	In RoW
Oregon	9 kV/m	In RoW
Florida	10 kV/m	For 500 kV lines in RoW
	2 kV/m	For 500 kV lines at edge of RoW
	8 kV/m	For 230 and smaller kV lines in RoW
	2 kV/m	For 230 kV and smaller lines at edge of RoW
	200 mG	For 500 kV lines at edge of RoW
	250 mG	For double circuit 500 kV lines at edge of RoW
Delmarva Power	150 mG	For 230 kV and smaller lines at edge of RoW/ in RoW
	8 kV/m	At edge of RoW
	2 kV/m	At edge of RoW
	200 mG	

/a/ kV/m = electric field strength in units of kilovolts per meter
mG = magnetic flux density in milligauss units
RoW = Transmission corridor right-of-way
SOURCES: California Department of Health Services, 1990.
U.S. Congress, Office of Technology, 1989.

Several states have established regulations that limit field intensities in transmission line rights-of-ways. Originally, these field limits were established to minimize the risk of electric shock to persons in the right-of-way; they are not based on biological health risks. Existing state regulations are listed in **Table 4.14-1**. All of the current regulations apply to transmission lines; no state has adopted regulations that govern substations, distribution lines, appliances, or other sources of EMF. The eastern utility, Delmarva Power, which serves portions of Delaware, Maryland, and Virginia, has established its own company standards for EMF levels near rights-

of-way, similar in magnitude to the established state standards. The Delmarva standards also apply to substation fields.

The California Department of Education has adopted a policy that recommends minimum setback distances between new schools and the edge of transmission line rights-of-way. The setback distances are 100 feet for 100-110 kV lines, 150 feet for 220-230 kV lines, and 250 feet for 345 kV lines. Again, these guidelines are not based on biological evidence. In California, there are no standards for exposure to EMF from power lines, nor are there setback requirements for new residences (Scott, 1991).

In the absence of firm exposure guidelines, many public agencies support the concept of "prudent avoidance" for EMF exposures. If individuals or organizations are concerned about possible health risks from EMF, they can take prudent steps to avoid exposure to the fields, while deferring large unjustified expenditures. For example, individuals could stop using electric blankets, sit further from computer monitors, and turn off unused appliances. Utility companies and planning agencies can avoid installing power lines close to locations where people live or work (California Dept. of Health Services, 1990; Morgan, 1989; Sacramento Municipal Utility District, 1991).

Because of past uncertainties, agencies and regulatory bodies have supported the policy of prudent avoidance by informing persons of what is known about the EMF issue, expanding efforts to learn more, and standing ready to take positive action when additional information becomes available. One of the most active agencies in the area is the Sacramento Municipal Utility District (SMUD), which monitors EMF research and keeps the public up-to-date on latest developments. SMUD holds public workshops, loans EMF measuring meters to its customers, and maintains a library of information and an EMF hotline that connects concerned citizens directly to SMUD's environmental specialists.

4.14.2 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, and agency and professional standards, a project would be considered to pose a significant impact if it would:

- pose public health and safety hazards through release of emissions or risk of upset;
- result in unsafe conditions for employees or surrounding neighborhoods;
- not comply with all applicable laws regarding the handling of hazardous materials;

- involve the use, production, or disposal of materials in a manner that poses a hazard to people, or to animal or plant populations in the area affected; or
- interfere with emergency response plans or emergency evacuation plans.

Impact

4.14.1 Implementation of the proposed project would not likely result in the exposure to contaminants on the project site. This would be a less than significant impact.

Contaminated soil or groundwater, if present on the project site, could potentially expose construction workers and future occupants to hazardous materials. The potential for soil and groundwater contamination has not been identified within the project site based upon a Phase I Environmental Site Assessment (Youngdahl Associates, 1992) and a recent site reconnaissance and hazardous materials release list search. Therefore, the potential for existing contamination on the project site to pose a hazard to construction workers and future occupants is considered to be a less than significant impact.

Mitigation Measures

4.14.1 Since no significant impact was identified, no mitigation was required.

Impact

4.14.2 The project could pose impacts related to the storage and use of hazardous chemicals. This would be a less than significant impact.

Various chemicals pose different levels of hazards in their use and storage. Some chemicals have the potential to cause cancer or other chronic illnesses; others have the potential to cause acute illnesses or injuries. The properties and health effects of chemical substances are unique to the individual materials considered. Service stations and dry cleaners are listed as permitted commercial uses under the Promontory Specific Plan. Service stations store significant quantities of petroleum products and dry cleaners typically use significant quantities of perchloroethylene. Workers and visitors could be exposed to hazardous chemicals through inhalation, skin contact, ingestion, or cuts. Both service stations and dry cleaning operations have historically been responsible for soil and groundwater contamination throughout California.

County Environmental Health Department programs address operational controls applicable to the storage and use of hazardous substances. Each operator is charged with implementing programs to ensure compliance with applicable laws and regulations, and to impose additional, more stringent, precautions when necessary. Each operator is responsible for ensuring that safe work practices are followed. The extent that building occupants are exposed to hazardous chemicals is related to the training they receive, how conscientiously they follow given safety procedures, and the

extent that compliance with safety policies is supervised and enforced. Operation of proposed service station or dry cleaners would eventually expose more people to potential hazards, although the hazard posed to any typical individual would be about the same as it is now.

Compliance with state and federal laws and regulations and implementation of effective health and safety programs are essential to ensure that the impact of increased hazardous chemical use would be less than significant.

Because of updated regulations on underground storage tanks and the required County oversight of service station and dry cleaning operations and implementation of environmental protection, health, and safety programs, this analysis concludes that the project would not involve the use of materials in a manner that poses a hazard to people, or to animal or plant populations, and would not create a substantial health or safety hazard due potential accidents. This impact would be considered less than significant.

Mitigation Measures

4.14.2 Since no significant impact was identified, no mitigation was required.

Impact

4.14.3 Exposure to electric and magnetic fields generated by power lines in the transmission corridor on the project site would expose future project occupants to electromagnetic forces. While no definitive conclusions regarding potential health threats of EMF can be drawn on the basis of direct scientific measurements, recent published literature suggests strongly that this impact would be less than significant.

Current available information regarding potential health threats of electric and magnetic fields is discussed in the setting section. The potential for electromagnetic radiation to cause cancer is widely in dispute. As previously described, the Orange County Superior Court recently dismissed a suit claiming transformers of a utility company had caused cancers in three individuals. The judge found that the plaintiffs "cannot show causation by any generally accepted scientific principle in the medical community" (Orange County Superior Court, 1995). This holding is supported by the 1995 finding cited in the setting section by the Council of the American Physical Society, which is the highest technical authority on the subject in the United States (American Physical Society, 1995).

In addition, land uses proposed within the electrical transmission line right-of-ways are limited to open space and passive recreation uses. Residential, commercial, and active park facilities and buildings would be located outside of the electrical transmission line right-of-ways.

Mitigation Measures

4.14.3 Since no significant impact was identified, no mitigation was required.

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CHAPTER 5.0

ANALYSIS OF ALTERNATIVES

CHAPTER 5.0
ANALYSIS OF ALTERNATIVES

5.1 INTRODUCTION

GENERAL CEQA REQUIREMENTS

The purpose of the alternatives analysis in an EIR is to describe a range of reasonable alternatives to the project that could feasibly attain the objectives of the project, and to evaluate the comparative merits of the alternatives (CEQA Guidelines, Section 15126(d)).

Additionally, Section 15126(d) of the CEQA Guidelines requires consideration of alternatives that could reduce to a less than significant level or eliminate any significant adverse environmental effects of the proposed project, including alternatives that may be more costly or could otherwise impede the project's objectives. The range of alternatives considered must include those that offer substantial environmental advantages over the proposed project and may be feasibly accomplished in a successful manner considering economic, environmental, social, technological, and legal factors.

ANALYSIS REQUIREMENTS FOR HOUSING DEVELOPMENTS

CEQA Section 20185 restricts a public agency from reducing the proposed number of residential units in a project as a mitigation measure or project alternative to reduce significant effects on the environment if it can be determined that there are other feasible mitigation measures and/or alternatives that would provide a similar level of mitigation. In addition, Government Code Section 65589.5(j) limits public agencies from reducing the proposed number of residential units in a project consistent with the general plan, zoning, and development policies in effect, unless the project's significant adverse effects on public health and safety could only be feasibly mitigated by the reduction of project density.

5.2 PROJECT ALTERNATIVES

The following four alternatives to the proposed project are analyzed below:

- No Project Alternative
- Reduced Intensity Alternative
- Clustered Development Alternative
- Off-Site Alternative

APPROACH

For each project alternative discussed below, the significant environmental impacts of the alternative are identified, as well as impacts of the proposed project that would be avoided. As allowed in Section 15126(d)(3) of the CEQA Guidelines, the alternatives are evaluated in less detail than the proposed project. The same environmental categories as presented for the proposed project in Chapter 4.0 have been addressed for each alternative. If a significant project-related impact would be avoided under the alternative, or if the alternative would cause a significant impact that would **not** occur under the proposed project, the impact category is generally discussed below. If a significant impact would not be avoided or created under the alternative, and therefore remain similar to that identified for the proposed project, the impact category is not discussed. For purposes of clarity, some environmental impact categories are discussed, even if a significant impact would not be avoided or created under the alternative.

NO PROJECT ALTERNATIVE

SETTING

Under the No Project Alternative, the Specific Plan would not be adopted and subsequent development under the Specific Plan would not occur. El Dorado County General Plan Policy 2.1.4.9 states that parcels within a designated Planned Community (i.e., the project site) shall not be subdivided below 40 acres until a specific plan, or other planning document is adopted by the County, while Policy 2.1.4.6 states that development pursuant to the underlying land use designation will not occur unless a General Plan amendment removing the Planned Community designation is adopted (El Dorado County, 1996).

As part of the No Project Alternative, it is assumed that the Planned Community overlay is removed from the project site and would be allowed to develop as residential uses consistent with the General Plan land use designation of Low-Density Residential (5 acres per dwelling unit minimum) and would be developed under the El Dorado County zoning designation of Estate Residential 5 acre (RE-5).

Under the No Project Alternative, ultimate development of the project site would consist of 199 single-family dwelling units, with a population of 557 at build-out.

IMPACTS

The No Project Alternative was identified as a potential alternative that could reduce significant project impacts, while reflecting the major underlying General Plan Land Use Designation of Low-Density Residential of the project site. The No Project Alternative is anticipated to reduce significant project impacts related to aesthetics, transportation and circulation, noise, air quality, biological resources, geology and soils, hydrology and water quality, and public schools. Implementation of this alternative would not result in substantially different effects to land use, fire protection, law enforcement, library services, water supply, wastewater service, solid waste service, electricity, natural gas, telephone, cable television, and public health and safety, and would result in significant impacts not related to the proposed project to population, housing and employment, parks, recreation and community services, and cultural resources. An overview of these impacts is provided below.

Land Use

Development under the No-Project Alternative would be less intense and generally compatible with adjacent areas in the El Dorado Hills area and the City of Folsom. Under the No Project Alternative, the project site would no longer be designated as a Planned Community and would not need to meet General Plan goals, objectives, and policies related to development of Planned Communities. Thus, no significant land use impacts are anticipated for the No Project Alternative.

Aesthetics

Alteration of the project site from development under the No Project Alternative would be substantially less than the proposed project. The significant impacts to views from the City of Folsom and the El Dorado Hills area would be reduced to a less than significant level. Nighttime light and glare impacts identified for the proposed project would be reduced under this alternative, but still could be potentially significant.

Population, Housing, and Employment

The No Project Alternative would result in 1,188 fewer dwelling units and 3,327 fewer residents at the project site than the proposed project. Unlike the proposed project, the No Project Alternative would not assist in meeting County affordable housing needs.

Transportation and Circulation

Build-out under the No Project Alternative would generate approximately 1,900 total daily trips, 19,957 fewer trips than the proposed project. Significant traffic impacts associated with the proposed project would likely be substantially reduced and/or avoided under this alternative.

Air Quality

As described above, the No Project Alternative would generate 19,957 fewer trips than the proposed project. This decrease would result in a substantial reduction in emissions of air pollutants from motor vehicle operation. In addition, the No Project Alternative also would substantially reduce the number of stationary sources of air pollution from the decrease in dwelling units and the elimination of potential commercial stationary sources such as service stations. However, emissions of reactive organic gases (ROG) would be 11.78 pounds per day and nitrogen oxides (No_x) 19.57 pounds per day (ozone precursors), which would be similar to the proposed project in that these emissions are above the El Dorado County Air Pollution Control District's standards (Rule 523.3).

Construction generated fugitive dust, construction equipment emissions, and hydrocarbon emissions also would be reduced under this alternative.

Noise

Implementation of this alternative would result in a substantial reduction in both construction and traffic noise due to the decrease in project site development. This would likely reduce significant impacts to residential areas surrounding the project site.

Biological Resources

Since development and density under the No Project Alternative would be substantially less than the proposed project, less disturbance to the natural habitat of the project site would occur. Depending on the locations of infrastructure and residential units, significant impacts to natural drainage areas, wetlands, oak trees, and special status species could still occur. However, these impacts to biological resources for this alternative could be mitigated to a less-than-significant level through proper design and using mitigation measures identified in Section 4.8, Biological Resources.

Geology and Soils

Disturbance of slopes and geologic conditions from construction and grading activities on the project site would be substantially less under this alternative because there would be fewer residents and roadways. Potential impacts to soil erosion, slope stability, and other geologic

conditions could be mitigated to less than significant levels using mitigation measures identified in Section 4.9, Geology and Soils.

Hydrology and Water Quality

Under the No Project Alternative, the amount of impervious surfaces added to the project site would be less than the proposed project. This would result in lower runoff volumes entering Willow and Humbug creeks in the City of Folsom and drainages north of the project site than the proposed project, but still would increase runoff volumes from existing conditions. In addition, the No Project Alternative would have similar, but less intense, potential water quality impacts. Mitigation measures outlined in Section 4.10, Hydrology and Water Quality, could reduce impacts of this alternative to less than significant levels.

Cultural Resources

Under the No Project Alternative, impacts on cultural resources would be essentially the same as those described for the proposed project, except that impacts to cultural resources CA-ELD-451, CA-ELD-452, CA-ELD-453, and CA-ELD-454 may be greater under this alternative than that described for the proposed project, since these cultural resources would not be within a designated open space area. Impacts to these cultural resources under this alternative could be mitigated to a less-than-significant level by designating these sites as open space and restricting public use and access to these areas.

Public Services

Implementation of the No Project Alternative would reduce significant impacts to fire protection, and public schools, and are discussed below. Project impacts to law enforcement and library services were found to be less than significant under the No Project Alternative.

Fire Protection

The No Project Alternative would result in 1,188 fewer dwelling units than the proposed project. Thus, significant impacts regarding fire protection and fuel modification zones would be slightly reduced under this alternative, but still would require mitigation as identified for the proposed project.

Public Schools

The No-Project Alternative would generate 91 elementary students, 27 middle school students, and 45 high school students. This alternative would generate 974 fewer students than the proposed project and would be within current capacities of Rescue School District, Buckeye School District, and El Dorado High School District, resulting in a less than significant impact to public schools.

Parks, Recreation, and Community Services

Implementation of the No Project Alternative would result in a substantial reduction in parkland dedication requirements. However, the No Project Alternative does not provide parkland, open space, bikeways, or pedestrian trails on the project site as identified in the El Dorado County General Plan, the El Dorado County Bikeway Master Plan, and the El Dorado County Hiking and Equestrian Trails Master Plan, resulting in a significant impact. This impact could be by providing parkland and/or parkland dedication fees, as well as designating bikeways and trails on the project site.

Utilities and Service Systems

The No Project Alternative would result in 199 dwelling units and 557 residents. Currently, the project site has 106 EDUs allocated from El Dorado Irrigation District's Assessment District No. 3 for water service, which would partially serve the project site. The No Project Alternative also would result in reduced wastewater flows and solid waste generation. In addition, this alternative would have the option of being serviced by wells and septic systems. However, the use of wells and septic systems on the project site would result in potential impacts to surface and groundwater quality. The provision of electricity, natural gas, telephone, and cable television services were found to be less than significant for the proposed project and would be for the No Project Alternative as well.

Public Health and Safety

Exposure to electric and magnetic fields was found to be less than significant for the proposed project and would be for the No Project Alternative as well.

REDUCED INTENSITY ALTERNATIVE

SETTING

Under the Reduced Intensity Alternative, villages 4-8 would be developed at a density of 0.5 dwelling units per acre (1 dwelling unit per 2 acres), villages 1-3 would be developed at a density of 1 dwelling unit per acre, and residential development in the village center would be developed at a density of 7 dwelling units per acre. Public open space, the community and neighborhood parks, and the commercial areas in the village center under the proposed project would remain the same under this alternative.

The maximum number of dwelling units under the Reduced Intensity Alternative would be approximately 793, with a resulting population of approximately 2,220 at build-out.

IMPACTS

The Reduced Intensity Alternative was identified as a potential alternative that could reduce significant project impacts. The Reduced Intensity Alternative is anticipated to reduce significant project impacts related to aesthetics, transportation and circulation, air quality, noise, biological resources, geology and soils, and hydrology and water quality, . Implementation of this alternative would not result in substantially different effects to land use, population, housing and employment, cultural resources, fire protection, law enforcement, public schools, parks, recreation and community services, library services, water supply, wastewater service, solid waste service, electricity, natural gas, telephone, cable television, and public health and safety. This alternative would not result in any impacts that are greater than those described for the proposed project. An overview of these impacts is provided below.

Land Use

Development under the Reduced Intensity Alternative would be less intense and generally compatible with adjacent areas in the El Dorado Hills area and the City of Folsom. The Reduced Density Alternative also would be consistent with El Dorado County General Plan policies related to providing mixed uses in Planned Communities, development intensities, and other related policies.

Aesthetics

Alteration of the project site from development under the Reduced Intensity Alternative would be less than the proposed project, but would still be considered significant. Nighttime light and glare impacts identified for the proposed project would be reduced under this alternative, but could still be potentially significant.

Population, Housing, and Employment

The Reduced Intensity Alternative would result in 594 fewer dwelling units and 1,664 fewer residents on the site than the proposed project. In addition, the Reduced Intensity Alternative could potentially assist in meeting County affordable housing needs, which is consistent with General Plan Policy 4.1.1.3.

Transportation and Circulation

Build-out under the Reduced Intensity Alternative would generate approximately 16,186 total daily trips, which would be 5,671 fewer trips than the proposed project. Significant traffic impacts associated with the proposed project would be reduced under this alternative; however, at some intersections and roadways, traffic impacts under this alternative would still likely be significant.

Air Quality

As described above, the Reduced Intensity Alternative would generate 5,671 fewer trips than the proposed project. This decrease would result in a reduction in emissions of air pollutants from motor vehicle operation. In addition, the Reduced Intensity Alternative would also reduce the number of stationary sources of air pollution from the decrease in dwelling units. However, emissions of reactive organic gases (ROG) would be 100.35 pounds per day and nitrogen oxides (No_x) would be 166.71 pounds per day (ozone precursors). These amounts would exceed the El Dorado County Air Pollution Control District's standards (Rule 523.3), resulting in a significant impact similar to the proposed project.

Noise

Implementation of this alternative would result in a reduction in construction and traffic noise due to the decrease in project site development. This would reduce significant impacts to residential areas surrounding the project site.

Biological Resources

Development under the Reduced Intensity Alternative generally would lessen the amount of overall disturbance to the natural habitat of the project site compared to that which would occur under the proposed project. Significant impacts to natural drainage areas, wetlands, and oak trees still could occur. However, significant biological resources could be avoided under this alternative and/or mitigated using mitigation measures identified in Section 4.8, Biological Resources.

Geology and Soils

Disturbance of slopes and geologic conditions from construction and grading activities on the project site would be less under this alternative because there would be fewer residents and roadways. Potential impacts to soil erosion, slope stability, and other geologic conditions could be mitigated to less than significant levels using mitigation measures identified in Section 4.9, Geology and Soils.

Hydrology and Water Quality

Under the Reduced Intensity Alternative, the amount of impervious surfaces added to the project site would be less than the proposed project. This would result in lower runoff volumes entering Willow and Humbug Creeks in the City of Folsom and drainages to the north in the El Dorado Hills area, but would still increase runoff volumes from existing conditions. In addition, the Reduced Intensity Alternative would have similar, but less intense, potential water quality impacts. On-site tributaries of Willow Creek would be protected as public open space in a similar fashion as that described for the proposed project.

Cultural Resources

Under the Reduced Intensity Alternative, impacts on cultural resources would be essentially the same as those described for the proposed project.

Public Services

Implementation of the Reduced Intensity Alternative would lessen impacts to fire protection, public schools, and parks, recreation, and community services, and are discussed below. Project impacts to law enforcement and library services were found to be less than significant, as they would be with this alternative.

Fire Protection

The Reduced Intensity Alternative would result in 594 fewer dwelling units than the proposed project. Thus, significant impacts regarding fire protection and fuel modification zones would be slightly reduced under this alternative, but would still require mitigation as identified for the proposed project.

Public Schools

The Reduced Intensity Alternative would generate 364 elementary students, 103 middle school students, and 182 high school students. This alternative would generate 488 fewer students than the proposed project. This student generation would be beyond the capacities of Rescue Union, and Buckeye Union school districts, resulting in a significant impact.

Parks, Recreation, and Community Services

Implementation of the Reduced Intensity Alternative would result in a reduction in parkland dedication requirements. The Reduced Intensity Alternative would provide parkland in excess of El Dorado Hills Community Service District requirements.

Utilities and Service Systems

The Reduced Intensity Alternative would result in reduced impacts regarding water supply, but would still be cumulatively significant. Wastewater service requirements and solid waste generation under this alternative would be reduced. The provision of electricity, natural gas, telephone, and cable television services was found to be less than significant for the proposed project and would be for this alternative as well.

Public Health and Safety

Exposure to electric and magnetic fields was found to be less than significant for the proposed project and would be for the Reduced Intensity Alternative as well.

CLUSTERED DEVELOPMENT/OPEN SPACE ALTERNATIVE

SETTING

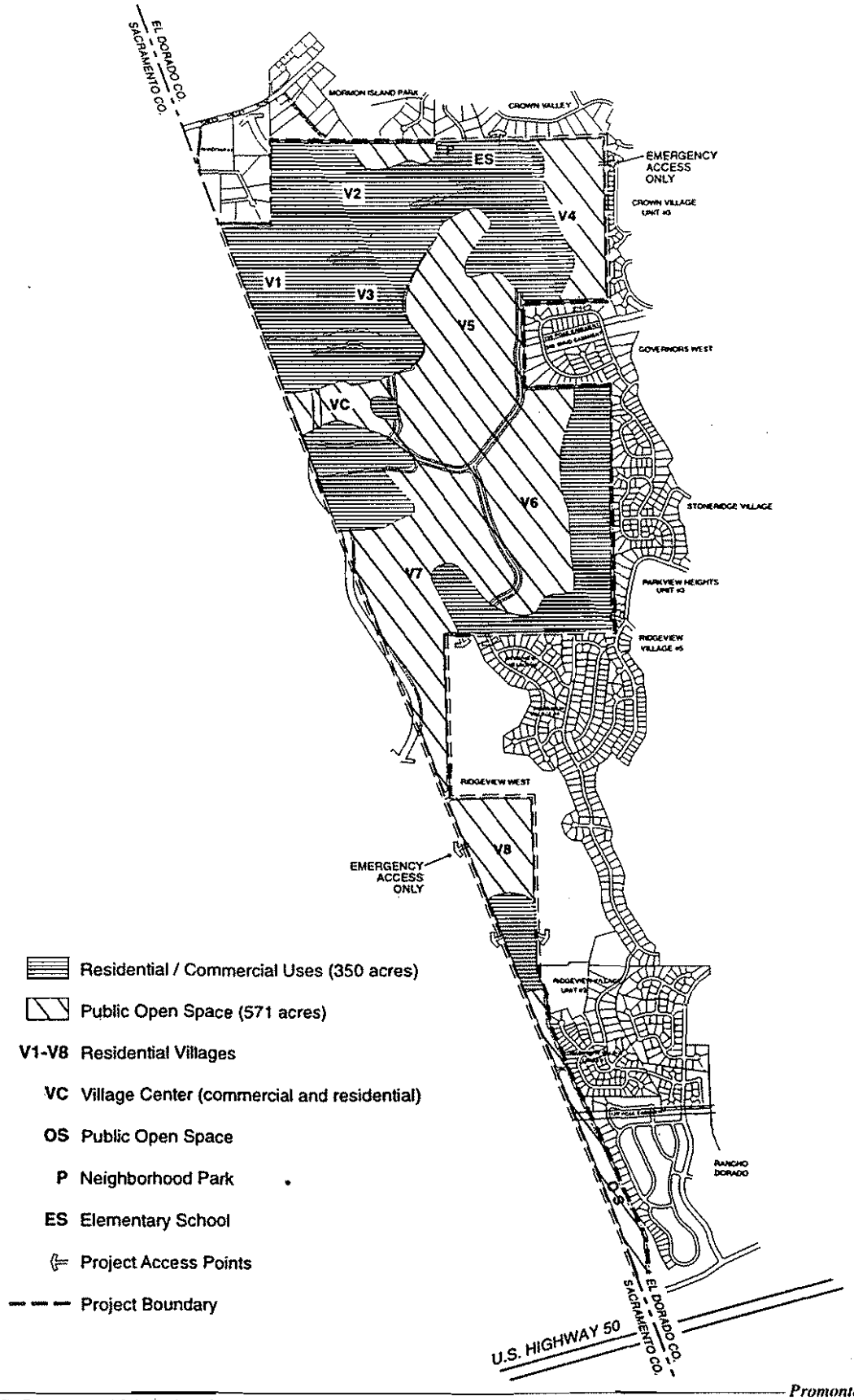
Under the Clustered Development/Open Space Alternative, the total number of dwelling units for the project site would remain the same as the proposed project. In addition, this alternative would include the development of the village center and designation and development of public open space areas, parks, and the elementary school site. However, residential development in Villages 1-8 generally would be clustered in areas with slopes 25 percent or less, while areas with slopes greater than 25 percent would be designated as public open space (see **Figure 5-1**). These clustered residential areas in villages 1-8 would consist of approximately 350.1 acres, with an average density of 3 dwelling units per acre. Public open space (including public open space within the village center) would consist of approximately 570.6 acres of the project site which would be approximately 57 percent of the site.

IMPACTS

The Clustered Development/Open Space Alternative was identified as a potential alternative that could reduce significant project impacts to aesthetics and hillside development, while providing a similar type of mixed-use development to the proposed project. The Clustered Development/Open Space Alternative is anticipated to reduce significant project impacts related to aesthetics, biological resources, geology and soils, hydrology and water quality, and parks, recreation, and community services. Implementation of this alternative would not result in substantially different effects to land use, population, housing, and employment, transportation and circulation, air quality, noise, cultural resources, fire protection, law enforcement, public schools, library services, water supply, wastewater service, solid waste, electricity, natural gas, telephone, cable television, and public health and safety. This alternative would not result in any impacts that are greater than those described for the proposed project. An overview of these impacts is provided below.

Land Use

Development under the Clustered Development/Open Space Alternative would be compatible to adjacent areas in the El Dorado Hills area and the City of Folsom, similar to the proposed project. The Clustered Development/Open Space Alternative would have a similar level of impact regarding land use issues to the proposed project, as described in Section 4.2, Land Use.



SOURCE: Environmental Science Associates

Promontory Specific Plan / 950107 ■

Figure 5-1

Clustered Development / Open Space Alternative Conceptual Plan

Aesthetics

Alteration of the project site from development under the Clustered Development/Open Space Alternative would be substantially less than the proposed project. The significant impacts to views from the City of Folsom and the El Dorado Hills area would likely be significant, but could be reduced to less than significant levels by implementation of mitigation measures identified in Section 4.3, Aesthetics, unlike the proposed project. Nighttime light and glare impacts identified for the proposed project would be similar under this alternative.

Population, Housing, and Employment

The Clustered Development/Open Space Alternative would have similar population, housing, and employment effects as the proposed project described in Section 4.4, Population, Housing, and Employment.

Transportation and Circulation

This alternative would have similar traffic impacts to the El Dorado Hills area as well as the City of Folsom as the proposed project described in Section 4.5, Transportation and Circulation.

Air Quality

The Clustered Development/Open Space Alternative would have similar air quality impacts as the proposed project described in Section 4.6, Air Quality.

Noise

The Clustered Development/Open Space Alternative would have similar construction-related and traffic noise as the proposed project described in Section 4.7, Noise.

Biological Resources

Development under the Clustered Development/Open Space Alternative would result in less overall site disturbance to the natural habitat of the project site than the proposed project. However, significant impacts to natural drainage areas, wetlands, oak trees, and special status species still would occur. These impacts to biological resources for this alternative could be mitigated by using mitigation measures identified in Section 4.8, Biological Resources.

Geology and Soils

Disturbance of slopes and geologic conditions from construction and grading activities on the project site would be reduced under this alternative from avoiding steeper sloped areas of the project site. Potential impacts to soil erosion, slope stability, and other geologic conditions would

be substantially reduced and could be further minimized using mitigation measures identified in Section 4.9, Geology and Soils.

Hydrology and Water Quality

Under the Clustered Development/Open Space Alternative, the amount of impervious surfaces added to the project site would be less than the proposed project. This would result in lower runoff volumes entering Willow and Humbug Creeks in the City of Folsom and drainages to the north in the El Dorado Hills area than the proposed project, but would still increase runoff volumes from existing conditions. In addition, the Clustered Development Alternative would have similar, but less intense, potential water quality impacts. Mitigation measures outlined in Section 4.10, Hydrology and Water Quality, could reduce impacts of this alternative to less than significant levels.

Cultural Resources

Under the Clustered Development/Open Space Alternative, impacts on cultural resources would be essentially the same as those described for the proposed project.

Public Services

Implementation of the Clustered Development/Open Space Alternative would result in similar impacts to fire protection and public schools. Impacts to parks, recreation, and community services are discussed below. Project impacts to law enforcement and library services were found to be less than significant, as they would be with this alternative.

Parks, Recreation, and Community Services

Implementation of the Clustered Development/Open Space Alternative would result in similar impacts regarding parkland dedication requirements. However, this alternative provide opportunities for development of park and recreation facilities and opportunities in the public open space areas identified in **Figure 5-1**. These areas could potentially assist this alternative in meeting parkland dedication requirements as well as further meet open space goals, objectives, and policies of the El Dorado County General Plan and the El Dorado County Hiking and Equestrian Trails Master Plan.

Utilities and Service Systems

The Clustered Development/Open Space Alternative would have similar water supply, wastewater service, solid waste, and electrical, natural gas, telephone, and cable television service effects as the proposed project.

Public Health and Safety

Exposure to electric and magnetic fields was found to be less than significant for the proposed project and would be for the Clustered Development/Open Space Alternative as well.

OFF-SITE ALTERNATIVE

SETTING

Under the Off-Site Alternative, the project would be developed in the same manner as proposed in the Promontory Specific Plan, but would be located on the northwestern 1,000 acres of the proposed Valley View Specific Plan site located south of U.S. Highway 50 generally between Latrobe Road and U.S. Highway 50, just east of the El Dorado Hills Wastewater Treatment Plant within the Community Region boundary. Access to this site would be provided by Latrobe Road and White Rock Road. Topographic and natural conditions of the Off-Site Alternative are similar in nature to the project site with moderate to steep slopes and natural vegetation consisting of grasslands, oak woodland, and riparian. In addition, Carson Creek and tributaries of Carson Creek flow west through the site.

IMPACTS

The Off-Site Alternative was identified as a potential alternative site that has not been approved for development within the Community Region boundaries of the El Dorado Hills area (consistent with project objectives). An overview of these impacts is provided below.

Land Use

The Off-Site Alternative is designated High-Density Residential (1 to 5 dwelling units per acre), Multi-Family Residential (5 to 24 dwelling units per acre), and Research and Development under the General Plan, while areas surrounding the site are designated Research and Development, Public Facilities, Low-Density Residential, and Rural Residential. Development of the Off-Site Alternative could potentially result in land use incompatibilities with existing and future industrial development along Latrobe Road. In addition, development of the Off-Site Alternative could result in the potential loss of designated Farmland of Local Importance and Grazing Land by the California Department of Conservation.

Aesthetics

Location of the project to the Off-Site Alternative would eliminate visual impacts to the City of Folsom as well as adjacent residential areas. However, development of the Off-Site Alternative would result in the alternation of the rural landscape characteristics of the site as viewed from Latrobe Road, White Rock Road, and U.S. Highway 50. In addition, the Off-Site Alternative

would result in the introduction of nighttime lighting and glare in an area that currently undeveloped. The overall aesthetic effect of the Off-Site Alternative would affect a different area, but would be similar in magnitude to the proposed project.

Population, Housing, and Employment

The Off-Site Alternative would have similar population, housing, and employment effects as the proposed project described in Section 4.4, Population, Housing, and Employment.

Transportation and Circulation

Build-out of the proposed project land use plan at the Off-Site Alternative would generate similar traffic volumes as the proposed project. Access to the Off-Site Alternative would be provided by Latrobe Road and White Rock Road, while regional access would be provided by the El Dorado Hills Boulevard/Latrobe Road Interchange with U.S. Highway 50. Traffic impacts to City of Folsom would not occur under this alternative, and the number of local roadways and intersections impacted would also be reduced. However, significant impacts to the El Dorado Hills Boulevard/Latrobe Road Interchange with U.S. Highway 50 and U.S. Highway 50 would still occur as in the proposed project.

Air Quality

The Off-Site Alternative would have similar air quality impacts as the proposed project described in Section 4.6, Air Quality. In addition, odor impacts from operation of the El Dorado Hills Wastewater Treatment Plant could substantially affect the Off-Site Alternative, given the plant's proximity to the site.

Noise

Implementation of this alternative would generate similar amounts of construction and traffic noise as the proposed project. However, noise from the Off-Site Alternative would affect fewer sensitive receptors than the proposed project. However, this alternative would be located adjacent to several existing noise sources, including of U.S. Highway 50, Latrobe Road, El Dorado Hills Wastewater Treatment Plant, and the El Dorado Hills Business Park, and could locate sensitive receptors in close proximity to these noise sources.

Biological Resources

As described above, the Off-Site Alternative consists of similar natural features to the proposed project. These natural features include grasslands, oak woodland, riparian habitats, Carson Creek and tributaries of Carson Creek. Impacts to biological resources on the Off-Site Alternative would be similar to the proposed project.

Geology and Soils

The Off-Site Alternative has similar topographic conditions to the project site, with gentle and steep slopes. Disturbance of slopes and geologic conditions from construction and grading activities, as well as potential seismic hazards, on the Off-Site Alternative would be similar to the proposed project.

Hydrology and Water Quality

As previously described, natural drainages on the Off-Site Alternative consist of Carson Creek and tributaries of Carson Creek. Development of the Off-Site Alternative would result in an increase in the amount of impervious surfaces added to the site, resulting in increased runoff volumes from existing conditions. These increased flows into Carson Creek would not adversely affect the City of Folsom, as identified for the proposed project. However, increases in Carson Creek flow could adversely affect downstream areas, similar to the proposed project. In addition, the Off-Site Alternative would have similar water quality impacts to the proposed project.

Cultural Resources

The Off-Site Alternative would not be near any existing cemeteries; therefore, impacts to cultural resources would be less under this alternative than under the proposed project.

Public Services

Implementation of the Off-Site Alternative would have similar effects to fire protection, law enforcement, parks, recreation, and community services, and library services, and public schools. Impacts to public schools are discussed below.

Public Schools

Implementation of the Off-Site Alternative would result in similar student generation as the proposed project. However, the Off-Site Alternative would be served by Buckeye Union and El Dorado Hills High School districts only. Impacts to public school services would be the similar to the proposed project.

Utilities and Service Systems

The Off-Site Alternative would have similar water supply, wastewater service, solid waste, and electrical, natural gas, telephone, and cable telephone service effects as the proposed project.

Public Health and Safety

The Off-Site Alternative would be close proximity to the El Dorado Hills Wastewater Treatment Plant. Plant operations could potentially expose future residents to offensive odors and hazardous materials.

5.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 5-1 provides a summary of the evaluation of the alternatives compared to the proposed project.

TABLE 5-1
COMPARISON OF PROJECT ALTERNATIVES TO THE PROPOSED PROJECT

Environmental Categories	No Project Alternative	Reduced Intensity Alternative	Clustered Development Alternative	Off-Site Alternative
Land Use	=	=	=	>
Aesthetics	<	<	<	=
Population, Housing, and Employment	>	=	=	=
Transportation and Circulation	<	<	=	=
Air Quality	<	<	=	>
Noise	<	<	=	>
Biological Resources	<	<	<	=
Geology and Soils	<	<	<	=
Hydrology and Water Quality	<	<	<	=
Cultural Resources	>	=	=	<
Public Services				
Fire Protection	=	=	=	=
Law Enforcement	=	=	=	=
Public Schools	<	=	=	=
Parks, Recreation, and Community Services	>	=	<	=
Library Service	=	=	=	=
Public Utilities				
Water Service	=	=	=	=
Wastewater Service	=	=	=	=
Solid Waste Disposal	=	=	=	=
Electricity and Natural Gas Service	=	=	=	=
Telephone and Cable Television Service	=	=	=	=
Public Health and Safety	=	=	=	>

> Impacts of the alternative are greater than those of the mitigated proposed project.
< Impacts of the alternative are less than those of the mitigated proposed project.
= Impacts of the alternative are equal to those of the mitigated proposed project.

SOURCE: Environmental Science Associates, 1997

As shown in **Table 5-1,** the No Project Alternative avoids or reduces significant adverse project impacts and would be considered the environmentally superior alternative. Other than the No Project Alternative, the Reduced Intensity Alternative would be the environmentally superior alternative. The Reduced Intensity Alternative would reduce significant project impacts related to aesthetics, transportation and circulation, air quality, noise, biological resources, geology and soils, and hydrology and water quality. However, the Reduced Intensity Alternative would provide substantially fewer dwelling units than the proposed project and what is allowed under General Plan Policy 2.1.4.3.

CHAPTER 6.0

OTHER CEQA-REQUIRED SECTIONS

CHAPTER 6.0

OTHER CEQA-REQUIRED SECTIONS

6.1 GROWTH INDUCING EFFECTS OF THE PROMONTORY SPECIFIC PLAN

INTRODUCTION

The CEQA Guidelines (Section 15126(g)) require that an EIR evaluate the growth inducing impacts of a proposed action. A growth inducing impact is defined by the CEQA Guidelines as:

> *The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this definition are public works projects which would remove obstacles to population growth. It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.*

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service and solid waste service. A project that would induce "disorderly" growth (conflict with the local land use plans) could indirectly cause additional adverse environmental impacts and other public services impacts. Thus, to assess whether a growth-inducing project will result in adverse secondary effects, it is important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

COMPONENTS OF GROWTH

The timing, magnitude, and location of land development and population growth in a community or region is based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type and intensity of growth, it is the primary means of regulating development and growth in California.

GROWTH INDUCEMENT POTENTIAL

As described in Chapter 3.0, Project Description, the proposed project site will consist of 1,387 dwelling units and 103,670 square feet of commercial and office uses on 999 acres in the El Dorado Hills area. Build-out of the project site would result in the addition of 3,884 new residents and approximately 259 new jobs to the El Dorado Hills area (see Section 4.4, Population, Housing, and Employment). Implementation of the proposed project also would include the extension of infrastructure facilities (such as water and wastewater distribution facilities) as well as the expansion of public services and roadways into a currently undeveloped portion of the El Dorado Hills area. This would result in the alternation of the project site from open space/rural area to a urban/suburban uses.

The El Dorado Hills area, including the project site, is located within a designated Community Region. As described in the El Dorado County General Plan, Community Regions are areas appropriate for urban and suburban development based upon the availability of infrastructure, public services, and major transpiration corridors and travel patterns. The eastern portion of the City of Folsom consists of several planned urban development projects which would include

approximately 8,425 residential dwelling units and 451 acres of commercial and industrial uses (see Chapter 3.0, Project Description). Thus, a substantial amount of urban growth is planned for in the project area.

GROWTH EFFECTS OF THE PROJECT

As described in Section 4.4, Population, Housing, and Employment, build-out of the proposed project is anticipated to consist of six percent of the El Dorado Hills area's 2020 population and two percent of the unincorporated area of El Dorado County's 2020 population. The project site is designated as a Planned Community by the El Dorado County General Plan, which projected maximum development of the project site to consist of 1,395 residential dwelling units. Thus the project would not directly support or stimulate growth that is not accommodated by the El Dorado County General Plan.

Development of the project site would result in the extension of infrastructure facilities that could be used by undeveloped parcels to the south and north of the project site. However, these parcels are within the Community Region boundary and could be developed in accordance with the land use plans and policies of the County, regardless of how infrastructure facilities are provided.

Implementation of the proposed project would not indirectly stimulate additional or new growth in the El Dorado Hills area or the City of Folsom. As described in Chapter 3.0, Project Description, the areas surrounding the project site are either developed or have been approved for urban/suburban development. Thus, the proposed project would result in the urban/suburban development of an area surrounded by existing and planned urban development.

The location of future growth would continue to be controlled by the County land use planning agencies as guided by local land use plans. Therefore, the proposed project would not have a significant growth inducing effect.

SECONDARY EFFECTS OF GROWTH

Because the proposed project would support planned growth as allowed for by the El Dorado County General Plan, it could indirectly result in some secondary environmental effects of growth that are associated with the adopted General Plan. These secondary effects of planned growth could potentially affect air quality, public infrastructure and services, traffic and circulation, water supply, agricultural land, open space and habitat. These secondary effects of planned growth are addressed in Chapter 4.0 of this EIR as well as the El Dorado County General Plan and its associated environmental review document.

6.2 SUMMARY OF CUMULATIVE IMPACTS

INTRODUCTION

"Cumulative impacts" refers to two or more effects that, when combined, are considerable or compound other environmental effects. CEQA Guidelines Section 15130(b) require that cumulative impacts must reflect the severity of the impacts and their likelihood of occurrence. The cumulative discussion need not provide as much detail as provided by impacts of the project alone and should be guided by the standards of practicality and reasonableness.

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

- A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency (list approach), or a summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or area-wide conditions. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency (plan approach);

- A summary of expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and;

- A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable options for mitigating or avoiding any significant cumulative effects of a proposed project.

Although CEQA Guidelines only requires the use of one method of cumulative analysis (list approach or plan approach), the cumulative analysis in this EIR uses both El Dorado County General Plan projections and future projects in both the El Dorado County and the City of Folsom.

CUMULATIVE SETTING

EL DORADO COUNTY GENERAL PLAN

The El Dorado County General Plan (adopted January 1996) provides for the long range direction and development of land within the County. The General Plan and Land Use Map identify and plan for future development densities and intensities throughout the unincorporated portion of the County. Development under the General Plan would allow for the development of 94,000 additional residential units, with an estimated 2015 population of 255,150 residents (El Dorado County, 1996; SACOG, 1995). The majority of development under the General Plan is

anticipated to occur in the western portion of El Dorado County, including the El Dorado Hills area. By the year 2015, the El Dorado Hills area is anticipated to consist of 20,600 dwelling units with a resulting population of 58,403 and a 15,341 jobs (SACOG, 1995). The communities of Cameron Park/Shingle Springs, Pilot Hill, Coloma/Lotus, and Diamond Springs are also anticipated to grow in a similar manner (see Section 4.4, Population, Housing, and Employment for further discussion).

EL DORADO COUNTY AND CITY OF FOLSOM DEVELOPMENT PROJECTS

El Dorado County Projects

As described in **Table 6.2-1** and **Figure 3-2**, several properties within the Community Region in the El Dorado Hills area that are approved or proposed for specific urban/suburban development. These development projects provide a further refinement of anticipated future development under the General Plan.

TABLE 6.2-1
EL DORADO HILLS AREA LARGE-SCALE PROPOSED AND APPROVED PROJECTS

Name of Project	Acreage	Description of Project	Status
Rancho Dorado	124	Residential development project consisting of 207 residential lots, 31.5 acres of open space, and 3.2 acres of public park uses.	Approved, unbuilt
Springfield Ranch	147	Residential development project consisting of 283 dwelling units and 26.9 acres of open space.	Approved, unbuilt
Carson Creek	710	Mixed-use development project consisting of 2,434 residential dwelling units, 13.8 acres of commercial uses, 48.4 acres of research and development uses, 31.2 acres of parks, and 142.8 acres of open space.	Approved, unbuilt
El Dorado Hills Business Park	900	Business park project consisting of light industrial, warehousing, office, research and development, and service uses.	Approved, under construction
Bass Lake Hills Specific Plan	1,196	Residential development project consisting of 1,458 dwelling units.	Approved, unbuilt
Marble Valley	2,341	Residential development project consisting of 398 dwelling units.	Under review
Valley View Specific Plan	2,038	Mixed-use development project consisting of residential, open space and parks, and mixed-use commercial "village centers".	Under review
El Dorado Hills Specific Plan	4,086	Mixed-use development project consisting of 6,162 dwelling units, 328 acres of commercial uses, 808 acres of open space, 370-acre golf course, and 60 acres of school uses.	Approved, under construction
Crown Valley	93	Residential project consisting of 68 residential lots.	Approved, unbuilt
Ridgeview West	118	Residential development project consisting of 85 dwelling units and open space areas.	Approved, unbuilt

SOURCE: El Dorado County, 1996; Trout, 1996

City of Folsom Projects

The City of Folsom General Plan was adopted in October 1988 and subsequent adoption of the East Area Facilities Plan in September 1992. Several projects covered by the General Plan and the East Area Facilities Plan have been approved with some under construction. **Table 6.2-2** and **Figure 3-2** describes these projects.

TABLE 6.2-2
CITY OF FOLSOM LARGE-SCALE APPROVED PROJECTS

Name of Project	Acreage	Description of Project	Status
Broadstone Unit 2	805	Mixed-use development project consisting of 1,005 single-family units, 500 multi-family units, 275 acres of commercial uses, and 130 acres of industrial uses.	Approved, unbuilt
Broadstone Unit 3	570	Mixed-use development project consisting of 687 single-family units, a 8.3 acre multi-family site, 13.5 acres of commercial uses, and 12 office/industrial lots.	Approved, unbuilt
The Parkway	612	Mixed-use development project consisting of 1,355 single-family units, 780 multi-family units, and 12 acres of commercial uses.	Approved, under construction
Russell Ranch	1,791	Mixed-use development project consisting of 3,754 single-family units, 344 multi-family units, 20 acres of commercial uses, and 2 golf courses	Approved, unbuilt
Willow Creek Estates South Unit 10, Lots G, H, J	285	Residential development project consist of 285 single-family units. Located between Oak Avenue Parkway and Blue Ravine Road.	Approved, unbuilt
Willow Springs	269	Specific Plan for 513 single-family units, 168 multi-family units, 25 acres of commercial uses, and 20 acres of industrial uses.	Approved, unbuilt
Prairie Oaks Ranch	405	Mixed-use development consisting of 670 single-family units, 860 multi-family units, and 8 acres of industrial development.	Approved, under construction

SOURCE: City of Folsom, 1996

SUMMARY OF CUMULATIVE IMPACTS

The following a summary of cumulative impacts related to the proposed project by environmental topic issue described in Chapter 4.0, Environmental Analysis. See Chapter 4.0, Environmental Analysis, for detailed discussion of cumulative impacts.

LAND USE

Impacts

As described in Section 4.2, Land Use, implementation of the proposed Specific Plan would convert the project site from grazing land to urban development, adding to the cumulative loss of

grazing lands. Conversion of agricultural lands in California and subsequent land use conflicts of urban uses in close proximity to active agricultural lands continues to be a state-wide concern. Implementation of the specific plan would result in the loss of existing grazing activities.

However, the project site is located within the boundaries of a Community Region and is designated Planned Community by the General Plan. As identified in General Plan Policy 2.1.4.3 (The Promontory Planned Community Land Use Summary Table), the project site is anticipated for urban development under the General Plan. In addition, the project site is designated as "Other Land" by the California Department of Conservation's Farmland Mapping and Monitoring Program and is not considered to be productive (or prime) farmland. The 1980 Draft Environmental Impact Report on the cancellation of the Williamson Act contract for the project site concluded that, due to the site's steep topography and soil conditions, the only agricultural use the property would be suited for is grazing (El Dorado County, 1980). The 1980 EIR also found that cattle operations in this area would not be profitable because of the steep terrain and interference from residents and pets in adjacent residential areas. Since the project site is not suited to agricultural uses, the loss of grazing land that would result from the project would not be considered significant.

AESTHETICS

Impacts

As described in Section 4.3, Aesthetics, implementation of the proposed project, in combination with approved and proposed projects in the El Dorado Hills area and the City of Folsom, would result in the further conversion of the region's rural landscape to urban uses. As previously described, future development under the El Dorado County General Plan, as well as proposed and approved urban/suburban development projects in the El Dorado Hills area and the City of Folsom will result in further urbanization of the existing rural landscape of the region. The proposed project will also contribute to the further alteration of the rural landscape character of the region.

Mitigation Measures

4.3.1a Prior to County approval of project site grading plans, the following item shall be included in the grading plans:

- **Project site grading shall avoid disturbing and/or removing rock outcroppings and oak trees to the maximum extent feasible.**

4.3.1b Landscaping plans for the project shall be developed and designed to preserve existing natural features, as feasible. The landscaping plans shall include the use

of native species within the project site and along project roadways and frontages to blend with the natural features of the project site. Landscaping plans shall be in conformance with County and El Dorado Hills Community Services District standards.

4.3.1c Project Design Guidelines shall include the following design standards that are identified within highly visible areas (see Figure 4.3-5):

- All residential structures shall be restricted to earth tone colors and designed to blend with the natural features of the project site. Such earth tone colors may include, but are not limited to, dark ochers, browns, and grays.

- Structures and facilities within the Neighborhood Park and Elementary School site shall be restricted to earth tone colors (e.g., dark ochers, browns, and grays) and designed to blend with the natural features of the project site. Landscaping for both sites shall consist of native plant species and will blend with the existing vegetation on the project site.

- Proposed lift stations shall be architecturally designed to blend with the surrounding natural features and/or screened with native landscaping in a manner acceptable to the El Dorado Irrigation District.

4.3.1d Streetscape features, such as street lights and project entry signage, shall be incorporated into the streetscape landscaping and blend with the natural features of the site.

4.3.1e Solid fences and walls shall be avoided to the maximum extent feasible. If solid fences and walls are used, the color and material used will blend with the natural features of the project site. Continuous fences and walls shall be softened with landscaping.

4.3.3a Prior to final water and sewer system approval, sewer and water improvement plans shall include details for screening sewer lift stations and the two million gallon water storage tank in a manner acceptable to the El Dorado Irrigation District. Methods of screening may include, but are not limited to, the following:

1. Architectural design of facilities to blend with the surrounding natural features.

2. Screen facilities with native landscaping.

3. Place facilities partially or completely underground.

Although implementation of the above identified mitigation measures would reduce the cumulative visual impact of urbanization, the impact would be significant and unavoidable.

POPULATION, HOUSING, AND EMPLOYMENT

Impacts

The proposed village center would consist of 103,670 square feet of commercial and office uses that would likely generate approximately 259 permanent jobs for 3,884 project residents, with a resulting 0.07 jobs to employed resident ratio. In addition to the commercial and office uses, the project site would generate some additional permanent employment from the proposed elementary school site and park sites, as well as temporary employment from project construction activities. However, these additional employment sources would not likely generate the additional permanent employment to minimize the ratio imbalance.

However, the project's jobs and housing generation was generally included the County's overall jobs to employed resident ratio projections. Development of the proposed project would not substantially alter the County's 2010 anticipated jobs to employed resident ratio of 0.57 for the unincorporated area, but would not assist the County in improving this ratio either. Transportation and circulation, air quality, and noise impacts of project residents commuting for employment outside the County are discussed in the relevant sections of this EIR.

TRANSPORTATION AND CIRCULATION

Impact

Implementation of the proposed project will increase cumulative traffic volumes at the Green Valley Road/Mormon Island Drive intersection resulting in LOS "F" conditions during the a.m. and p.m. peak hours. The left-turn movement from Mormon Island Drive to westbound Green Valley Road will experience substantial delay because of the limited number of gaps in the vehicle flow on Green Valley Road. As a result, this one movement will cause the overall intersection delay to exceed the LOS "F" threshold.

Mitigation Measures

4.5.11a The project applicant shall construct a barrier to prevent private vehicle access to Mormon Island Drive. This barrier shall be passable by emergency vehicles only. The specific barrier design shall be determined by the El Dorado County DOT and El Dorado Hills Fire Department.

Implementation of this mitigation measure will reduce this impact to a less-than- significant level for the following reasons.

- The Green Valley Road/Mormon Island Drive intersection would operate at LOS "B" and "D" during the a.m. and p.m. peak hours, respectively.

- The Green Valley Road/North-South Collector Road (Russell Ranch Boulevard Extension) intersection would continue to operate at LOS "B" and "D" during the a.m. and p.m. peak hours, respectively.

- The El Dorado Hills Boulevard/East-West Collector Road intersection would continue to operate at LOS "A" during the a.m. and p.m. peak hours.

The LOS information for the Green Valley Road/North-South Collector Road and El Dorado Hills Boulevard/East-West Collector is presented here because elimination of project access to Mormon Island Drive will shift project traffic to these other project access roads.

Or

4.5.11b As an alternative, the intersection may be signalized to maintain a LOS "B" in the a.m. and LOS "C" in the p.m.

The signalization and lane improvements are not currently in the El Dorado Hills RIF or West Slope TIM. Should the improvements be added to the RIF or TIM programs, and the applicant signalizes the intersection, the applicant may be eligible for reimbursement or credit towards the RIF.

Impact

Implementation of the proposed project will increase cumulative traffic volumes at the Blue Ravine Road/East Natoma Street intersection resulting in the exacerbation of LOS "D" conditions during the a.m. peak hour and a deterioration in LOS from "E" to "F" during the p.m. peak hour.

This intersection is not projected to operate within the City of Folsom's LOS "C" threshold even under cumulative no project conditions. Past traffic impact studies for projects in the City of Folsom such as the Russell Ranch Specific Plan have not shown this intersection to operate below the City's LOS threshold under cumulative conditions. For example, the Russell Ranch Specific Plan Environmental Impact Report, January 14, 1991, shows that this intersection will operate at LOS "C" or better during a.m. and p.m. peak hours under cumulative conditions. Interestingly, the traffic forecasts for the Russell Ranch EIR were prepared using the City of Folsom East Area Traffic Model, which included land use assumptions for the Promontory Specific Plan and the rest

of El Dorado Hills. The reason that this intersection operates worse than LOS "C" in this study, is that the planned roadway assumptions used in this study are different from those used in previous City of Folsom studies.

At the beginning of this study, the City of Folsom was contacted to determine what assumptions should be used for City roadways under cumulative conditions. City officials stated that Blue Ravine Road and Green Valley would be a total of four lanes (two lanes in each direction) instead of six, which was shown in the City of Folsom General Plan (1988) and used in studies for projects such as Russell Ranch, the Parkway, and the Folsom East Area (Maguire, 1997). As a result, the intersection fails to operate within the City of Folsom's LOS "C" threshold even under cumulative no project conditions.

Mitigation Measures

According to the City of Folsom Public Works Department, the intersection geometrics contained in **Figures 4.5-10** and **4.5-13** in Section 4.5, Transportation and Circulation, are consistent with available right-of-way at this intersection, but any additional widening could cause undesirable environmental impacts (Maguire, 1997). To obtain LOS "C" operations at this intersection would require substantial widening, which would include the following:

- Widen the Green Valley Road approach to include dual left-turn lanes, three exclusive through lanes, and a free-flow right-turn lane. The three through lanes should extend a minimum of 1,000 feet prior to the intersection.

- Widen the Blue Ravine Road approach to include dual left-turn lanes, three exclusive through lanes, and a free-flow right-turn lane. The three through lanes should extend a minimum of 1,000 feet prior to the intersection.

- Widen the East Natoma Street approach to include dual left-turn lanes, three exclusive through lanes, and an exclusive right-turn lane. The three through lanes should extend a minimum of 1,000 feet prior to the intersection.

- Widen the Russell Ranch Boulevard approach to include dual left-turn lanes, two exclusive through lanes, and an exclusive right-turn lane.

Since these improvements are not considered feasible by the City of Folsom, this impact will be significant and unavoidable.

Impact

Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Olson Lane intersection resulting in the exacerbation of LOS "F" conditions during

both peak hours. The roadway plan prepared for the El Dorado County General Plan projected this section of El Dorado Hills Boulevard to operate at LOS "E" under year 2015 conditions.

This intersection warrants signalization under cumulative no project conditions according to the peak hour volume warrant contained in the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, 1988. The addition of project trips will exacerbate this need and push the a.m. and p.m. peak hour LOS to "F".

Mitigation Measures

4.5.13 The project applicant shall install a traffic signal at the El Dorado Hills Boulevard/Olson Lane intersection and construct exclusive left- and right-turn lanes on the Olson Lane approach.

El Dorado County DOT, at the next update of the El Dorado Hills RIF, will determine the cost of signalization and turn lane improvements and determine the fair-share cost of the project applicant. The RIF will reimburse the project applicant the difference between the cost of the improvements and the project applicant's fair-share portion. Implementation of this mitigation measure will reduce this impact to a less-than-significant level because the a.m. and p.m. peak hour operations would improve to LOS "B" under cumulative plus project conditions.

Impact

Implementation of the proposed project will increase traffic volumes at the El Dorado Hills Boulevard/Wilson Boulevard intersection resulting in the exacerbation of LOS "F" conditions during both peak hours. The roadway plan prepared for the El Dorado County General Plan projected this section of El Dorado Hills Boulevard to operate at LOS "E" under year 2015 conditions.

Similar to the Olson Lane intersection with El Dorado Hills Boulevard, this intersection warrants signalization under cumulative no project conditions according to the peak hour volume warrant contained in the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, 1988. The addition of project trips will exacerbate this need and push the a.m. and p.m. peak hour LOS to "F".

Mitigation Measures

4.5.14 Implement Mitigation Measure 4.5.5:

4.5.5 During the review of tentative maps for each phase of the Promontory Specific Plan, a traffic study shall be performed to determine the amount of project traffic that will be added to the El Dorado Hills

Boulevard/Wilson Boulevard intersection. When the intersection warrants signalization, as determined by the El Dorado County Department of Transportation, or if the intersection is projected to operate at LOS "D", "E", or "F", as a result of implementing a particular phase of the Promontory Specific Plan, then the tentative map for that phase shall not be approved unless the intersection is signalized.

The signalization required by Mitigation Measure 4.5.5 would improve the a.m. and p.m. peak hour operations to LOS "D" under cumulative plus project conditions.

Impact

Implementation of the proposed project will create a new intersection with Green Valley Road. This intersection would operate at LOS "F" under cumulative plus project conditions.

The new North-South Collector Road (Russell Ranch Boulevard Extension) intersection with Green Valley Road was assumed to operate under stop control for cumulative plus project conditions. This intersection will warrant signalization according to the peak hour volume warrant contained in the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, 1988. Signalization will also be necessary to improve peak hour traffic operations to acceptable levels.

Mitigation Measures

4.5.15 Implement mitigation measures 4.5.7a and 4.5.7b.

4.5.7a Implement Mitigation Measure 4.5.2a.

4.5.7b Install a traffic signal and turn lane improvements at the Green Valley Road/North-South Project Collector Road (Russell Ranch Boulevard Extension) intersection. The turn lane improvements shall include an exclusive westbound left-turn lane and an exclusive eastbound right-turn lane on Green Valley Road. In addition, the North-South Collector Road approach shall include a dual left-turn lane and an exclusive right-turn lane. The timing of these improvements will be predicated on the phasing of the project and the results of the traffic studies submitted with each tentative subdivision map.

The signalization and turn lane improvements required by mitigation measures 4.5.7a and 4.5.7b would improve the a.m. and p.m. peak hour operations to LOS "B" and "D", respectively, under cumulative plus project conditions.

AIR QUALITY

Impact

Implementation of the proposed project, by incrementally adding to regional air pollution, would contribute to a cumulative air quality impact. New development induced by the proposed project will generate substantial quantities of ROG, NO_x, PM_{10}, and CO. The District's AQAP outlines feasible measures to be undertaken in order to achieve mandated emission reductions. Because emissions associated with the proposed project would limit the District's ability to achieve the AQAP emission reductions, the proposed project could affect the ability of the District to reduce emissions contributing to current O_3 and PM_{10} violations, and could potentially contribute to future violations of the CO standards. Therefore, this would be a cumulatively significant impact.

Mitigation Measures

4.6.9 Implement mitigation measures 4.6.1, 4.6.2a, 4.6.2b, 4.6.3, 4.6.4, and 4.6.5.

4.6.1 Prior to approval of subsequent development, project applicants shall demonstrate to the County and District their compliance with Rule 223 of the El Dorado Air Pollution Control District's Rules and Regulations handbook in written report form. This fugitive dust prevention and control plan shall briefly list all Best Management Practices (BMP) to be implemented for the control of fugitive dust emissions throughout the construction phase.

4.6.2a The County shall encourage subsequent site development to incorporate the use of Best Available Control Technologies (BACT) for the control of construction exhaust emissions. The EDCAPCD shall be consulted to determine the appropriate BACT measures available (regular tune-ups, cleaner burning conventional fuels, alternative fueled vehicles and equipment).

4.6.2b Prior to future final map approvals, the project applicant shall consult the County and the EDCAPCD concerning feasible transportation alternatives in order to reduce construction worker vehicle trips and associated vehicle exhaust emissions.

4.6.3 Prior to future final map approvals, the project applicant shall demonstrate to the County and the EDCAPCD their compliance with Rules 215 and 224 of the EDCAPCD's Rules and Regulations handbook for the control of ROG emissions from architectural and asphalt coatings.

4.6.4 Prior to future final map approvals, the project applicant shall demonstrate complete compliance with the El Dorado Air Pollution Control District's open burning rules contained in Regulation III.

4.6.5 Implementation of the following measures would reduce, but not eliminate, the significant air quality impacts:

- **The project applicant shall encourage the location of neighborhood-serving shops and services in or adjacent to the Promontory Specific Plan area. By providing these shops and services within the planned commercial center (those facilities to locate in the commercial center are currently unspecified), residential shopping travel distances will be reduced, subsequently reducing mobile source criteria air pollutant emissions. Effectiveness of measure is estimated at a 1-4 percent reduction in total emissions (BAAQMD, 1996).**

- **Public transit system improvements within the project to include: expansion of routes and schedules servicing the project, convenient access to existing or future public transportation system (i.e., possible Regional Transit light rail system extension servicing the Highway 50 corridor), and incorporation of convenient transit stops in project design (i.e., bus turnouts, benches with shelters). Effectiveness of measure is estimated at a 0.2-2 percent reduction in total emissions (BAAQMD, 1996).**

- **All major surface streets are proposed to accommodate Class II bikeways and pedestrian sidewalks. These project proposed bicycle lanes in addition to the sidewalks shall be linked to the commercial center and local area network. Planned bikeways and sidewalks from the City of Folsom in the Russell Ranch Specific Plan shall be extended to connect to the proposed village center. Effectiveness of measure is estimated at a 0.1-2 percent reduction in total emissions (BAAQMD, 1996).**

- **Prior to future final map approvals, the project applicant shall demonstrate that only EPA certified wood stoves and fireplaces inserts are installed in homes. Standard masonry fireplaces, uncertifiable by the EPA, shall not be constructed. EPA certified stoves and fireplace inserts have a 70 to 90 percent lower particulate emission rate than conventional stoves and fireplaces.**

Implementation of the above mitigation measures would help reduce the project's contribution to regional air pollution, but not to a less-than-significant level.

NOISE

Impact

Upon project buildout, subsequent local traffic increases would increase noise levels along local arterial roads. P.M. peak hour noise levels would increase along segments of Green Valley Road, Francisco Drive, East Natoma Street, and El Dorado Hills Boulevard, exposing existing residents to noise levels exceeding the performance standards outlined in the El Dorado County General Plan Noise Element and the City of Folsom Noise Element where applicable.

Implementation of the proposed project would increase future cumulative ambient noise levels along arterial roads. **Table 4.7-8** (see Section 4.7, Noise) lists the distances to the cumulative future with project traffic noise contours and differences in noise levels 49 feet (15 meters) from the center line of the roadway segments along Green Valley Road, Francisco Drive, El Dorado Hills Boulevard, and Russell Ranch Boulevard.

Green Valley Road, between East Natoma Street and the proposed Russell Ranch Boulevard, would experience a change in noise level of approximately 2.5 dBA. No residences currently exist or are planned for this segment within the cumulative no project 65 dBA contour. Therefore, a change in noise level of 2.5 dBA would be less than significant. However, on all road segments, existing residential noise receptors closest to Green Valley Road, Francisco Drive, East Natoma Street and El Dorado Hills Boulevard could potentially experience a change in noise exposure exceeding the performance standards outlined in the County and City's General Plan Noise Element and in **Table 4.7-1** (see Section 4.7, Noise) as a consequence of increased noise contour distances. This would be a cumulatively significant unavoidable impact.

Impact

Resultant traffic along the proposed Russell Ranch Boulevard extension would expose residents of the Shadowfax subdivision and Amys Lane to noise levels exceeding the performance standards of the El Dorado County Noise Element and **Table 4.7-1** (see Section 4.7, Noise).

Increased ambient noise levels at Residence #1(see Section 4.7, Noise), as a consequence of project implementation, would create a condition of General Plan noise/land use incompatibility resulting in a significant impact. Although noise exposure levels increase at all other modeled residences, changes in the ambient noise environment at these residences does not constitute a significant impact as defined in **Table 4.7-4** (see Section 4.7, Noise) nor would there be any change creating a condition of noise/land use incompatibility constituting a significant impact.

Mitigation Measures

4.7.3 The County shall require:

- **that speeds along Russell Ranch Boulevard in the area of Shadowfax and Amys Lane be posted at no higher than 30 mph (assumes posted speed limit exceedence by 5 mph and subsequently assures compliance with mitigation); and**

- **that a 4-foot earthen berm be constructed adjacent the west side of Russell Ranch Boulevard blocking line of site between Residence #1 through #3 and Russell Ranch Boulevard (see Section 4.7, Noise).**

Although reduced speeds brings noise levels into compliance with the Noise Element performance standards at both Residence #1 and #4 (see Section 4.7, Noise), a 4-foot earthen berm in addition to the reduced speeds would reduce ambient noise exposure levels in the Shadowfax development to levels very near baseline existing or cumulative conditions. Reduced traffic speeds on Russell Ranch Boulevard plus a 4-foot earthen berm is the preferred mitigation alternative.

Impact

Upon project buildout, subsequent local traffic increases would increase noise levels in residential areas east of the project site. Peak hour noise levels would increase along segments of Hensley Circle, Warren Lane, Governor Drive, Gillett Drive, Olson Lane, Ridgeview Drive, Wilson Boulevard, and Julie Ann Way. This increase would expose existing residents to noise levels exceeding the noise impact significance threshold criteria.

Under cumulative conditions, the change in noise levels along road segments would result in a significant noise impact to residential receptors on:

1) Hensley Circle (from the Promontory access to Warren Lane),
3) Governor Drive (from Warren Lane to El Dorado Hills Boulevard), and
4) Gillett Drive (from Ridgeview Drive to Olson Lane).

Implementation of proposed traffic mitigation (Mitigation Measure 4.5.11) of removing the Promontory Specific Plan access to Mormon Island Road under the cumulative with project conditions would add approximately 140 peak hour vehicle trips to the Crown Valley access roadway, subsequently increasing the predicted noise level along the Crown Valley access roadway to 58 dBA, L_{dn}. However, this would not significantly affect future residents of Crown Valley.

Possible mitigation measures to reduce significant transportational noise impacts include the deletion or alteration of project access to the residential areas to the east and the development of sound barriers and/or walls along the affected residential roadways. However, deletion or alteration of project access to the east would result in significantly worse traffic impacts on roadways and intersections, as well as increasing noise impacts on other residential areas elsewhere in the project vicinity. Development of sound barriers along affected roadways likely would result in significant aesthetic impacts to the residential areas to the east and would likely be economically infeasible.

BIOLOGICAL RESOURCES

Impact

The proposed development would contribute incrementally to the cumulative loss and alteration of oak woodlands on a local and regional basis and habitat for sensitive and common plant and animal species. This would be a significant cumulative impact.

Oak woodland habitats are of high value to wildlife and are declining due to urban and suburban growth in the project site vicinity. The proposed Specific Plan would contribute to the regional loss of oak woodlands by developing infrastructure and other urban/suburban uses at the project site.

Mitigation Measures

4.8.7 The project applicant shall implement mitigation measures 4.8.1, 4.8.3, and 4.8.4.

4.8.1 Mitigation for project impacts to trees shall include measures for tree protection, revegetation and compensation, and monitoring. All aspects of the following measures must be implemented to ensure mitigation/compensation for the impact.

- **The project applicant shall develop and implement a <u>Tree Protection Plan</u> to minimize direct and indirect impacts to oak woodland on the project site during construction and operation phases of the proposed project. The Plan shall require the use of buffers to prevent or reduce the effects of disruption in the hydrologic or edaphic (growing) environment of heritage trees. Canopy cover retention within oak woodlands shall meet the requirements of General Plan Policy 7.4.4.4 wherever possible. The elements of the Tree Protection Plan shall appear as standards in the tentative subdivision maps, improvement plans, and subdivision CC&Rs. The Plan shall be implemented prior to the**

initiation of ground clearing, grading, or other construction activities that may impact oak trees. Unless stated otherwise, all measures shall be the sole responsibility of the project applicant.

- The County or project applicant shall engage a qualified project biologist or equivalent professional to oversee all aspects of construction monitoring that pertain to oak tree protection. The project applicant shall be responsible for reimbursing the County for all costs related to the compliance monitoring of the project.

  The project biologist shall be responsible for contractor education and shall monitor all construction activities in areas supporting sensitive biological resources. The project biologist shall be responsible for scheduling and/or implementing pre-construction tree surveys, and shall inform the County, the project engineer and the project general contractor if there are construction activities that threaten protected oak trees for which no mitigation measures have been identified in this EIR.

  The project biologist shall clearly mark on project maps all oak trees and oak woodlands to be avoided and provide these maps to the contractor. These areas shall be designated as "no construction" or "limited construction" zones. These areas shall be flagged by the project biologist prior to construction activities. In some cases, trees may need to be fenced or otherwise protected from direct or indirect impacts, as determined by the project biologist.

- The Tree Revegetation Plan shall consist of an implementation and a monitoring component. Because the exact extent of tree loss can only be determined after final grading plans and building envelopes are defined, a detailed analysis of 1) the precise number and species of trees to be removed, and 2) the specific mitigation areas to be planted, shall be developed and identified as part of the tentative and final map processes, in compliance with General Plan Policy 7.4.5.1. Lost tree canopy cover must be replaced at the percentage required under Policy 7.4.4.4 of the County General Plan.

- The Monitoring and Management Plan shall identify monitoring and management techniques for a minimum period of ten years following implementation. The plan shall establish success criteria (performance standards) and shall describe steps to be taken to replace vegetation not meeting the success criteria (contingency plans). Performance standards could relate to the number of trees,

species and sizes of trees, area of canopy, or a combination. Appropriate data sampling and statistical treatment of data shall be developed and utilized.

- A preliminary mitigation plan (based on the elements presented in this EIR) shall be submitted for review prior to approval of subsequent tentative subdivision maps. A draft mitigation plan (including draft versions of the Tree Protection Plan, Revegetation Plan, and Monitoring and Management Plan) shall be submitted with the applications for tentative subdivision maps and other subsequent approvals. The final mitigation plan shall be submitted as part of the final subdivision map process or prior to approval of a grading permit for improvement plans, whichever occurs first. Prior to implementation, the final plan shall be approved by the County. The project applicant shall identify and secure sources of funding and personnel to carry out all identified measures outlined above before any tree removal or grading permits are issued by the County.

4.8.3 The project applicant shall hire a biologist(s) approved by the County to conduct protocol surveys for the species listed in Table 4.8-2 as having a potential to occur on the property. In addition, the biologist(s) shall also conduct protocol surveys for any new special status species that may occur on the project site, which are listed by CDFG and/or USFWS subsequent to the certification of this EIR. Results of the surveys shall be submitted to CDFG, USFWS, and the County prior to approval of subsequent tentative subdivision maps. If no sensitive species are located on-site, no further mitigation is necessary. If listed species are located on the property the applicant and County shall enter into informal consultation with CDFG and USFWS and begin preparation of a Biological Assessment or Habitat Conservation Plan, as applicable.

The precise mitigation/compensation for direct and indirect impacts to sensitive species will depend on agency consultation and agreements. The project applicant shall implement all measures identified by the CDFG and USFWS to protect and mitigate impacts to listed and other special status species.

4.8.4 The objective of this mitigation measure is to reduce the potential for introduction or dispersal of non-native plant species to less-than-significant levels. The following measures will be performed:

- All seeds and straw material shall be certified weed free by the California Department of Food and Agriculture (CDFA) seed

laboratory. All gravel and fill material used during project construction and maintenance shall be certified weed free by the County Agriculture Commissioner's Office. The removal site for all fill materials shall be examined for the presence of noxious weeds by the local County Agriculture Commissioner's Office. Material transported between counties shall be approved by the local County Agriculture Commissioner's Office in the county receiving the materials.

- **Project landscaping shall conform to County and California Native Plant Society guidelines. Table 4.8-3 (see Section 4.8, Biological Resources) presents a list of species that should not be used for project landscaping.**

However, implementation of the above mitigation measures would not reduce the impact to a less-than-significant level. This would be a significant and unavoidable impact.

GEOLOGY AND SOILS

Impacts associated with geology and soils would be site-specific. As a result, the proposed project is not anticipated to contribute to cumulative significant impacts related to geology and soils.

HYDROLOGY AND WATER QUALITY

Impact

Implementation of the proposed project, in conjunction with approved and proposed developments in the El Dorado Hills area and the City of Folsom, would result in increased flows in Willow and Humbug creeks in the City of Folsom. This cumulative increase in flows could result in on-site and downstream flooding in the City of Folsom.

Conversion of the undeveloped lands to urban/suburban uses on the project site would increase the area of impervious surfaces. As shown in **Table 4.10-1** (see Section 4.10, Hydrology and Water Quality), approximately 36 percent of the land surface at the project site would be impervious at full build-out. The increased area of impervious surfaces such as roads, parking lots, sidewalks, and buildings prevents natural infiltration to the soil and thus creates higher runoff volumes. More rapid transport of runoff over smooth artificial surfaces and drainage facilities, combined with the higher volume of runoff, would result in elevated peak flows.

A drainage study by Cooper, Thorne & Associates (Cooper, Thorne & Associates, 1991) identifies that development at the project site would increase total peak runoff flow into Willow

Creek from 2,188 cubic feet per second (cfs) to 2,351 cfs (7 percent increase) and increase total storm runoff flow from 248.6 ac-ft to 257.8 ac-ft (4.2 percent increase). These increases in flows could also result in localized on-site flooding, especially within the lower elevation areas in the village center.

In addition to the project site, urban development in the El Dorado Hills area (outside of the project site), at full build-out, would result in a total of approximately 370 acres of impervious land surface[1] that would also drain into Willow Creek. Development in the eastern and southern portions of the City of Folsom consisting of, but not limited to, Russell Ranch, The Parkway, and Prairie Oaks Ranch would also contribute increased flows to Willow and Humbug creeks.

Increases in storm runoff into Willow and Humbug would likely increase flooding along those creeks. Reaches of Willow and Humbug creeks currently have restricted channel capacities and problems passing 100-year flows.

Mitigation Measure

4.10.5a Prior to approval of improvement plans for site development, El Dorado County shall coordinate with the City of Folsom and the City of Folsom/El Dorado County Joint Powers Authority in developing a formal drainage agreement identifying shared drainage facilities and volumes, pre- and post-development runoff volumes that maintain existing 100-year storm drainage flows, and a review process of future project-specific drainage plans. The drainage agreement shall be approved by both the City of Folsom and El Dorado County.

4.10.5b Prior to approval of improvement plans for site development, the project applicant shall prepare a hydrologic study in conformance with the El Dorado County Drainage Manual which would support the project drainage plans. The project applicant shall submit both the hydrologic study and drainage plans to the County for review and approval. These drainage plans shall clearly demonstrate that build-out peak storm runoff flows from the project site will remain at or below existing peak storm runoff flows. The drainage plan will provide details on ultimate location and design of retention/detention basins and other drainage facilities, as well as a maintenance program for all drainage facilities. The drainage plan shall also identify the 100-year floodplain on the project site, or verify that no 100-year flood zones will exist on the site. The drainage plan shall be in conformance with the El Dorado County Drainage Manual, as well as any additional requirements set forth the City of Folsom/El Dorado County drainage agreement described in Mitigation Measure 4.10.5a.

[1] Impervious land surface calculated assuming the percent land surface at other developments in the region would roughly equal the weighted average impervious surface percentage at the project site.

4.10.5c Prior to County approval, the County shall submit project drainage plans to the City of Folsom for review and comment.

4.10.5d If the drainage plan described in Mitigation Measure 4.10.5b identifies 100-year flood plain on the project site, project development shall not occur in those areas identified, unless flood protection improvements approved by the County are implemented.

Implementation of the above mitigation measures would reduce the project's contribution to the cumulative effects to Willow and Humbug creeks to a less-than-significant level.

CULTURAL RESOURCES

Impact

The proposed project would not result in the disturbance of the four known archaeological resources at the project site. These resources would be within open space areas where no excavation or other earthmoving activities would occur.

However, additional unidentified archaeological resources could exist at the project site. These resources could be prehistoric resources associated with habitation by Native Americans at the project site. Construction-related earthmoving activities at the project site could disrupt or destroy any of these previously undiscovered subsurface resources, and could contribute to the cumulative loss of significant cultural resources.

Mitigation Measure

4.11.2 In the event that any prehistoric or historic subsurface cultural resources are discovered during construction-related earthmoving activities, all work within 20 meters of the resources shall be halted and the project applicant shall consult with a qualified archaeologist to assess the significance of the find. If any find were determined to be significant by the qualified archaeologist, then representatives of the project applicant, El Dorado County, and the qualified archaeologist would meet to determine the appropriate course of action. If the discovery includes human remains, Section VIII of CEQA Guidelines Appendix K would be followed, requiring coordination with the Native American Heritage Commission if the human remains are of Native American origin. All significant cultural materials recovered would be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.

Implementation of the above mitigation measure would reduce the project's potential contribution to cumulative cultural impacts to a less-than-significant level.

Impact

The proposed project would contribute to the population growth anticipated within the County. As a result, the existence of the Mormon Island Relocated Cemetery would be known to additional persons as a result of an increase in population at the project site. Although the proposed project would not directly affect the cemetery, additional persons in the vicinity of the cemetery could result in an increased likelihood that vandalism or desecration would occur. The existing cemetery does not have any substantial physical barriers to prevent entry by unauthorized persons. Therefore, the proposed project would contribute to this County-wide significant impact.

Mitigation Measure

4.11.3 If the County establishes a program to provide fencing or other physical barriers around existing cemeteries to prohibit unlawful entry, the project applicant would contribute a pro-rata share to construct a fence or physical barrier around the existing Mormon Island Relocated Cemetery.

Implementation of this mitigation measure is not considered feasible since the County has not established such a funding program. Therefore, this impact would remain significant and unavoidable.

PUBLIC SERVICES

Impact

Cumulative build-out of the El Dorado Hills area would increase the current demand for fire protection and emergency medical services, law enforcement, public schools, park and recreation services, and library services. However, mitigation measures identified in Section 4.12, Public Services, and tax revenues generated by the project in excess of additional costs to serve the project site would result in a less than significant cumulative impact.

UTILITIES AND SERVICE SYSTEMS

Water Service

Impact

Implementation of the project would increase demand for water service in the EID service area. This would be a significant cumulative impact.

The proposed project would require approximately 1,400 Equivalent Dwelling Units (EDUs) (4,700 acre-feet per year) of water. The project applicant currently owns 106 EDUs in AD No. 3. Additional EDUs likely would be available to the project applicant in the proposed AD No. 12.

The El Dorado Irrigation District currently has 7,845 EDUs of water available for use in the El Dorado Hills Service Area. While this amount of water is adequate to serve the proposed project, there are several other approved or pending projects in the service area which would place additional demand upon the water supply in the El Dorado Hills Service Area. At full buildout, these projects would require 12,000 to 15,000 EDUs (7,000 to 9,000 acre-feet per year) of water, exceeding the current available supply of 7,845 EDUs.

General Plan policies 5.2.1.2, 5.2.1.3, and 5.2.1.4 require that adequate water supply be provided for a proposed development prior to approval of that development. As discussed in the Carson Creek Final EIR Addendum, a project is not automatically inconsistent with these policies simply because the existing supply does not meet expected project demand. General Plan policies 5.2.1.2, 5.2.1.3, and 5.2.1.4 are interpreted to mean that the applicant must obtain a permanent and reliable water supply only at the final subdivision map and building permit stages. The General Plan water supply policies are intended to recognize the practicalities of the water development process by allowing water supply development to occur while development planning moves from the plan- and zoning-level towards issuance of final subdivision maps and building permits. Final and full analysis of impacts on water supply would be the responsibility of EID, the proposed water service provider (El Dorado County, 1997). Therefore, the project would be consistent with General Plan water resources policies, even though an adequate supply of water for project buildout is not yet guaranteed.

EID provides water service to new consumers on a first-come, first-served basis (EID Policy Statement Nos. 22 and 41). The owners of existing approved parcels that have obtained water meters, even if the meters have not yet become active, would not be adversely affected by EID providing service to the project because their supply is already reserved. The project applicant would obtain the remaining EDUs needed to serve the project from additional unreserved supplies or as EID develops new supplies (El Dorado County, 1997). Therefore, current water users in the EID service area would not be affected by the project.

Mitigation Measures

4.13.1a In accordance with EID Policy Statement No. 22, the project applicant shall prepare a Facility Plan Report (FPR) for the proposed project. The FPR shall address the expansion of the water and sewer facilities and the specific fire flow requirements for all phases of the project.

4.13.1b In accordance with General Plan Objective 4.5.1, water-efficient housing features, such as low-volume and low-flow plumbing fixtures, shall be installed to reduce water consumption.

4.13.1c Efficient irrigation systems shall be installed in common landscaped areas to minimize runoff and evaporation and maximize the water that will reach plant roots. One or any combination of the following methods of increasing irrigation efficiency shall be employed: drip irrigation, soil moisture sensors, and automatic irrigation systems. Mulch shall be used extensively in all common landscaped areas. Drought resistant and native vegetation shall be used in common landscaped areas.

Prior to approval of the final subdivision map or issuance of building permits, the project applicant must obtain water meters or equivalent guarantees from EID to ensure that an adequate water supply is available to serve the project. Implementation of the above mitigation measures would reduce potential project impacts on water supply. EID would be responsible for final analysis of impacts on water supply. Therefore, the project's impact on water consumption would be less than significant.

Wastewater Service

Impact

Implementation of the proposed project would generate additional wastewater flows that would be treated at the El Dorado Hills Wastewater Treatment Plant (EDHWTP). This would be a less than significant cumulative impact.

The project applicant estimates that development at the project site would generate 0.42 million gallons per day (mgd) of effluent. The EDHWTP capacity is currently being expanded from 1.6 mgd to 3.0 mgd, providing an additional 6,300 Equivalent Dwelling Units (EDUs) of wastewater capacity. This additional capacity would be able to handle the additional effluent generated by buildout of the project site and maintain existing levels of service to the remainder of the EDHWTP service area (Powell, 1996). However, there are several other approved or pending projects in the area that would place additional demand on the EDHWTP.

The project applicant is not required to obtain a guarantee of wastewater service for the project until the final subdivision map and building permit stages. EID provides wastewater service to new consumers on a first-come, first-served basis. The owners of existing approved parcels that have wastewater service would not be adversely affected by EID providing service to the project because EDHWTP capacity is already reserved for those parcels. Therefore, current users in the EID service area would not be affected by the project.

Solid Waste Disposal

Impact

The Materials Recovery Facility (MRF) in Diamond Springs is planning to increase its capacity to process solid waste (Dutra, 1996). The Union Mine Disposal Site has recently expanded, extending its life expectancy from 5 to 7 years to 32 years. Additionally, the disposal site has land available for future expansions. The MRF and the Union Mine Disposal Site provide adequate capacity for the processing, recycling, transformation, and disposal of solid waste generated on the project site and future County growth, as required by El Dorado County General Plan Policy 5.5.2.1. The cumulative generation of solid waste would be a less than significant impact.

Electrical and Natural Gas Service

Impact

Cumulative build-out of the region would result in increased demand for electrical and natural gas service. However, there are adequate infrastructure facilities in the County to provide or be extended to future development. Thus, the increased demand for electrical and natural gas services would be less than significant.

Telephone and Cable Television Service

Impact

Cumulative build-out of the region would result in increased demand for telephone and cable television service. However, there are adequate infrastructure facilities in the County to provide or be extended to future development. Thus, the increased demand for telephone and cable television services would be less than significant.

PUBLIC HEALTH AND SAFETY

Implementation of the proposed project would cumulatively add to regional residents exposed to electric and magnetic fields generated by power lines. While no definitive conclusions regarding potential health threats of EMF can be drawn on the basis of direct scientific measurements, recent published literature suggests strongly that this impact would be less than significant (see Section 4.14, Public Health and Safety, for further discussion).

6.3 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS WHICH COULD NOT BE AVOIDED IF THE PROJECT WAS IMPLEMENTED

CEQA Section 21100(b)(2) requires that any significant effect on the environment that cannot be avoided from implementation of the proposed project must be identified. In addition, Section

15093(a) of the CEQA Guidelines allows the decision-making body of the lead agency to determine if the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. El Dorado County can approve project with unavoidable adverse impacts if it prepares a "Statement of Overriding Considerations" setting forth the specific reasons for making such a judgment. A list of unavoidable adverse impacts identified in this EIR is provided below. For each of the unavoidable impacts, the County must prepare a Statement of Overriding Considerations if the County approves the project.

The following significant unavoidable adverse impacts resulting from the proposed project has been identified.

AESTHETICS

4.3.1 As viewed from the City of Folsom, the implementation of the proposed project would substantially alter the existing landscape characteristics of the project site from rural land to a developed urban/suburban uses. This would be a significant impact.

4.3.5 Implementation of the proposed project, in combination with approved and proposed projects in the El Dorado Hills area and the City of Folsom, would result in the further conversion of the region's rural landscape to urban uses. This would be a cumulative significant impact.

TRANSPORTATION AND CIRCULATION

4.5.12 Implementation of the proposed project will increase cumulative traffic volumes at the Blue Ravine Road/East Natoma Street intersection resulting in the exacerbation of LOS "D" conditions during the a.m. peak hour and a deterioration in LOS from "E" to "F" during the p.m. peak hour. This would be a cumulative significant impact.

AIR QUALITY

4.6.2 Construction of the project would increase criteria air pollutant emissions from construction equipment exhaust systems during the construction phase of the project. This would be a significant unavoidable impact.

4.6.5 Operation of the project would generate both mobile source and area source criteria air pollutants and would increase total criteria air pollutant emissions in the region. This would be a significant unavoidable impact.

4.6.6 **Implementation of the project would increase roadside CO concentrations along heavily traveled roadways at congested intersections. This would be a significant unavoidable impact under existing plus project conditions.**

4.6.9 **Implementation of the proposed project, by incrementally adding to regional air pollution, would contribute to a cumulative air quality impact. This would be a cumulative significant impact.**

NOISE

4.7.1 **Construction of the necessary infrastructure improvements, the village center, and the residential units would temporarily increase noise levels in nearby areas. This would be a temporary significant unavoidable impact.**

4.7.2 **Upon project buildout, subsequent local traffic increases would increase noise levels along local arterial roads. P.M. peak hour noise levels would increase along segments of Green Valley Road, Francisco Drive, East Natoma Street, and El Dorado Hills Boulevard, exposing existing residents to noise levels exceeding the performance standards outlined in the El Dorado County General Plan Noise Element and the City of Folsom Noise Element where applicable. This would be a significant unavoidable impact.**

4.7.4 **Upon project buildout, subsequent local traffic increases would increase noise levels in residential areas east of the project site. Peak hour noise levels would increase along segments of Hensley Circle, Warren Lane, Governor Drive, Gillett Drive, Olson Lane, Ridgeview Drive, Wilson Boulevard, and Julie Ann Way. This increase would expose existing residents to noise levels exceeding the noise impact significance threshold criteria. This would be a significant unavoidable impact.**

BIOLOGICAL RESOURCES

4.8.1 **An undetermined acreage of oak woodland will be removed due to project implementation. This would be a significant impact.**

4.8.3 **The project has potential to significantly affect federally and state listed and other special status species. This would be a cumulatively significant and unavoidable impact.**

4.8.7 The proposed development would contribute incrementally to the cumulative loss and alteration of oak woodlands on a local and regional basis and habitat for sensitive and common plant and animal species. This would be a cumulatively significant impact.

CULTURAL RESOURCES

4.11.3 The proposed project would contribute to the population growth anticipated within the County. As stated in the County's General Plan EIR, this increase in population would increase the likelihood for persons to vandalize or desecrate the existing Mormon Island Relocated Cemetery. This would be a cumulatively significant impact.

6.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD RESULT FROM THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

CEQA Sections 21100(b)(2) and 21100.1(a) require that EIRs prepared for the adoption of plan, policy, or ordinance of a public agency must include a discussion of significant irreversible environmental changes of project implementation. In addition, CEQA Guidelines Section 15126(e) describe irreversible environmental changes as:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Implementation of the proposed project would result in the conversion of 999 acres of open space/rural area to residential, commercial and office, open space, and park uses. This development of the project site would constitute a long-term commitment to urban/suburban land uses. It is unlikely that circumstances would arise that would justify the return of the land to its original condition. Alteration of the project site is consistent with the land use designation, goals, objectives, and policies of the El Dorado County General Plan.

Development of the project site would irretrievably commit building materials and energy to the construction and maintenance of buildings and infrastructure proposed. Nonrenewable and limited resources that would likely be consumed as part of project site development would

include, but not limited to, oil, natural gas, gasoline, lumber, sand and gravel, asphalt, water, steel, and similar materials. In addition, the project site would result in the increase demand on public services and utilities (see Sections 4.12, Public Services, and 4.13, Public Utilities).

CHAPTER 7.0

BIBLIOGRAPHY

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CHAPTER 8.0

EIR AUTHORS, CONSULTANTS, AND PERSONS/ORGANIZATIONS CONSULTED

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EIR AUTHORS, CONSULTANTS, AND PERSONS/ ORGANIZATIONS CONSULTED

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CHAPTER 9.0

ACRONYMS

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AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACM	Asbestos Containing Material
af/yr	Acre Feet per Year
AHERA	Asbestos Hazard Emergency Response Act
APN	Assessors Parcel Numbers
AQAP	Air Quality Attainment Plan
AWP	Annual Work Plan
BMP	Best Management Practices
BOD	Biological Oxygen Demand
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulation
cfs	cubic feet per second
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
dbh	Diameter at Breast Height
DEIR	Draft Environmental Impact Report
DHHS	Department of Health and Human Services
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EMF	Electric and Magnetic Fields
EPA	Environmental Protection Agency

ERP	Emergency Response Plan
ESA	Environmental Science Associates
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIRM	Flood Insurance Rate Mapping
FMMP	Farmland Mapping and Monitoring Program
gpd	gallons per day
Kv/m	Kilovolts per meter
LCA	Land Conservation Act
LOS	Level of Service
LU	Land Use
LUST	Leaking Underground Storage Tank
M	Richter scale magnitude
MCE	Maximum Credible Earthquake
mgd	million gallons per day
MM	Modified Mercalli
msl	mean sea level
NAAQS	National Ambient Air Quality Standards
NCIC	North Central Information Center
NPL	National Priority List
NO_2	Nitrogen Dioxide
NOP	Notice of Preparation
NO_x	Nitrogen Oxides
NPA	Neighborhood Preservation Area
NPDES	National Pollution Discharge Elimination System
NMFS	National Marine Fisheries Service
NRCS	National Resource Conservation Service
O_3	Ozone
OSHA	Occupational Safety and Health Administration
Pb	Lead
PCB	Polychlorinated Biphenyl
PF	Public Facilities
PG&E	Pacific Gas and Electric
PM_{10}	Particulate Matter ≤10 microns

ppm	parts per million
RCRA	Resource Conservation and Recovery Act of 1976
RMPP	Risk Management Prevention Program
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SAAQS	State Ambient Air Quality Standards
SACOG	Sacramento Area Council of Governments
SCS	Soil Conservation Service
SCWA	Sacramento County Water Agency
SMUD	Sacramento Municipal Utility District
SO_2	Sulfur Dioxide
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWTR	Surface Water Treatment Rule
TSS	Total Suspended Solids
UBC	Uniform Building Code
ug/m^3	micrograms per meter cubed
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
VELB	Valley Elderberry Longhorn Beetle
WWTP	Wastewater Treatment Plant