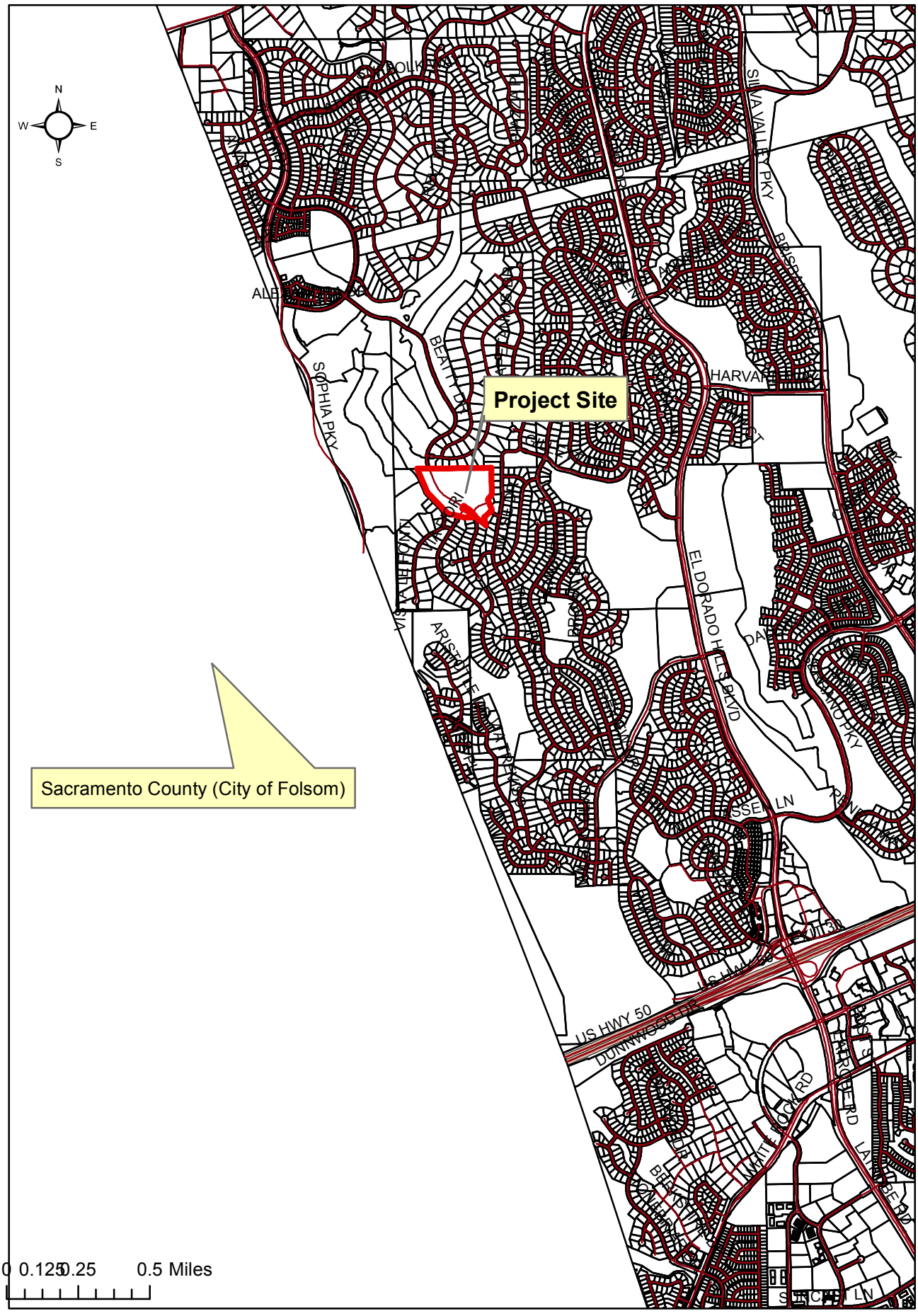
Revision to Rigdgeview Village Unit No.9
Tentative Subdivision Map/TM08-1477-R



ATTACHMENT 1: Location Map

POR. SEC. 34, T.10N., R.8E., M.D.M.

120:01

1 " equals 200 '

Bk 124 Pg 11

Bk 124 Pg 23

CAPETANIOS

POWERS DR

Bk 124 Pg 13

Bk 124 Pg 05

POWERS DR

POWERS DR

RIDGEVIEW DR

463.76'

BEATTY DR

1

16.84 A

MOSSRIDGE WAY

MUSE DR

Bk 120 Pg 61

554.42'

TIBURON WAY

NA

2

0.368 A

JULIE ANN WAY

Bk 120 Pg 58

Bk 120 Pg 44

Bk 120 Pg 29

302.51'

VIA FIORI

253.79'

VISTA LE FONTI

Bk 120 Pg 68

Bk 120 Pg 65

Bk 120 Pg 41

Bk 120 Pg 43

Bk 120 Pg 30

BEATTY DR

POWERS DR

MUSE DR

Bk 120 Pg 40

THIS MAP IS NOT A SURVEY, it is prepared by the El Dorado Co. Assessor's office for assessment purposes only. Area calculations and characteristics are not guaranteed. Users should verify items such as dimensions and acreage.

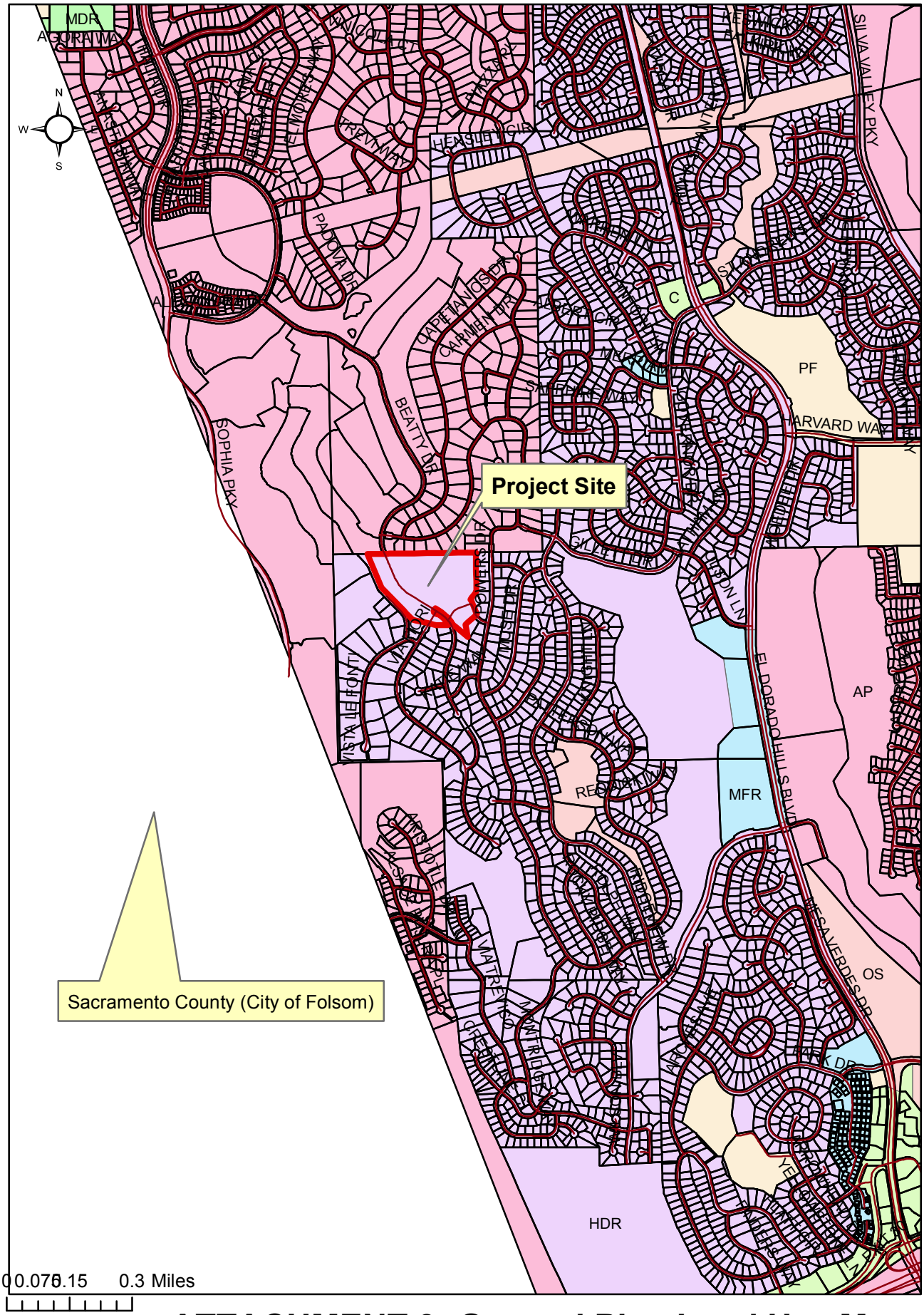
Acreages Are Estimates

Rev. July 12, 2006

Assessor's Map Bk. 120, Pg. 01
County of El Dorado, CA

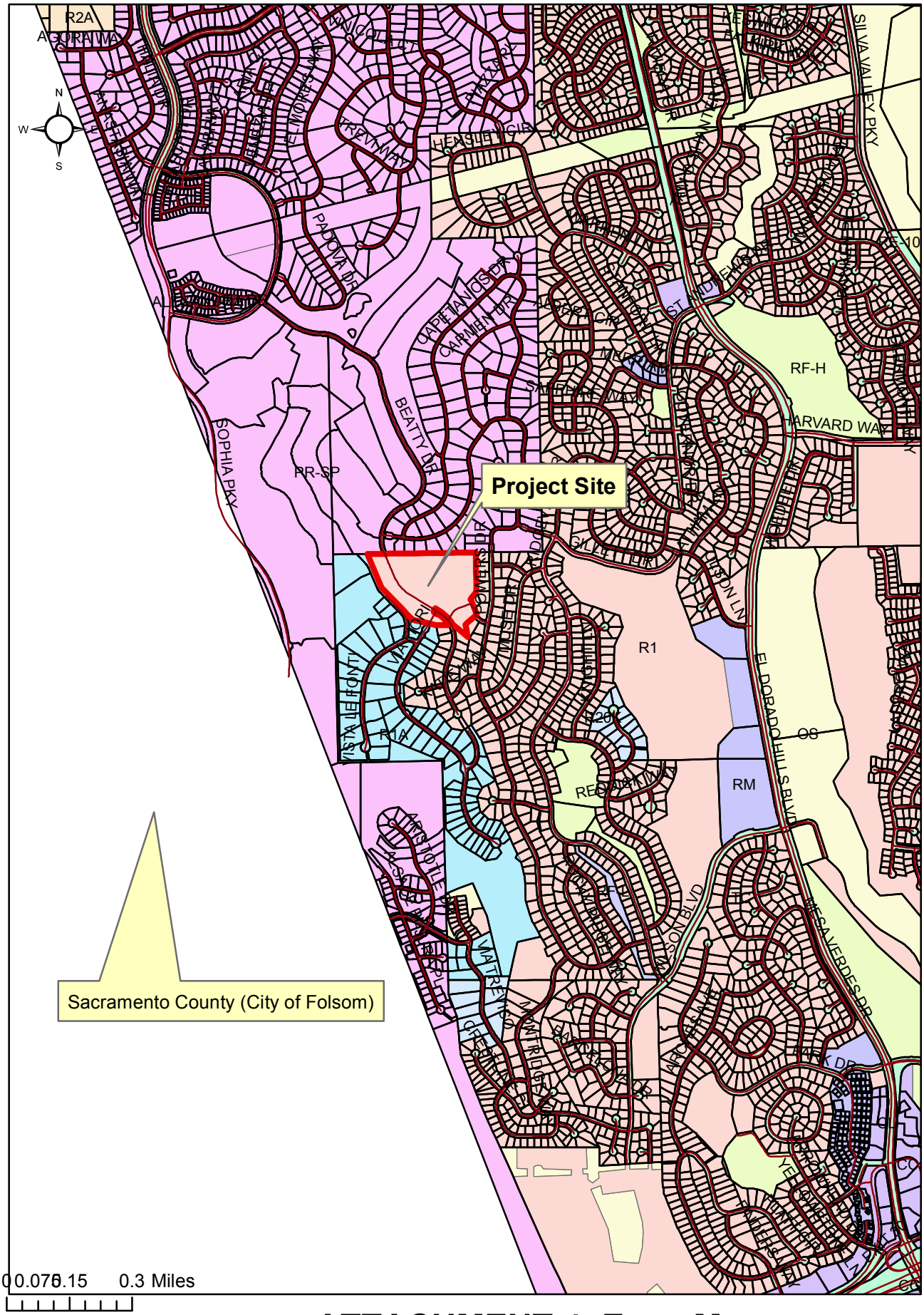
ATTACHMENT 2

Revision to Rigdgeview Village Unit No.9
Tentative Subdivision Map/TM08-1477-R



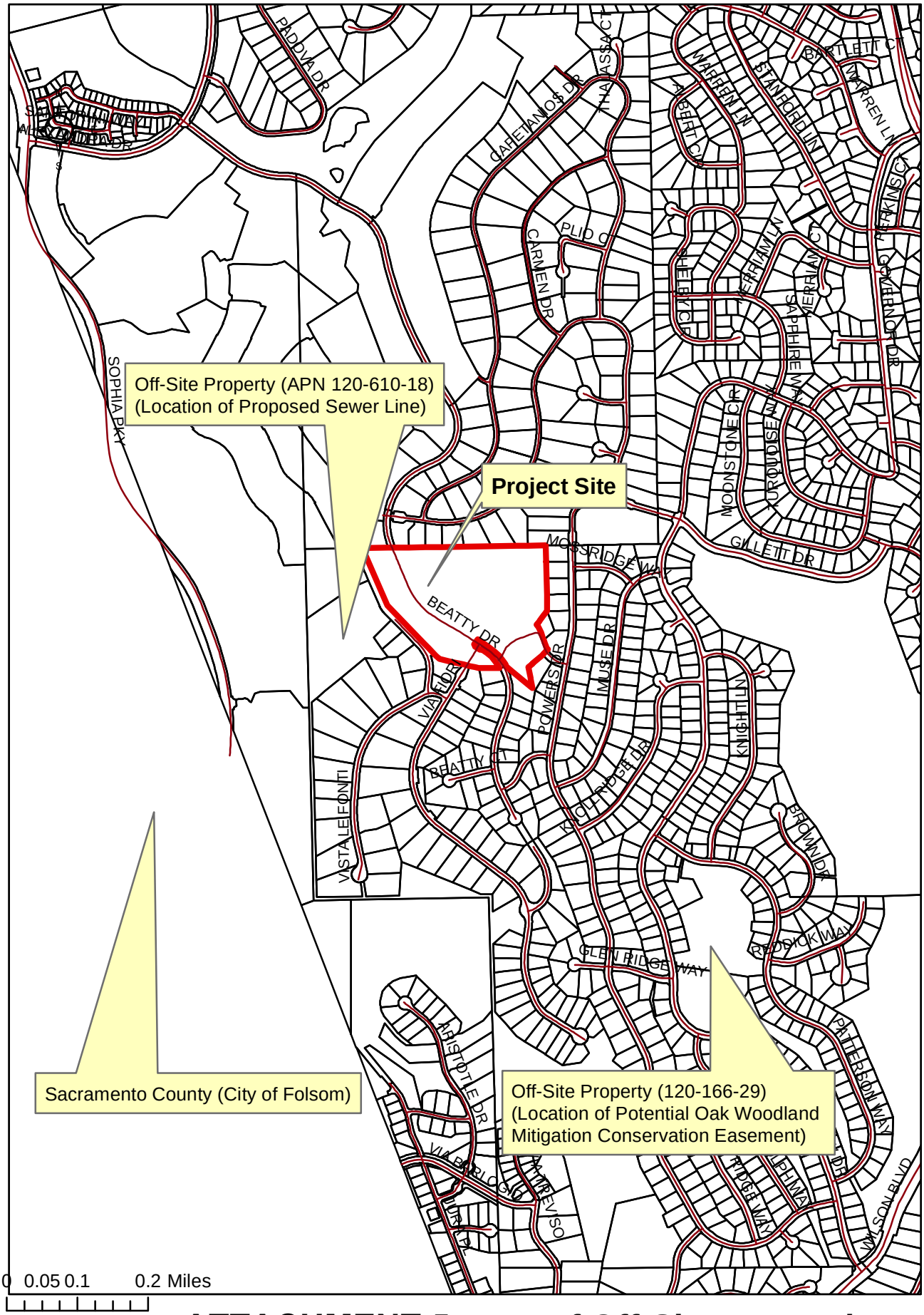
ATTACHMENT 3: General Plan Land Use Map

Revision to Rigdgeview Village Unit No.9
Tentative Subdivision Map/TM08-1477-R



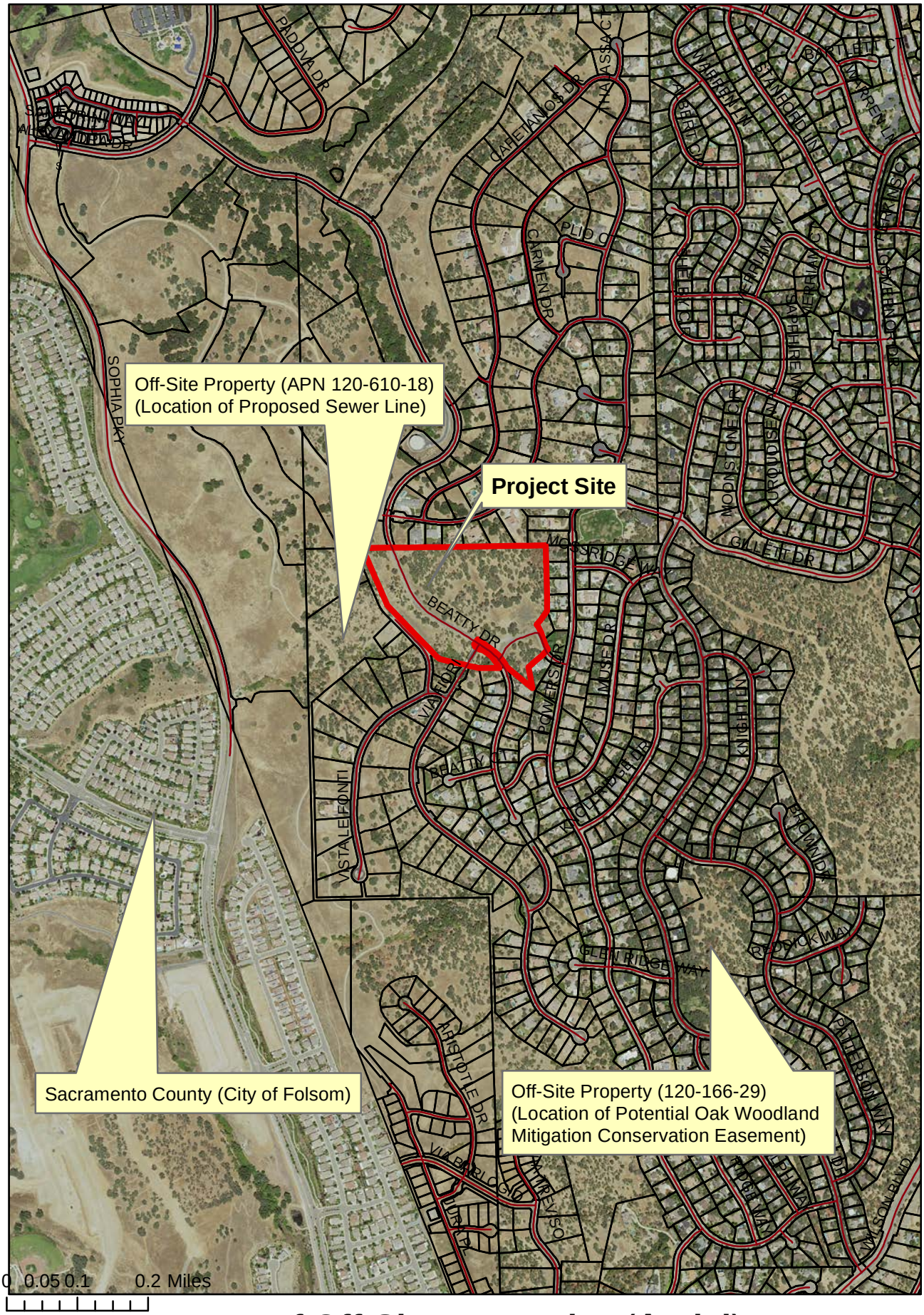
ATTACHMENT 4: Zone Map

Revision to Rigdgeview Village Unit No.9
Tentative Subdivision Map/TM08-1477-R



ATTACHMENT 5: Map of Off-Site Properties

Revision to Rigdgeview Village Unit No.9
Tentative Subdivision Map/TM08-1477-R



Map of Off-Site Properties (Aerial)

MITIGATED NEGATIVE DECLARATION

FILE: TM08-1477

PROJECT NAME: Ridgeview Village Unit No.9 Tentative Subdivision Map

NAME OF APPLICANT: Pacific States Development

ASSESSOR'S PARCEL NO.: 120-010-01 **SECTION:** 34 **T:** 10N **R:** 8E, MDM

LOCATION: The project is approximately 160 feet south from the intersection of Powers Drive and Beatty Drive, in the El Dorado Hills area.

☐ **GENERAL PLAN AMENDMENT:** **FROM:** **TO:**

☐ **REZONING:** **FROM:** **TO:**

☐ **TENTATIVE PARCEL MAP** ☒ **SUBDIVISION: TO SPLIT 22.4 ACRES INTO 44 LOTS**
SUBDIVISION (NAME): Ridgeview Village Unit No.9

☐ **SPECIAL USE PERMIT TO ALLOW:**

☒ **OTHER:**
Design Waivers of the following Design and Improvement Standards Manual (DISM) Standards:

A. Reduction of Right-of-Way on Beatty Drive from 60 feet to 50 feet;
B. Construction of reduced sidewalk from 6 feet to 4.5 feet on one side (downhill) only of Beatty Drive;
C. Modification to following driveway standards under DISM Plan 103A-1:
   1. Allow encroachment on the required 25-foot separation from a driveway to the radius return;
   2. Allow construction of 10-foot wide driveway for a single car garage without 4-foot taper;
   3. Allow construction of 16-foot wide driveway for two-car garage without 4-foot taper.
D. Allow construction of Type I Rolled Curb and Gutter along residential street frontages.

And Findings of Consistency with General Plan Policy 7.3.3.4 in accordance with the Interim Interpretive Guidelines to reduce setback from 50 feet to 20 feet from an intermittent wetland.

REASONS THE PROJECT WILL NOT HAVE A SIGNIFICANT ENVIRONMENTAL IMPACT:

☐ **NO SIGNIFICANT ENVIRONMENTAL CONCERNS WERE IDENTIFIED DURING THE INITIAL STUDY.**

☒ **MITIGATION HAS BEEN IDENTIFIED WHICH WOULD REDUCE POTENTIALLY SIGNIFICANT IMPACTS.**

☐ **OTHER:**

In accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), State Guidelines, and El Dorado County Guidelines for the Implementation of CEQA, the County Environmental Agent analyzed the project and determined that the project will not have a significant impact on the environment. Based on this finding, the Planning Department hereby prepares this MITIGATED NEGATIVE DECLARATION. A period of thirty (30) days from the date of filing this mitigated negative declaration will be provided to enable public review of the project specifications and this document prior to action on the project by COUNTY OF EL DORADO. A copy of the project specifications is on file at the County of El Dorado Planning Services, 2850 Fairlane Court, Placerville, CA 95667.

This Mitigated Negative Declaration was adopted by the Planning Commission on July 11, 2013.

Roger Trout/dre
Executive Secretary

ATTACHMENT 6

EL DORADO COUNTY PLANNING SERVICES
2850 FAIRLANE COURT
PLACERVILLE, CA 95667

INITIAL STUDY
ENVIRONMENTAL CHECKLIST FORM

Project Title/Application Nos.: Ridgeview Village Unit No.9 Tentative Subdivision Map/TM08-1477

Lead Agency Name and Address: El Dorado County, 2850 Fairlane Court, Placerville, CA 95667

Contact Person: Mel Pabalinas, Senior Planner | **Phone Number:** (530) 621-5363

Property Owner's Name and Address: Pacific States Development, 991 Governor Drive, Suite 103 El Dorado Hills, CA 95762

Project Applicant's/Agent's Name and Address: Pacific States Development, 991 Governor Drive, Suite 103 El Dorado Hills, CA 95762

Project Engineer's Name and Address: CTA Engineering and Surveying, 3233 Monier Circle , Rancho Cordova 95742

Project Location: The project is approximately 160 feet south from the intersection of Powers Drive and Beatty Drive in the El Dorado Hills, El Dorado County (Exhibit A)

Assessor's Parcel Number(s): 120-010-01 (Exhibit B) | **Size:** 22.4 acres

Zoning: One-Family Residential (R1) (Exhibit D)

Section: 34 **T:** 10N **R:** 8E

General Plan Designation: High Density Residential (HDR) (Exhibit C)

Description of Project:

1. Tentative Subdivision Map creating 44 single-family residential lots;
2. Design Waivers of road and improvement standards in accordance with El Dorado County Design and Improvement Standards Manual (DISM) ; and
3. Findings of Consistency with General Plan Policy 7.3.3.4 for a reduced wetland setback

Surrounding Land Uses and Setting

The project site is within the El Dorado Hills Community Region. The site is the remaining undeveloped property within the existing Ridgeview Village development. As detailed in Table 1, the site is surrounded by existing residential development on all sides.

Table 1. Land Use Information

	General Plan	Zoning	Land Use/Improvements
Site	High Density Residential (HDR)	One-Family Residential (R1)	Undeveloped
North	Adopted Plan (Promontory Specific Plan)	Adopted Plan (AP-PSP)	Residential
South	High Density Residential (HDR)	One-Family Residential (R1)	Residential
East	High Density Residential (HDR)	One-Family Residential (R1)	Residential
West	High Density Residential (HDR)	One-Acre Residential/Planned Development (R1A-PD)	Residential

Briefly Describe the setting

The vacant site is dominated by annual grassland mixed with oak tree canopy in the amount of 14.37 acres. The site has an average elevation of 850 feet with the majority of the site with slopes below 30 percent. The site drains naturally to the west. Portions of the site have been previously disturbed for partial road construction associated with the original tentative map approval and development of a village in the Promontory Specific Plan. A total 0.46 acre of wetland (0.25 acre of seeps and 0.21acre of channel) borders along the southern portion of the site.

Beatty Drive, a major residential collector, bisects the project site into two areas and provides direct and indirect access to all lots. Julie Ann Way, which connects to Beatty Drive to the southeast, provides access to southeastern portion of the subdivision.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

1. Development Services Department (Planning Services and Building Services): Improvement Plan, Grading Permit, Final Map, Building Permits
2. Department of Transportation (DOT): Improvement Plan, Grading Permit, Final Map, Building Permits, Encroachment Permit
3. El Dorado Irrigation District (EID): Facility Plan Report, Improvement Plan, Meter Award Letter
4. Resource Conservation District (RCD): Improvement Plan, Grading Permit
5. El Dorado Hills Fire Department: Improvement Plan, Building Permit
6. U.S. Army Corp of Engineer: Nationwide Permit (if needed)

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture and Forestry Resources	X	Air Quality
X	Biological Resources		Cultural Resources		Geology / Soils
	Greenhouse Gas Emissions		Hazards & Hazardous Materials		Hydrology / Water Quality
	Land Use / Planning		Mineral Resources		Noise
	Population / Housing		Public Services		Recreation
	Transportation/Traffic		Utilities / Service Systems		Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☐ I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: 1) has been adequately analyzed in an earlier

document pursuant to applicable legal standards; and 2) has been addressed by Mitigation Measures based on the earlier analysis as described in attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects: a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION, pursuant to applicable standards; and b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or Mitigation Measures that are imposed upon the proposed project, nothing further is required.

Signature: _____ Date: May 9, 2013

Printed Name: Mel Pabalinas, Senior Planner For: El Dorado County

Signature: _____ Date: 9 May 2013

Printed Name: Peter Maurer For: El Dorado County

DETAILED PROJECT DESCRIPTION

Introduction

This Initial Study for Ridgeview Village Unit No.9 tentative subdivision map has been prepared in accordance with the California Environmental Quality Act (CEQA) evaluating the potential environmental impacts resulting from the proposed development.

Project Description

1. Tentative Map

The tentative map would divide the 22-acre site creating a Class I residential subdivision totaling of 44 lots (Exhibit D). The original version of the map submitted depicted a total of 46 lots which was later reduced as a result of some the lots being combined to protect wetland on site. The lots range in size from 12,004 to 51,257 square feet in excess of the minimum 6,000 square foot lot area under One-Family Residential (R1) zone district. The subdivision has been designed in accordance with the standards in accordance with the County Design and Improvement Standards Manual (DISM) and provisions of the County Subdivision Ordinance. Development in each lot shall be subject to the standard R1-zone yard setbacks of 20 feet (front), 5 feet (side), and 15 feet (rear), which are delineated in each lot.

2. Design Waivers

Design waivers are requested for the following standard subdivision road improvements in accordance with the El Dorado County Design and Improvement Standard Manual (DISM). These road standards are proposed to be modified to accommodate the design of the subdivision. The requests are subject to review and verification by County staff for conformance with the findings under Section 16.08.020 of the El Dorado County Subdivision Ordinance.

A. Reduction of Right-of-Way on Beatty Drive from 60 feet to 50 feet;

B. Construction of reduced sidewalk from 6 feet to 4.5 feet on one side (downhill) only of Beatty Drive;

C. Modification to the following driveway standards under DISM Plan 103A-1:

1. Encroachment on 25' setback for driveway from the radius return

2. Construct 10' wide driveway for a single car garage without a 4 foot taper

3. Construct 16' wide driveway for two-car garage without 4' taper.

D. Construct Type I rolled curb and gutter along residential street frontages.

3. Reduced Wetland Buffer

The project proposes reduced wetland setbacks in accordance with the Interim Interpretive Guideline to General Plan Policy 7.3.3.4. The intermittent wetlands, which exists as a result of drainage from the surrounding areas, are located along the southern border of the site and are proposed to be sited within several lots (Lots 467, 499, 503-505) (Exhibit D). Based on submitted supporting justification, the reduced 20-foot buffer (from the standard 50-foot buffer) from development would provide an adequate setback to the intermittent wetland.

Subdivision Improvements

Development of the subdivision would require construction of various improvements and infrastructures. These necessary improvements include construction of subdivision streets, extension and/or construction of new dry and wet utility lines, and installation of underground drainage system. Site development would also include preparation of each lot for subsequent residential construction. No mass pad grading and specific development phasing is proposed (Exhibit E).

Site development would result in ground disturbance and removal of oak tree canopies. Standard construction measures and Best Management Practices (BMP) shall be implemented to protect and preserved oak tree canopy and existing wetlands. Construction permits and plans shall be reviewed and approved by affected agencies prior to start of any activities. The following discussion summarizes the related improvements.

Roads and Circulation: The subdivision would be served by the existing public road system serving the neighborhood. All of the proposed residential lots would have direct driveway access off Beatty Drive, a major collector public road that bisects the project, and proposed residential courts (Courts A and B connects directly off Beatty Drive while Court C connects via Julie Ann Way) (Exhibit D). Table 2 below detail the required road improvements for the subdivision.

Table 2. Ridgeview Village Unit No.9 Road Design and Improvements

Road Name	DISM Plan	Road Width*	Right-of-Way**	Exceptions/Notes
Beatty Drive	Modified Std Plan 101B *(3"AC over 8"AB Min.)*	40 ft	50ft	Type 1 rolled curb and gutter, 4.5-ft sidewalks on downhill side
'A' Court	Modified Std Plan 101B *(3"AC over 8"AB Min.)*	28ft	50ft	Type 1 rolled curb and gutter
'B' Court	Modified Std Plan 101B *(3"AC over 8"AB Min.)*	28ft	50ft	Type 1 rolled curb and gutter

'C' Court	Modified Std Plan 101B *(3"AC over 8"AB Min.)*	28ft min.	50ft	Type 1 rolled curb and gutter,

* Road widths are measured from face of curb to face of curb (traveled way).
** Non-exclusive road and public utility easements included

Utilities: The subdivision would have public sewer and water by El Dorado Irrigation District (EID) via direct connection to existing lines along Beatty Drive (Exhibit D). According to the Facility Improvement Letter (FIL), an 8-inch water line and 6-inch sanitary sewer lines exists along portion of Beatty Drive. These lines would be extended from Beatty Drive into the residential courts.

An offsite sewer line is proposed to be constructed south of the project site. This sewer line extends approximately 592 feet southwest of Lot 498, through APN 120-610-18, into an existing sewer manhole. This off-site sewer line would be utilized as part of a gravity force alternative that would minimize maintenance and operational costs to the existing sewer lift station in Ridgeview Village Unit 7. A Facility Plan Report detailing the construction of all proposed infrastructures would be required and reviewed as part of the Improvement Plan for the development. Submittal of an EID meter award letter confirming acquisition of service would be verified during review of Final Map application.

All utilities shall be constructed within defined easements either along frontage of the lots or within the road right-of-way.

Drainage: Subdivision drainage would be conveyed using v-ditches along the lot perimeter into the underground storm drains along the proposed roads (Exhibit E). The drainage would be conveyed into existing drainage system in the adjacent the development. Construction of these infrastructures would be done according to the DISM standards and Drainage Manual.

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is a fair argument that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of Mitigation Measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the Mitigation Measures, and briefly explain how they reduce the effect to a less than significant level.

5. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

6. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

7. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

8. The explanation of each issue should identify:

   a. the significance criteria or threshold, if any, used to evaluate each question; and
   b. the mitigation measure identified, if any, to reduce the impact to less than significant.

Initial Study Schedule

This Initial Study is being circulated for public and agency review for a 30-day period. Written comments on the Initial Study should be submitted to the project planner indicated in the Summary section above.

Following the conclusion of the comment period, the Initial Study will be considered by the Lead Agency in a public meeting and will be certified if it is determined to be in compliance with CEQA. The Lead Agency will also determine whether to approve the project.

ENVIRONMENTAL IMPACTS

I. AESTHETICS. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?				X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c. Substantially degrade the existing visual character quality of the site and its surroundings?				X
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion:

A substantial adverse effect to Visual Resources would result in the introduction of physical features that are not characteristic of the surrounding development, substantially change the natural landscape, or obstruct an identified public scenic vista.

a. and c. Scenic Vista and Visual Character: The site is not located in any areas identified as scenic or containing visual significance. The project site is surrounded by existing residential development in the community of El Dorado Hills. The proposed subdivision would conform to the design and density of the surrounding neighborhood. No impact.

b. Scenic Resources and Historic Buildings. The site is currently vacant. There are no significant existing cultural or historical resources on-site as described in the Cultural Resource Report. As discussed in Section IV *Biological Resources*, 4.29 acres of the existing 14.37 acres oak canopy would be impacted with implementation of the project. A Tree Preservation Plan for Ridgeview Village Unit No.9 has been prepared to mitigate the canopy impacts in accordance with General Plan Policy 7.4.4.4 Option A and its Interim Interpretive Guideline. Mitigation Measures BIO-3 through 5 shall be implemented in order to mitigate the identified impacts. Impacts are anticipated to be less than significant.

d. Light and Glare. Common residential lighting and glare effects would blend and conform to the existing residential development in the area. Though insignificant, lighting effects, such as patio and garage entrance lights, would minimized via shielding provisions of the Zoning Ordinance and use of low intensity type of lighting. Proposed landscaping and retained oak tree canopy would provide additional shielding of the glare. Impacts would be considered less than significant.

FINDING: For this "Aesthetics" category, impacts would be less than significant.

II. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are

significant environmental effects, lead agencies may refer to information compiled by California Department of forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forrest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				X
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Discussion:

A substantial adverse effect to Agricultural Resources would occur if:

- There is a conversion of choice agricultural land to nonagricultural use, or impairment of the agricultural productivity of agricultural land;
- The amount of agricultural land in the County is substantially reduced; or
- Agricultural uses are subjected to impacts from adjacent incompatible land uses.

a-e. **Farmland Mapping and Monitoring Program.** The site is not identified to be within any mapping associated for farmland or lands containing prime farmland. No impact.

Williamson Act Contract. The property is not subject to a Williamson Act Contract nor is agriculturally zoned. The rezone would maintain the residential use of the property consistent with the High Density Residential land use designation. No impact.

Non-Agricultural Use. No conversion of agriculture land would occur as a result of the project. No impact.

Loss of Forest land or Conversion of Forest land. No forest land exists on site. No impact.

Conversion of Prime Farmland or Forest Land. No prime farmland exists on site. No impact.

FINDING: For this "Agriculture" category, there would be no impact.

III. AIR QUALITY. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?			X	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d. Expose sensitive receptors to substantial pollutant concentrations?			X	
e. Create objectionable odors affecting a substantial number of people?			X	

Discussion:

A substantial adverse effect on Air Quality would occur if:

- Emissions of ROG and No_x, will result in construction or operation emissions greater than 82lbs/day (See Table 5.2, of the El Dorado County Air Pollution Control District – CEQA Guide);
- Emissions of PM_{10}, CO, SO_2 and No_x, as a result of construction or operation emissions, will result in ambient pollutant concentrations in excess of the applicable National or State Ambient Air Quality Standard (AAQS). Special standards for ozone, CO, and visibility apply in the Lake Tahoe Air Basin portion of the County; or
- Emissions of toxic air contaminants cause cancer risk greater than 1 in 1 million (10 in 1 million if best available control technology for toxics is used) or a non-cancer Hazard Index greater than 1. In addition, the project must demonstrate compliance with all applicable District, State and U.S. EPA regulations governing toxic and hazardous emissions.

An air quality analysis has been prepared by Tim Rimpo and Associates evaluating the potential impacts to air quality with project implementation (Exhibit F). The study evaluates impacts from the anticipated generated emissions associated with the construction associated with grading, building, and paving of the development and the operation of the proposed residential uses (such as vehicular use) in accordance with the applicable regulations. The study also evaluated the potential presence and development effects from asbestos. The analysis below provides the results of the study. Though the study is outdated and reduction of lot count, based on the review and determination by the El Dorado County Air Quality Management District (AQMD), the District concluded that the analysis, results, and recommended measures to mitigate the identified project impacts to be adequate and supportable (Exhibit G).

a. **Air Quality Plan.** El Dorado County has adopted the *Rules and Regulations of the El Dorado County Air Pollution Control District* (February 15, 2000) establishing rules and standards for the reduction of stationary source air pollutants (ROG/VOC, NOx, and O3). Any activities associated to the grading and construction of this project would pose a less than significant impact on air quality because the El Dorado County Air Quality Management District (AQMD) would require implementation of Fugitive Dust Mitigation (FDM) plan during grading and construction activities. Such a plan would address grading measures and operation of equipment to minimize and reduce the level of defined particulate matter exposure and/or emissions, anticipated to be below a level of significance.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

b. **Air Quality Standards.** The project would generate emission which may contribute to an existing or projected air quality violation during construction. Construction activities associated with the project include site grading improvements and building construction. The following discussion relates to the potential air quality effects from implementation of the project.

- Construction Dust Threshold

Construction-related emissions are generally short term in duration, but may still cause adverse air quality impacts. Inhalable Particulate Matter PM10 (particles less than 10 microns in diameter) is the pollutant of greatest concern with respect to construction activities. PM10 emissions can result from a variety of construction activities, including excavation and grading. Because PM2.5 air quality standards are relatively recent, the EDCAQMD's Guide to Air Quality Assessment (El Dorado County Air Pollution Control District 2002) focuses on PM10 rather than PM2.5.

According to the guide, mass emissions of PM10 fugitive dust need not be quantified, and may be assumed not significant, if the project includes mitigation measures that will prevent visible dust beyond the property lines. However, without mitigation, uncontrolled fugitive dust would be considered a significant impact. Mitigation measures can reduce fugitive dust emissions by approximately 50-75%. Because the proposed project does not include the implementation of PM10 construction mitigation measures, construction emissions could have a potentially significant temporary air quality impact. The construction activities associated with site construction would generate PM10 dust emissions that could exceed either the state or federal ambient air quality standards for PM10. This would be a potentially significant impact during construction. Implementation of the following mitigation measure will reduce emissions to a less than significant level.

Mitigation Measure MM AIR-1: The applicant shall implement EDCAQMD's Rule 223-1 regulations.

Method of Verification: Incorporate as Notes on Improvement Plan and Grading Plan

Monitoring Requirement:: Prior to Approval of Improvement Plan and Issuance of Grading Permit

Monitoring Agency: Air Quality Management District (AQMD) and Planning Services

- Construction-Related Asbestos Dust

Certain areas of El Dorado County contain ultramafic rocks and faults where serpentine rock and naturally occurring asbestos (NOA) can occur. Any project that is located in an area that includes ultramafic rock, which often contains NOA, could potentially release asbestos during construction. When this rock is broken or crushed, asbestos may be released and become airborne, causing a potential health hazard. Consequently, any project located in an area of known ultramafic rock is considered potentially significant with respect to the release of asbestos during construction.

Construction of the proposed project would involve grading, excavating, and trenching. The proposed project is located at the edge of areas with potentially occurring NOA according to the Asbestos Review Map of El Dorado County Western Slope. Development impacts could be considered significant; however, in the event that NOA is found on the project site during construction, compliance with the mitigation measure below will reduce the exposure of workers and residents living in the project vicinity to a less than significant level.

Mitigation Measure AIR-2: The applicant shall implement EDCAQMD's Rule 223-2 regulations.

Method of Verification: Incorporate as Notes on Improvement Plan and Grading Plan

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

Monitoring Requirement: Prior to Approval of Improvement Plan and Issuance of Grading Permit

Monitoring Agency: Air Quality Management District (AQMD) and Planning Services

- Construction-Related Criteria Pollutant

The EDCAQMD has established maximum daily and construction period diesel fuel use thresholds designed to ensure that criteria pollutant emissions are less than the mass emission significance thresholds. A project's emissions of all criteria pollutants are deemed to be less than significant if its maximum daily fuel use is less than 337 gallons diesel fuel used for all equipment of 1995 model year or earlier or 402 gallons per day for all equipment of model year 1996 or later. Table 3 (Page 12) of the Air Quality Analysis shows estimates of the quantity of diesel fuel that would be consumed during project construction. The project would increase diesel fuel use by a maximum of 336 gallons per day (during site grading) and 20,307 gallons over the construction period. This increase in diesel combustion would result in insignificant generation of ROG, NOx, CO, and PM10 combustion emissions. No mitigation is required.

- Operational Ozone Precursor

The EDCAQMD has established significance thresholds of 82 pounds per day for Reactive Organic Gas (ROG) and Nitrogen Oxides (NOx) associated with project operation. Emissions from sources that are below these levels are considered less than significant. The URBEMIS 2007 model (appendix in Air Quality Analysis) was used to estimate the increase in ROG and NOx emissions. Table 4 (page 14) of the Air Quality Analysis shows the estimated increase in ROG and NOx associated with project operations for the summer and winter periods. On-road operational emissions are based on the trip generation rates provided in the traffic impact analysis. Winter emissions are higher because of area source emissions, especially those associated with fuel combustion from wood stoves and fireplaces.

Project operations will generate vehicle trips traveling to and from the proposed project along with area source emissions associated with water and space heating, landscape maintenance, and consumer products. These emission sources will generate emissions of the ozone precursors, ROG and NOx. However, as shown in Table 4, the emissions of ROG and NOx would be less than the significance thresholds established by the EDCAQMD. Therefore, this impact is less than significant.

For the other criteria pollutants, CO SO_2, NO_2, and PM_{10} significance is based on whether a project would cause or contribute to violations of the California or federal ambient air quality standards. However, if a project's ROG or NOx emissions are below the 82 pounds per day thresholds, then the project's emission impacts of CO, SO2, NO2, and PM10 are also considered less than significant. Based on less than significant effects from ROG and NOx, the anticipated emissions from CO, SO_2, NO_2 and PM_{10} are also less than significant.

The EDCAQMD has identified the following criteria to be used in determining whether a land use project has a potentially significant Toxic Air Contaminant (TAC) impact:

- the project generates heavy duty truck trips (from project operations) of 10 or more per day.
- the project uses more than 3,700 gallons of diesel fuel during construction if toxic-best available control technology (T-BACT) is not applied or 37,000 gallons if T-BACT is applied.

The residential project is unlikely to generate heavy-duty truck trips. The evaluation of construction related TAC emissions found that, with implementation of T-BACT, construction emissions of TAC would be less than significant.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

c. **Cumulative Impacts.** Based on the insignificant project specific emission impacts from Ozone Precursors, Carbon Monoxide, Particulate Matter (PM 10), Sulfur Dioxide (SO_2), Nitrogen Dioxide (NO_2), and Toxic Air Contaminant (TAC) discussed above, the project's cumulative operational and area emissions impacts are considered less than significant.

d. **Sensitive Receptors.** CEQA Guidelines identifies sensitive receptors as facilities that house or attract children, the elderly, people with illnesses, or others that are especially sensitive to the affects of air pollutants. Hospitals, schools and convalescent hospitals are examples of sensitive receptors. There are no hospitals or convalescent hospitals in the immediate area. The proposed residential subdivision would conform to the existing use in the immediate area.

Standard AQMD Rules 214 (Architectural Coatings), 223.1 (Fugitive Dust-Construction, Bulk Material Handling, Blasting, Other Earthmoving Activities and Carryout and Trackout Prevention), 224 (Cutback and Emulsified Asphalt Paving Materials), 300 (Open Burning), Fugitive Dust Plan, as well as implementing typical conditions for the development of the site as it relates to pollutant concentrations based on Environmental Management rules, regulations, and standards, would be required to be implemented during project development. Implementation of these AQMD standards and mitigation measures above, and adherence to County Codes required during the site grading, encroachment, and building permit processes, the proposed project is not anticipated to expose sensitive receptors to substantial pollutant concentrations. Impacts would be anticipated to be less than significant.

e. **Objectionable Odors.** Residential use is not classified as an odor generating facility within Table 3.1 of the El Dorado County AQMD CEQA Guide. The proposed project is not anticipated to create significant levels of odors as measured with current standards. Impacts would be anticipated to be less than significant.

FINDING: The proposed project would not affect the implementation of regional air quality regulations or management plans. The project would result in insubstantial increase in emissions due to construction and operation. Standard conditions of approval, as required by the El Dorado County Air Quality Management District (AQMD) shall be required of the project. As such, the project would create less than significant impacts in this category if the identified mitigation measures are implemented.

IV. BIOLOGICAL RESOURCES. *Would the project:*				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife			X	

IV. BIOLOGICAL RESOURCES. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
corridors, or impede the use of native wildlife nursery sites?				
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Discussion:

A substantial adverse effect on Biological Resources would occur if the implementation of the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state

The site is dominated primarily by foothill oak woodland, which consists of live oak, blue oak and valley oak, with a mixture of herbaceous understory such as soft chess and dog tail. These communities provide potential habitat to a number of common species of wildlife and may provide suitable habitat for breeding, foraging, and shelter habitat for several species of wildlife. Species observed or expected to occur in this habitat include silver-haired bat, Cooper's hawk, and tricolored blackbird. None of the Pine Hill rare plants indigenous to the County have been identified in the project area (Exhibit H).

The existing oak woodland canopy encompasses 14.37 acres of the 22.4 project site, which equates to 64% of the site; 0.08 acre of this canopy has been identified as unhealthy. The existing oak canopy provides breeding and foraging habitat to a variety of wildlife species identified above.

The site is also supported by a small riparian area. A total of 0.46 acre of existing intermittent wetland has been formally delineated on the property along the southern portion of the property. This wetland feature consists of 0.25 acre of seeps and channel 0.21 acre. Portions of the wetland features eventually empties into an unnamed tributary of Willow Creek, Lake Natoma and American Riverwater and would be regulated under Section 404 of the Clean Water Act enforced by the U.S. Army Corp of Engineers.

a. **Special Status Species.** The biological reports evaluated the existence of the biological communities within the project site. Specifically, the site consists of biological communities including Interior live and blue oak woodland and California Grassland. Within these communities, varying types of species including raptors and hawks could

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

potentially inhabit the site. Project implementation would result in the removal of oak trees (discussed below) which these migratory bird species could potentially inhabit for foraging and nesting purposes. The following mitigation measure shall be incorporated which would minimize the impact to less than significant:

Mitigation Measure BIO-1: The applicant shall submit a pre-construction survey for active bird and raptor nests conducted within the nesting period for most migratory bird species and nesting raptor species (between February and September) by a qualified biologist. No known active nests shall be disturbed without a permit or other authorization from USFWS or CDFW.

Method of Verification: Submittal of Pre-Construction Survey

Monitoring Requirement:: Prior to Approval of Improvement Plan and Issuance of Grading Permit

Monitoring Agency: Planning Services

The site was also evaluated for potential presence of sensitive status plants including the Rare Plants or Pine Hill Endemic Plants. The study concluded that no special status plants were observed within the project area. However, given that the site is within the Ecological Preserve Area 2, in accordance with Chapter 17.71 of the El Dorado County Zoning Ordinance and Board of Supervisors Resolution No. 205-98, payment of standard mitigation fee for impacts to rare plant would be required and collected prior to issuance of building permits. This requirement shall be incorporated as a standard condition of approval.

b.-c. **Riparian Habitat/Wetlands.** The design of the subdivision would preserve the existing wetland with the application of reduced setbacks in accordance with the Interim Interpretive Guideline to General Plan Policy 7.3.3.4. The wetlands are sited within several lots (Lots 467, 499, 503-505) and have a minimum setback of 20-foot from development (Exhibit H). Impacts to these wetland features would be reduced to less than significant with implementation of the following mitigation measures.

Mitigation Measure BIO-2: A 20-foot setback line shall be shown on the Final Map from all high-water marks or the outer boundary of the identified wetland. No development shall occur within the setback area. A Notice of Restriction (NOR) shall be recorded with the Final Map against each lot encumbered with the modified setback which shall provide construction notice of the setback to future lot owners. The notice shall be reviewed and be subject to approval by Planning Services.

Method of Verification: Review of Final Map

Monitoring Requirement:: Prior to Final Map

Monitoring Agency: Planning Services

Mitigation Measure BIO-3: The applicant shall implement the following Standard Best Management Practices (BMP) measures during site construction.

A Storm Water Pollution Prevention Program (SWPPP) will be required by a National Pollutant Discharge Elimination System (NPDES) construction permit. To protect the channel and wetlands, the following Best Management Practices (BMP's) will be incorporated into the SWPPP.

A. Silt fences and /or waddles will be installed to prevent sediments from entering the creek and wetlands.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

B. Orange construction fencing will be placed outside the identified buffers for the creek and all protected wetlands to avoid impacts from construction equipment. Buffers will not be used to store construction equipment or temporary stockpiling.

C. Drip pans will be placed under all work vehicles.

D. Fuel waste will be contained throughout the site during construction.

E. The construction site will be winterized utilizing the distribution of straw and/or hydroseeding.

Method of Verification: The above provisions shall be incorporated as a note on Grading and Improvement Plan

Implementation Timing: Prior to approval of Grading and Improvement Plan

Monitoring Agency: Planning Services

Application of the above mitigation measures would minimize said impacts to a less than significant level.

d. **Migration Corridor.** Wildlife movement zones are important for the movement of migratory wildlife populations. Corridors provide foraging opportunities and shelter during migration. Generally, wildlife movement zones are established migration routes for many species of wildlife. Movement corridors often occur in open areas or riverine habitats that provide a clear route for migration in addition to supporting ample food and water sources during movement. The site does not contain specific habitat that would make it suitable for wildlife migration corridor and is not identified within the Important Biological Corridor (-IBC) of the General Plan. The site is surrounded by existing and planned residential development on all sides which further limits the suitability for migration corridor. Impact to wildlife migration corridor is anticipated to be less than significant.

e. **Local Plans.** General Plan Policies 7.4.4.4, 7.4.4.5, and 7.4.5.2 govern the removal of oak tress within El Dorado County. Specifically, Policy 7.4.4.4 contains two options to mitigate for the loss of oak woodlands: 1) Option A requires conformance to on-site tree canopy retention and replacement standards; and 2) Option B provides for in-lieu payment of mitigation fees in accordance with an Oak Woodland Management Plan (OWMP). With the invalidation of the OWMP as a result of the Third District Court of Appeals ruling in the case of Center for Sierra Nevada Conservation v. County of El Dorado, mitigation via in-lieu fee payment (Option B) is not available.

An Oak Tree Preservation Plan is proposed for the affected and preserved oak canopy consistent with Option A of General Plan Policy 7.4.4.4 and its Interim Interpretive Guideline (Exhibit I). The affected on-site canopy amounts to a total 4.29 acres, which consist of the 3.01 acres of combined canopies designated for removal in each lot and 1.28 acres associated with infrastructure construction. The affected canopy shall be mitigated in kind through the establishment of an off-site conservation easement over an existing oak canopy located at APN 120-166-29 in accordance with the interim interpretive guideline. The remaining 10.08 acre of the canopy shall be preserved and protected in accordance with the policy.

Implementation of the following measures would minimize said impacts to a less than significant level.

Mitigation Measure BIO-4: The applicant shall submit a Final Oak Tree Preservation Plan for Ridgeview Village Unit No.9 depicting the removed and preserved oak tree canopy in accordance with General Policy 7.4.4.4 Option A and Interim Interpretive Guideline.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

Method of Verification: *Review of Final Oak Tree Preservation Plan during review of Grading Plan*

Monitoring Responsibility: *Planning Services*

Monitoring Requirement: *Prior to approval of Grading Permit or recording of Final Map, whichever occur first*

Mitigation Measure BIO-5: *The applicant shall establish and submit proof of executed Conservation Easement as part of the Final Oak Tree Preservation Plan for Ridgeview Village Unit No.9 in accordance with General Policy 7.4.4.4 Option A and Interim Interpretive Guideline.*

Method of Verification: *Review of Conservation Easement and documentation during review of Final Map*

Monitoring Responsibility: *Planning Services*

Monitoring Requirement: *Prior to recordation of Final Map*

Mitigation Measure BIO-6: *The applicant shall a record a Notice of Restriction (NOR) requiring submittal of a Development Notebook with the residential building permit. The Development Notebook shall detail the extent of the impacted and preserved oak tree canopy in accordance with Final Oak Tree Preservation Plan for Ridgeview Village No.9.*

Method of Verification: *Review of Notice of Restriction*

Monitoring Responsibility: *Planning Services*

Monitoring Requirement: *Prior to recordation of Final Map*

f. **Adopted Plans.** This project, as designed, would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact.

FINDING: For the "Biological Resources" category, the site contains area of sensitive biological resources that would be impacted as part of the project. As analyzed, conditioned, and mitigated, these impacts would be minimized to less than significant.

V. CULTURAL RESOURCES. *Would the project:*				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			**X**	
b. Cause a substantial adverse change in the significance of archaeological resource pursuant to Section 15064.5?			**X**	
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			**X**	

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. *Would the project:*				
d. Disturb any human remains, including those interred outside of formal cemeteries?			X	

Discussion

In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a historical or cultural resource significant or important. A substantial adverse effect on Cultural Resources would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect a prehistoric or historic archaeological site or a property or historic or cultural significant to a community or ethnic or social group; or a paleontological site except as a part of a scientific study;
- Affect a landmark of cultural/historical importance;
- Conflict with established recreational, educational, religious or scientific uses of the area; or
- Conflict with adopted environmental plans and goals of the community where it is located.

a-c. **Historic, Pre-historic, and Archeological Resources.** General Plan Policy 7.51.3 requires discretionary projects for new development to be analyzed for potential presence of sensitive cultural and archeological resources. Numerous cultural and archeological studies have been conducted on the site and the immediate area (See Supporting Information List, page 42). A recent cultural study was conducted in 2008 by Historic Resource Associates verified absence of potentially significant artifact. Based on the analysis and conclusions in the cultural and archeological reports, no significant resources exist on site therefore any anticipated impacts are less than significant.

d. **Human Remains.** In addressing the potential of presence of human remains during construction, standard conditions of approval, in accordance with CEQA Guidelines § 15064.5, Health and Safety Code § 7050.5 and Public Resources Code §§ 5097.94 and 5097.98, would be incorporated. Impacts would be anticipated to be less than significant.

FINDING: Based on the study, no sensitive cultural and historical resources were identified on the site. However, a possibility of previously unknown resources or human remains could be discovered during construction. Specific conditions would be incorporated to ensure any potential discoveries. This project would have a less than significant impact within the Cultural Resources category.

VI. GEOLOGY AND SOILS. *Would the project:*				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?			X	

VI. GEOLOGY AND SOILS. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b. Result in substantial soil erosion or the loss of topsoil?			X	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?			X	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

A substantial adverse effect on Geologic Resources would occur if the implementation of the project would:

- Allow substantial development of structures or features in areas susceptible to seismically induced hazards such as groundshaking, liquefaction, seiche, and/or slope failure where the risk to people and property resulting from earthquakes could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards;
- Allow substantial development in areas subject to landslides, slope failure, erosion, subsidence, settlement, and/or expansive soils where the risk to people and property resulting from such geologic hazards could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards; or
- Allow substantial grading and construction activities in areas of known soil instability, steep slopes, or shallow depth to bedrock where such activities could result in accelerated erosion and sedimentation or exposure of people, property, and/or wildlife to hazardous conditions (e.g., blasting) that could not be mitigated through engineering and construction measures in accordance with regulations, codes, and professional standards.

a. Seismic Hazards.

i) According to the California Department of Conservation, Division of Mines and Geology, there are no Alquist-Priolo active fault zones within El Dorado County. The nearest such faults are located in Alpine and Butte Counties. There would be no impact.

ii) The potential for seismic ground shaking in the area would be considered less than significant. Any potential impacts due to seismic impacts would be addressed through compliance with the Uniform Building Code. All residential structures would be built to meet the construction standards of the UBC for the appropriate seismic zone. Impacts would be less than significant.

iii) El Dorado County is considered an area with low potential for seismic activity. The potential areas for liquefaction on the project site would be the swale and ephemeral drainage area, which would be avoided. Impacts would be less than significant.

iv) All future grading activities would be required to comply with the El Dorado County Grading, Erosion Control

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

and Sediment Ordinance. Compliance with the Ordinance would reduce potential landslide impacts to less than significant.

b.-d. **Soil Erosion/ Geologic Hazards/Expansive Soils.** According to the Soils Survey of El Dorado County, the soil composition consists of Auburn Series, specifically Auburn very rocky silt loam (AxD) and Auburn very rocky silt loam (AxE). Auburn silt loam is characterized to occur within slopes between 5 to 25% rock outcrops, well drained, and is typically utilized for range, irrigated pasture. Auburn very rocky slit loam also occurs within the 30 to 50% slope. Both types of soils have moderate permeability, medium to rapid surface runoff, and erosion hazard is moderate to high and shrink-swell potential is considered low.

As part of project implementation, potential for erosion would be mitigated through Best Management Practices subject to conformance with provisions of the El Dorado County Grading, Erosion Control and Sediment Ordinance. Development of the site would require submittal of a formal construction permit application which includes submittal of a Geotechnical Reports. These reports would be subject to review by the County and affected agencies for implementation of measures minimizing erosion hazards. Impacts would be less than significant.

c. **Geologic Hazards.** Onsite soil types have a medium to rapid runoff potential with medium to high erosion potentials. All future grading activities would comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance and building construction would comply with applicable building codes. Impacts would be less than significant.

e. **Septic Capability.** The residential development project would be served by EID for sewage services. There would be no impacts related to septic systems.

FINDING: A review of the soils and geologic conditions on the project site determined that the soil types are suitable for the future residential development, subject to applicable construction and building standards. All grading activities would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance which would address potential impacts related to soil erosion, landslides, and other geologic impacts. For this 'Geology and Soils' category impacts would be less than significant.

VII. GREENHOUSE GAS EMISSIONS. *Would the project:*				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Discussion

The prominent Greenhouse Gas (GHG) contributing to the greenhouse effect as specifically listed in Assembly Bill AB 32, the California Global Warming Solutions Act of 2006, are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors; in California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. California Energy Commission. 2006. *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004.* (Staff Final Report). Publication CEC-600-2006-013-SF.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

GHGs are global pollutants, unlike criteria for air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. Emitting CO_2 into the atmosphere is not itself an adverse environmental affect. It is the increased concentration of CO_2 in the atmosphere potentially resulting in global climate change and the associated consequences of such climate change that results in adverse environmental affects (e.g., sea level rise, loss of snowpack, severe weather events). Although it is possible to generally estimate a project's incremental contribution of CO_2 into the atmosphere, it is typically not possible to determine whether or how an individual project's relatively small incremental contribution might translate into physical effects on the environment.

In June 2008, the Office of Planning and Research's (OPR) issued a technical advisory (*CEQA and Climate Change)* to provide interim guidance regarding the basis for determining the proposed project's contribution of greenhouse gas emissions and the project's contribution to global climate change. In the absence of adopted local or statewide thresholds, OPR recommends the following approach for analyzing greenhouse gas emissions:

- Identify and quantify the project's greenhouse gas emissions;
- Assess the significance of the impact on climate change; and
- If the impact is found to be significant, identify alternatives and/or Mitigation Measures that would reduce the impact to less-than-significant levels.

Neither El Dorado County nor the El Dorado County Air Quality Management District has established GHG significance thresholds to assess project impacts under CEQA. The only air district in northern California that has established a GHG CEQA significance threshold is the Bay Area Air Quality Management District (BAAQMD). BAAQMD has set the significance threshold at 1,100 metric tons CO_2 for operational emissions but has not established a GHG threshold for construction emissions. San Luis Obispo Air Pollution Control District (SLAPCD) has established a threshold of significance of 1,150 metric tons of CO_2. The Sacramento Metropolitan Air Quality Management District (SMAQMD), although not specifying CEQA thresholds, has suggested that a project's construction emissions be amortized over the life of the project and added to the project's operational emissions.

a and b. Generate Greenhouse Gas Emissions. A Greenhouse Gas analysis for the project was conducted by Pacific Municipal Consultants (PMC) dated January 2013 (Exhibit J). This analysis used 1,150 metric tons CO_{2e} referenced above as the significance threshold for the project. Tables 1 and 2 of the analysis shows that the project's estimated 2013 emissions, which include an amortized construction emissions in the amount 10 tons CO_{2e}, would equal to a total of 893 metric tons CO2e. Since these emissions would be less than the 1,150 metric ton CO_{2e} threshold, the project would have a less than significant GHG impact.

FINDING: The greenhouse gas emission analysis for the project estimated that the project emissions would be below the SLOAPCD standard applicable to the project. For this "Greenhouse Gas Emissions" category, impacts would be anticipated to be less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials,				X

VIII. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
substances, or waste within one-quarter mile of an existing or proposed school?				
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

Discussion

A substantial adverse effect due to Hazards or Hazardous Materials would occur if implementation of the project would:

- Expose people and property to hazards associated with the use, storage, transport, and disposal of hazardous materials where the risk of such exposure could not be reduced through implementation of Federal, State, and local laws and regulations;
- Expose people and property to risks associated with wildland fires where such risks could not be reduced through implementation of proper fuel management techniques, buffers and landscape setbacks, structural design features, and emergency access; or
- Expose people to safety hazards as a result of former on-site mining operations.

a.-b. **Hazardous Materials.** Implementation of the project, in particular during construction, may involve transportation, use, and disposal of hazardous materials such as construction materials, paints, fuels, landscaping materials. The usage of these materials is more typical during construction phase. Contractors are required to obtain approval of a Hazardous Materials Business Plan through the Environmental Management Department- Hazardous Waste Division of El Dorado County. Any uses of hazardous materials would be required to comply with all applicable federal, state, and local standards associated with the handling and storage of hazardous materials. The impacts are anticipated to be less than significant.

c.- g. **Hazardous Materials Near Schools.** The project is not in close proximity of any schools. No Impact.

Hazardous Sites. No parcels within El Dorado County are included on the Cortese List. There would be no impact.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

Aircraft Hazards and Private Airstrips. The project site is not within any airport plan, nor is it in any public or private airport. There would be no impact.

Emergency Plan. No formal emergency or evacuation plan is proposed for the project. The subdivision has been designed in accordance with the County Design and Improvement Standards Manual which requires adequate road access and circulation. All lots would have direct access of Beatty Drive and the residential courts. Impacts are anticipated to be less than significant.

h. **Wildfire Hazards.** The project site is within an area identified as moderate fire hazard. The project has been reviewed by the El Dorado Hills Fire Department for the project's potential exposure to wildfire. As conditioned, the Department requires the project to comply with Public Resource Code 4291, which includes bordering fence be non-combustible and planting of select low-lying vegetation. Prior to approval, Improvement and Building Permit Plans shall be reviewed by the department for consistency with applicable fire codes. A previously approved Wildfire Safe Plan shall be updated and implemented for the project. Impacts would be anticipated to be less than significant.

FINDING: Site construction and development would anticipate use of various potential hazardous materials, subject to permitting standards at the local and state level. Residential use does not commonly use these types of hazardous materials. The proposed residential use is not located in any airport facilities. A Wildfire Safe Plan would require implementation as part of the development. For this 'Hazards and Hazardous Materials' category, impacts would be less than significant.

IX. HYDROLOGY AND WATER QUALITY. *Would the project:*				
a. Violate any water quality standards or waste discharge requirements?			X	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or -off-site?			X	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f. Otherwise substantially degrade water quality?			X	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
XI. HYDROLOGY AND WATER QUALITY. *Would the project:*				
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				**X**
j. Inundation by seiche, tsunami, or mudflow?				**X**

Discussion

A substantial adverse effect on Hydrology and Water Quality would occur if the implementation of the project would:

- Expose residents to flood hazards by being located within the 100-year floodplain as defined by the Federal Emergency Management Agency;
- Cause substantial change in the rate and amount of surface runoff leaving the project site ultimately causing a substantial change in the amount of water in a stream, river or other waterway;
- Substantially interfere with groundwater recharge;
- Cause degradation of water quality (temperature, dissolved oxygen, turbidity and/or other typical stormwater pollutants) in the project area; or
- Cause degradation of groundwater quality in the vicinity of the project site.

a. **Water Quality Standards.** Project related construction activities would be required to adhere to the El Dorado County Grading, Erosion Control and Sediment Ordinance which include application of Best Management Practices (BMP's) to minimize degradation of water quality during construction.

Any grading and improvement plans required by the El Dorado County Department of Transportation (DOT) and Building Services would be prepared and designed to meet the *County of El Dorado Grading, Erosion and Sediment Control Ordinance*. These standards require that erosion and sediment control be implemented into the design of the project. Combined with the design standards outlined by the *El Dorado Design and Improvement Standards Manual (DISM)*, as well as the *Off-Street Parking and Loading Ordinance*, required by the ordinance would be implemented and engineered correctly for the final design, including those necessary for site grading and drainage facilities. Grading and drainage plans would be designed pursuant to a project specific Storm Water Mitigation Plan (SWMP). This would address Storm Water Prevention and Pollution Program (SWPPP) standards in order to adhere to the state requirements, as well as the federal, National Pollution Discharge Elimination System (NPDES) requirements for water quality and water discharge. As a result, impacts would be anticipated to be less than significant Impacts would be anticipated to be less than significant.

b. **Groundwater Supplies.** The project is proposed to be connected to public water service provided by El Dorado Irrigation District and would not utilize any groundwater as part of the project. Impact would be less than significant.

c-f. **Drainage Patterns.** Exhibit E details the Preliminary Drainage Plan for the project. The site has a natural drainage from east to west of the property. Proposed subdivision drainage design would convey drain using v-ditches along lot perimeters that ultimately connects into the proposed underground storm drains and inlets along the roads. Construction of the infrastructures would be reflected on Improvement Plan in accordance with DISM standards and Drainage Manual which would ensure that all stormwater and sediment control methods are implemented during construction. All applicable construction measures are detailed in the standard conditions of approval imposed on the project. Impact would be considered less than significant.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

g-j. Flood-related Hazards. The site, which is identified within the 06017C0712E panel of the Flood Insurance Rate Map (FIRM) map, is designated as Flood Zone X. This designation describes areas that are outside of any mapped 100-year or 500-year flood areas. The proposed development shall be required to adhere to applicable construction and building standards involving drainage control and flood prevention. No dams are located in the project area and therefore, no potential hazards related to dam failures. The risk of exposure to seiche, tsunami, or mudflows is remote. There would be no impact.

FINDING: The proposed drainage facilities would adequately convey the anticipated run-off associated to the project. Water would be provided for this project via connections to the EID infrastructures, as well as adequate capacity to connect to the existing EID sewer facility system. BMPs for pre-and-post-construction for erosion and sediment controls would be incorporated into the final grading and drainage design for the project. As conditioned, mitigated, and with adherence to applicable County Codes, impacts within this category would be anticipated to be less than significant.

X. **LAND USE PLANNING.** *Would the project:*				
a. Physically divide an established community?				X
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Discussion

A substantial adverse effect on Land Use would occur if the implementation of the project would:

- Result in the conversion of Prime Farmland as defined by the State Department of Conservation;
- Result in conversion of land that either contains choice soils or which the County Agricultural Commission has identified as suitable for sustained grazing, provided that such lands were not assigned urban or other nonagricultural use in the Land Use Map;
- Result in conversion of undeveloped open space to more intensive land uses;
- Result in a use substantially incompatible with the existing surrounding land uses; or
- Conflict with adopted environmental plans, policies, and goals of the community.

a.-b. Established Community and Land Use Consistency. Based on the High Density Residential land use designation, the site is identified for residential development. The existing zone of One-Family district is consistent with this land use designation. Ridgeview Village Unit No.9 density, design, and configuration would blend with the existing residential development in the area. There would be no impact.

c. Habitat Conservation Plan. El Dorado County does not have an adopted Habitat Conservation Plan Program. There would be no impact.

FINDING: For the 'Land Use Planning' category, the project would have no impact.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. *Would the project:*				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Discussion

A substantial adverse effect on Mineral Resources would occur if the implementation of the project would:

- Result in obstruction of access to, and extraction of mineral resources classified MRZ-2x, or result in land use compatibility conflicts with mineral extraction operations.

a-b. **Mineral Resources.** The site is identified for residential development. There are no known mineral resources on the site according to the General Plan. There are no known mineral resources of local importance on or near the project site. There would be no impact.

FINDING: No known mineral resources are located on or within the vicinity of the project. There would be no impact to this 'Mineral Resources' category.

XII. NOISE. *Would the project result in:*				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise level?				X
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Discussion

A substantial adverse effect due to Noise would occur if the implementation of the project would:

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

- Result in short-term construction noise that creates noise exposures to surrounding noise sensitive land uses in excess of 60dBA CNEL;
- Result in long-term operational noise that creates noise exposures in excess of 60 dBA CNEL at the adjoining property line of a noise sensitive land use and the background noise level is increased by 3dBA, or more; or
- Results in noise levels inconsistent with the performance standards contained in Table 6-1 and Table 6-2 in the El Dorado County General Plan.

a. **Noise Exposures.** The site is immediately bordered by open space and vacant residential properties to the west and existing development to the east, north and south. The anticipated noise effects from the proposed residential subdivision would occur and blend with the existing and planned residential uses in the immediate area. Site construction noise is anticipated to occur intermittently and on a short term basis. Construction activities would include use of various machinery and construction tools equipped with standard sound muffling device to reduce the noise effects. Along with application of standard construction hours of limitation, these effects are not anticipated to be significant in excess of the standards. Operational noise effects primarily involve common residential noises that would generally be confined within the lot. Residential units would be built utilizing standard building construction that would mitigate exterior noise effects. Noise effects on the outdoor yard areas of these custom lots would be intermittent, buffered by the residential structures and setback, and are therefore considered less than significant.

   Impacts would be less than significant.

b. **Ground borne Shaking:** Future development of the site may generate ground borne vibration or shaking events during project construction. These potential impacts would be limited to project construction. Adherence to the time limitations of construction activities to 7:00am to 7:00pm Monday through Friday and 8:00am to 5:00 pm on weekends and federally recognized holidays would limit the ground shaking effects in the project area. Impacts would be less than significant.

c. **Permanent Ambient Noise Increases.** Post-construction of the site, implementation and operation of residential development is not expected to add significant noise ambient levels of the surrounding area. The overall types and volumes of residential noise are not anticipated to be excessive and would be common to the surrounding residential uses. Impacts would be anticipated to be less than significant.

d. **Temporary Ambient Noise Increases:** The construction phase of the project would result in an increase in ambient noise levels. Construction noise would be temporary and would be minimized by compliance with Policy 6.5.1.11 of the El Dorado County General Plan Noise Element. Project operation would also result in periodic noise generation above current levels from the use of personal vehicles, landscaping equipment, etc. The overall types and volumes of noise from project operation are not anticipated to be excessive and would be similar in nature with the existing residential uses. Thus, as a result, the impacts would be anticipated to be less than significant.

e-f. **Aircraft Noise.** The project site is not within any airport plan, located within the immediate vicinity of public airport, or private airport. There would be no impact.

FINDING: Based on project and general site conditions, implementation of the project does anticipate significant impacts to or from noise effects. For this "Noise" category, the thresholds of significance are not anticipated to be exceeded.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING. *Would the project:*				
a. Induce substantial population growth in an area, either directly (i.e., by proposing new homes and businesses) or indirectly (i.e., through extension of roads or other infrastructure)?			X	
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Discussion:

A substantial adverse effect on Population and Housing would occur if the implementation of the project would:

- Create substantial growth or concentration in population;
- Create a more substantial imbalance in the County's current jobs to housing ratio; or
- Conflict with adopted goals and policies set forth in applicable planning documents.

a. **Population Growth.** The proposed residential subdivision would result in construction a total of 44 residential detached primary single-family residences. The resulting density of 1.96 units/acre is within the anticipated density range of 1 to 5 dwelling unit/acre under the High Density Residential land use designation. Based on the population density of 2.8 persons per unit under this land use designation, the development would result in the addition of 123 residents at buildout. Given that buildout of the subdivision is long-term, this addition of residents into the neighborhood would occur gradually. This amount of additional population would be considered less than significant.

b and c. Housing Displacement. The site is vacant thus implementation of the project would not result in any displacement or relocation of housing. There would be no impact.

FINDING: Implementation of project would not have any significant increase to population or housing. No displacement would occur. For this "Population and Housing" category, impacts would be less than significant.

XIV. PUBLIC SERVICES. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a. Fire protection?			X	
b. Police protection?			X	
c. Schools?			X	
d. Parks?			X	
e. Other government services?			X	

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

Discussion

A substantial adverse effect on Public Services would occur if the implementation of the project would:

- Substantially increase or expand the demand for fire protection and emergency medical services without increasing staffing and equipment to meet the Department's/District's goal of 1.5 firefighters per 1,000 residents and 2 firefighters per 1,000 residents, respectively;
- Substantially increase or expand the demand for public law enforcement protection without increasing staffing and equipment to maintain the Sheriff's Department goal of one sworn officer per 1,000 residents;
- Substantially increase the public school student population exceeding current school capacity without also including provisions to adequately accommodate the increased demand in services;
- Place a demand for library services in excess of available resources;
- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Be inconsistent with County adopted goals, objectives or policies.

a. **Fire Protection.** The project site is within the El Dorado Hills Fire Department Service Area for fire and emergency service. The nearest fire station, Administration Station # 85, is located along El Dorado Hills Blvd at the intersection with Wilson Blvd. in El Dorado Hills, which is approximately 1¼ mile east of the project site. The department has reviewed the project and recommended specific conditions of approvals that would ensure adequate services to the development. Specifically, the fire department would review Improvement Plans verifying necessary size of water infrastructures to accommodate anticipated water flows for fire sprinklers and fire hydrant. The department would also review building permits for the construction of the proposed residential units, installation of sprinklers, and adequate site circulation. The department would receive development impact fees prior to issuance of building permit. Impacts would be anticipated to be less than significant.

b. **Police Protection.** Police services would continue to be provided by the El Dorado County Sheriff's Department. Due to the size, scope, duration of the project buildout, the demand for additional police protection is not anticipated to change. Impacts would be anticipated to be less than significant.

c-e. **Schools and Government Services.** The project site is within the Buckeye Union School District (K-12) and El Dorado Union High School District. The schools that could provide educational services to the future residents of the subdivision include William Brooks Elementary School, Rolling Hills Middle School and Silva Valley and Oak Ridge High School. The recent record of enrollment (2010-11) for William Brooks Elementary Schools and Rolling Hills Middle School are 513 and 971 students, respectively, while Oak Ridge High School currently has 2,305 students. The amount of residents (123) that subdivision could generate is anticipated to occur gradually as the development builds out. This above schools anticipates future capacity to accommodate the students generated from the subdivision.

FINDING: No significant increase of services is anticipated with this project. For this 'Public Services' category, impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
XV. RECREATION.				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Discussion:

A substantial adverse effect on Recreational Resources would occur if the implementation of the project would:

- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Substantially increase the use of neighborhood or regional parks in the area such that substantial physical deterioration of the facility would occur.

a-b. **Parks and Recreational Services.** Residential subdivisions are required to dedicate parkland or pay an equivalent in-lieu fee. The area is currently served by several parks including Kalithea Park, Ridgeview Village Unit 7 Park, and Ridgeview Village Unit 1 Park. Ridgeview Village Unit No.9 is part of the overall Ridgeview Village development, which entered into an agreement with El Dorado Hills Community Services District (CSD), and dedicated sufficient parkland area with Unit No.7.

The subdivision would be required to pay the park improvement fee for existing parks within the CSD service area. The fee is collected prior to issuance of residential building permit.

Impacts would be less than significant impact.

FINDING: Impacts to Parks and Recreational amenities are considered less than significant.

XVI. TRANSPORTATION/TRAFFIC. *Would the project:*				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X

XVI. TRANSPORTATION/TRAFFIC. *Would the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e. Result in inadequate emergency access?			X	
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	

Discussion:

A substantial adverse effect on Traffic would occur if the implementation of the project would:

- Result in an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system;
- Generate traffic volumes which cause violations of adopted level of service standards (project and cumulative); or
- Result in, or worsen, Level of Service "F" traffic congestion during weekday, peak-hour periods on any highway, road, interchange or intersection in the unincorporated areas of the county as a result of a residential development project of 5 or more units.

a-b. Circulation and Congestion Management Plan.

A Traffic Impact Analysis (TIA) was conducted Kimley Horn and Associated analyzing the potential traffic effects resulting from project implementation based on the established protocols and procedures by DOT (Exhibit K). The study was based on a 48-lot version of the map with minor deviation in the internal circulation. The DOT has evaluated the study, and based on the reduced density, consistency with the General Plan, and adequacy of existing road capacity that serve the area, concluded the applicability of this study for the current version of the map.

The TIA covered factors such as analysis of the affected roadways, impacts to Level of Service (LOS), and estimation of generated trips by the project. The roadways analyzed include El Dorado Hills Boulevard and Olson Lane and El Dorado Hills Blvd and Wilson Blvd.

The applicable County standards include following:

- Level of Service (LOS) for County-maintained roads and State highways within the unincorporated areas of the County shall not be worse than LOS E in the Community Regions." (El Dorado County General Plan Policy TC-Xd);
- If a project causes the peak-hour level of service…on a County road or State highway that would otherwise meet the County standards (without the project) to exceed the [given] values, then theimpact shall be considered significant;
- If any county road or state highway fails to meet the [given] standards for peak hour level of service…under existing conditions, and the project will 'significantly worsen' conditions on the road or highway, then the impact shall be considered significant." According to General Plan Policy TCX-e, significantly worsen is defined as "a 2 percent increase in traffic during the a.m. peak hour, p.m. peak hour, or daily, or the addition of 100 or more daily trips, or the addition of 10 or more trips during the a.m. peak hour or the p.m. peak hour."

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

The TIA estimated 460 total new daily trips which consist of 36 new trips occurring during the AM peak-hour and 49 new trips occurring during the PM peak-hour. The project is consistent with the zoning and General Plan and is less that the General Plan forecasted growth for the traffic analysis zone. The addition of the project would not result in substandard operation of the studied intersections and capacity of the existing road network. Impacts are anticipated to be less than significant.

c. **Air traffic.** The project site is not identified in any airport plan, nor is it located within any public or private airport flight zones. There would be no impact to air traffic patterns.

d. **Design Hazards.** Residential subdivision design has been reviewed by DOT for conformance with County design standards, such as sharp curves, dangerous intersection, or incompatible uses that would increase hazards. The project has been conditioned to reduce potential hazards onto the existing local road systems to less than significant impact levels.

e. **Emergency Access.** The proposed development has been reviewed for conformance with county design and fire standards for emergency access. Impacts would be less than significant.

f. **Alternative Transportation Plan.** The nearest identified corridor within the El Dorado County Master Bicycle Plan is Sophia Parkway located approximately 1½ mile west of the project site. Beatty Drive, a major residential collector road, adequately provides circulation for bicycle and no additional bicycle improvements is required.

Bus turnouts are not required in the project area. There would be no impacts.

FINDING: The proposed project would have less than impacts to existing road infrastructures. For the Transportation/ Traffic category, impacts would be less than significant.

XVII. UTILITIES AND SERVICE SYSTEMS. *Would the project:*				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g. Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

Discussion

A substantial adverse effect on Utilities and Service Systems would occur if the implementation of the project would:

- Breach published national, state, or local standards relating to solid waste or litter control;
- Substantially increase the demand for potable water in excess of available supplies or distribution capacity without also including provisions to adequately accommodate the increased demand, or is unable to provide an adequate on-site water supply, including treatment, storage and distribution;
- Substantially increase the demand for the public collection, treatment, and disposal of wastewater without also including provisions to adequately accommodate the increased demand, or is unable to provide for adequate on-site wastewater system; or
- Result in demand for expansion of power or telecommunications service facilities without also including provisions to adequately accommodate the increased or expanded demand.

a-e. Potable, Wastewater, and Stormwater Facilities.

The project is required to comply with EID requirements for the treatment, collection, processing, and disposal of waste as established by the Regional Water Quality Control Board (RWQCB). The proposed development would be served with public sewer and water by El Dorado Irrigation District (EID) via construction of lines connecting to existing lines (8-inch water lines and 6-inch sewer lines in the neighborhood. The project would construct an off-site sewer line utilizing a gravity force alternative that would minimize maintenance and operational costs to the existing sewer lift station. A Facility Plan Report detailing the construction of the facilities would be required and reviewed as part of the Improvement Plan for the development. Submittal of an EID meter award letter confirming acquisition of services would be verified prior to Final Map approval.

The preliminary drainage plan depicts storm runoff generated on-site and off-site that would require construction of drainage facilities that would utilize and connect to the existing network in the area. These facilities, which include v-ditches within the residential lots and underground drainage inlets and culverts, shall be designed in accordance with El Dorado County Drainage Manual. The final drainage plan shall be reviewed as part of the Improvement Plan by DOT. Impacts are less than significant.

f- g. Solid Waste

County Ordinance No. 4319 requires that new development provide for adequate, accessible, and convenient storing, collecting, and loading of solid waste and recyclables on site. Solid waste collection for the proposed lots would be handled through the local waste management contractor.

In December of 1996, direct public disposal into the Union Mine Disposal Site was discontinued and the Material Recovery Facility/Transfer Station was opened. Only certain inert waste materials (e.g., concrete, asphalt, etc.) may be dumped at the Union Mine Waste Disposal Site. All other materials that cannot be recycled are exported to the Lockwood Regional Landfill near Sparks, Nevada. In 1997, El Dorado County signed a 30-year contract with the Lockwood Landfill Facility for continued waste disposal services. The Lockwood Landfill has a remaining capacity of 43 million tons over the 655-acre site. Approximately six million tons of waste was deposited between 1979 and 1993. This equates to approximately 46,000 tons of waste per year for this period.

After July of 2006, El Dorado Disposal began distributing municipal solid waste to Forward Landfill in Stockton and Kiefer Landfill in Sacramento. Pursuant to El Dorado County Environmental Management Solid Waste Division

staff, both facilities have sufficient capacity to serve the County. Recyclable materials are distributed to a facility in Benicia and green wastes are sent to a processing facility in Sacramento.

The subdivision would be required to obtain solid waste collection service provided by El Dorado Disposal in accordance with Environmental Management-Solid Waste Division standards. Impacts would be less than significant.

FINDING: The project has been designed to adequately convey storm drainage. Utilities such as water, sewer, and trash/recycle services shall be provided to the residential development by and in accordance with local purveyors' standards. For this 'Utilities and Service Systems' category, impacts would be less than significant.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE. *Does the project:*	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			X	
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Discussion

a. **Degradation of Environment.** The site is not within any wildlife corridor but contains existing biological resources that would be affected as part of project development including impacts to oak canopy. Oak canopy impacts would be mitigated in accordance with the retention and replacement standards under General Plan Policy 7.4.4.4 Option A. Potential raptor foraging or nesting habitat would be verified prior to any construction. Project effects to Air Quality are anticipated to be less than significant with application of recommended mitigation measures. Based on the above discussions, project impacts to quality of the environment are anticipated to be less than significant after applicable mitigation measures are implemented.

b. **Cumulative Effects.** Cumulative impacts are defined in Section 15355 of the California Environmental Quality Act (CEQA) Guidelines as "two or more individual effects, which when considered together, would be considerable or which would compound or increase other environmental impacts." Based on the analysis and conclusions in this checklist, including impacts to Air Quality and Biological Resources it has been determined that the project's individual and cumulative effects are not considerable and would have a less than significant impacts with adherence to identified mitigation measures and conformance to specific construction and permitting standards.

c. **Effects on Human Beings.** Project implementation would result to less than significant environmental effects to the existing and future residents in the area. As analyzed, implementation of project design, adherence to specific

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact

mitigation measures, and application of standard building and construction requirements would minimize the identified potential effects.

PROJECT INFORMATION

EXHIBITS

Exhibit M- Exhibit A: Location Map
Exhibit M- Exhibit B: Assessor's Parcel Map
Exhibit M- Exhibit C: General Plan Land Use Map
Exhibit M- Exhibit C.1: Zone Map
Exhibit M- Exhibit D: Ridgeview Village Unit No.9 Tentative Map
Exhibit M- Exhibit E: Ridgeview Village Unit No.9 Preliminary Grading and Drainage Plan
Exhibit M- Exhibit F: Air Quality Analysis
Exhibit M- Exhibit G: AQMD Correspondence
Exhibit M- Exhibit H: Jurisdictional Wetland and Special Status Species Evaluation
Exhibit M- Exhibit I: Ridgeview Village Unit No.9 Oak Tree Preservation Plan
Exhibit M- Exhibit J: Greenhouse Gas Analysis
Exhibit M- Exhibit K: Traffic Impact Analysis

SUPPORTING INFORMATION SOURCE LIST

The following documents are available at El Dorado County Planning Services in Placerville.

El Dorado County General Plan Draft Environmental Impact Report
Volume 1 of 3 – EIR Text, Chapter 1 through Section 5.6
Volume 2 of 3 – EIR Text, Section 5.7 through Chapter 9
Appendix A
Volume 3 of 3 – Technical Appendices B through H

El Dorado County General Plan – A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief (Adopted July 19, 2004)

Findings of Fact of the El Dorado County Board of Supervisors for the General Plan

El Dorado County Zoning Ordinance (Title 17 - County Code)

County of El Dorado Drainage Manual (Resolution No. 67-97, Adopted March 14, 1995)

County of El Dorado Grading, Erosion and Sediment Control Ordinance (Ordinance No. 3883, amended Ordinance Nos. 4061, 4167, 4170)

El Dorado County Design and Improvement Standards Manual (DISM)

El Dorado County Subdivision Ordinances (Title 16- County Code)

Soil Survey of El Dorado Area, California

California Environmental Quality Act (CEQA) Statutes (Public Resources Code Section 21000, et seq.)

Title 14, California Code of Regulations, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act (Section 15000, et seq.)

Ridgeview Village Unit No.9
Tentative Map TM08-1477

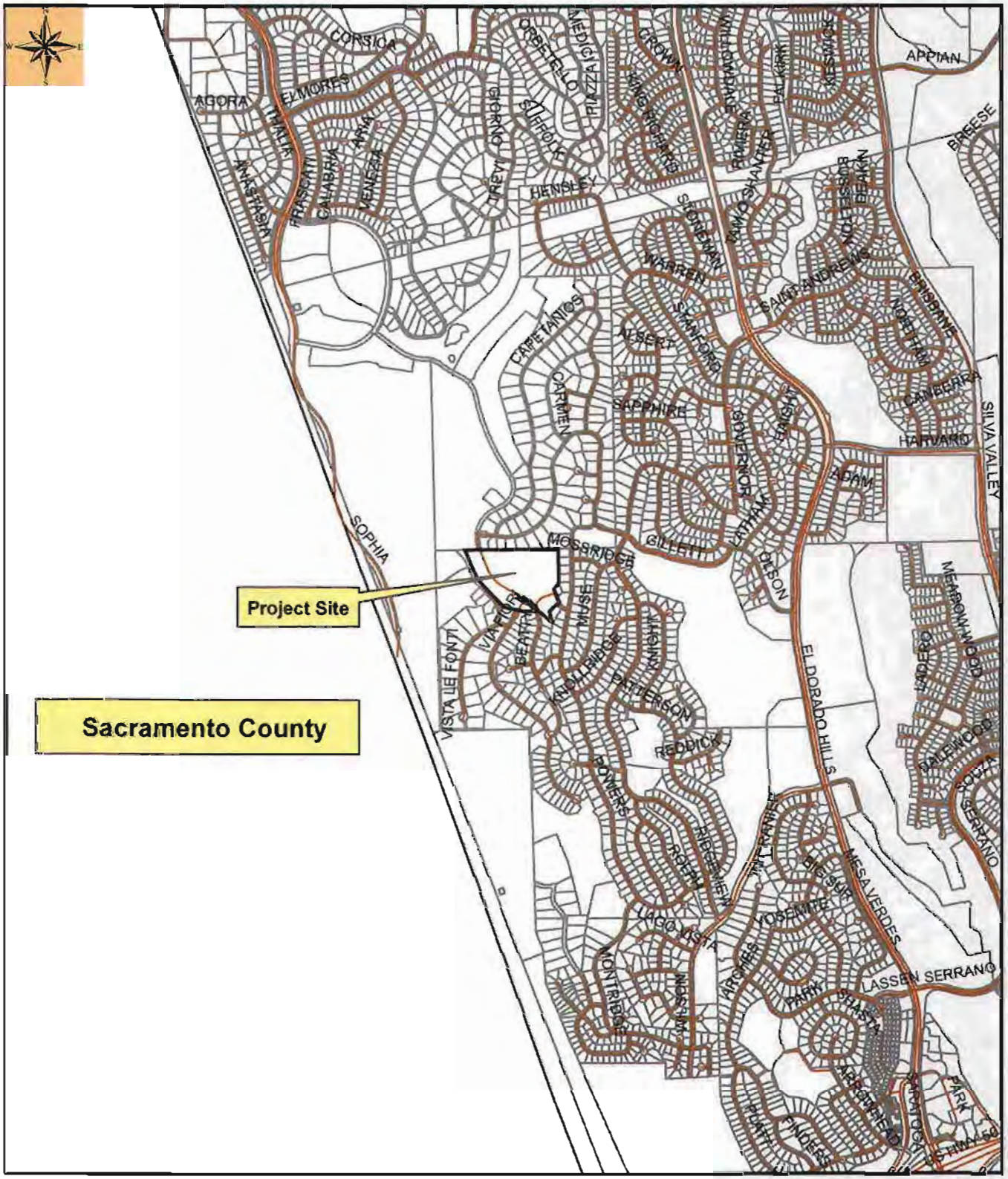
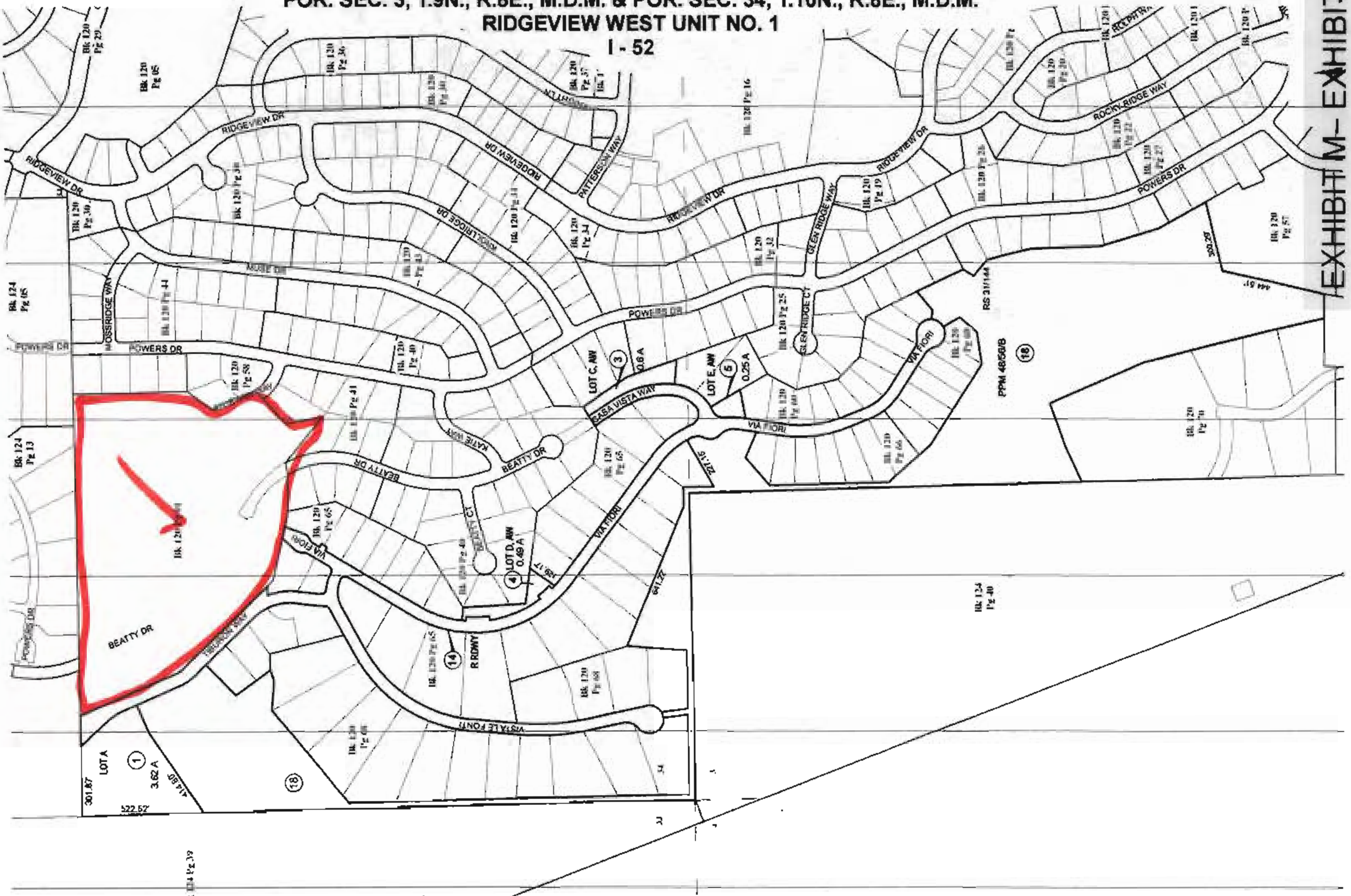


EXHIBIT M–Exhibit A- Location Map

EXHIBIT M- EXHIBIT B

POR. SEC. 3, T.9N., R.8E., M.D.M. & POR. SEC. 34, T.10N., R.8E., M.D.M.
RIDGEVIEW WEST UNIT NO. 1
I - 52



P IS NOT A SURVEY. It is prepared by the El Dorado Co. 's office for assessment purposes only. Area calculations ... are not guaranteed. Users should verify items dimensions and acreage.

Acreages Are Estimates

Assessor's Parcel Numbers Shown in Circles
Assessor's Block Numbers Shown in Ellipses
Adjacent Map Pages Shown in Grey Text

Rev. Aug. 5, 2009

Assessor's Map B
County of El D

Ridgeview Village Unit No.9
Tentative Map TM08-1477

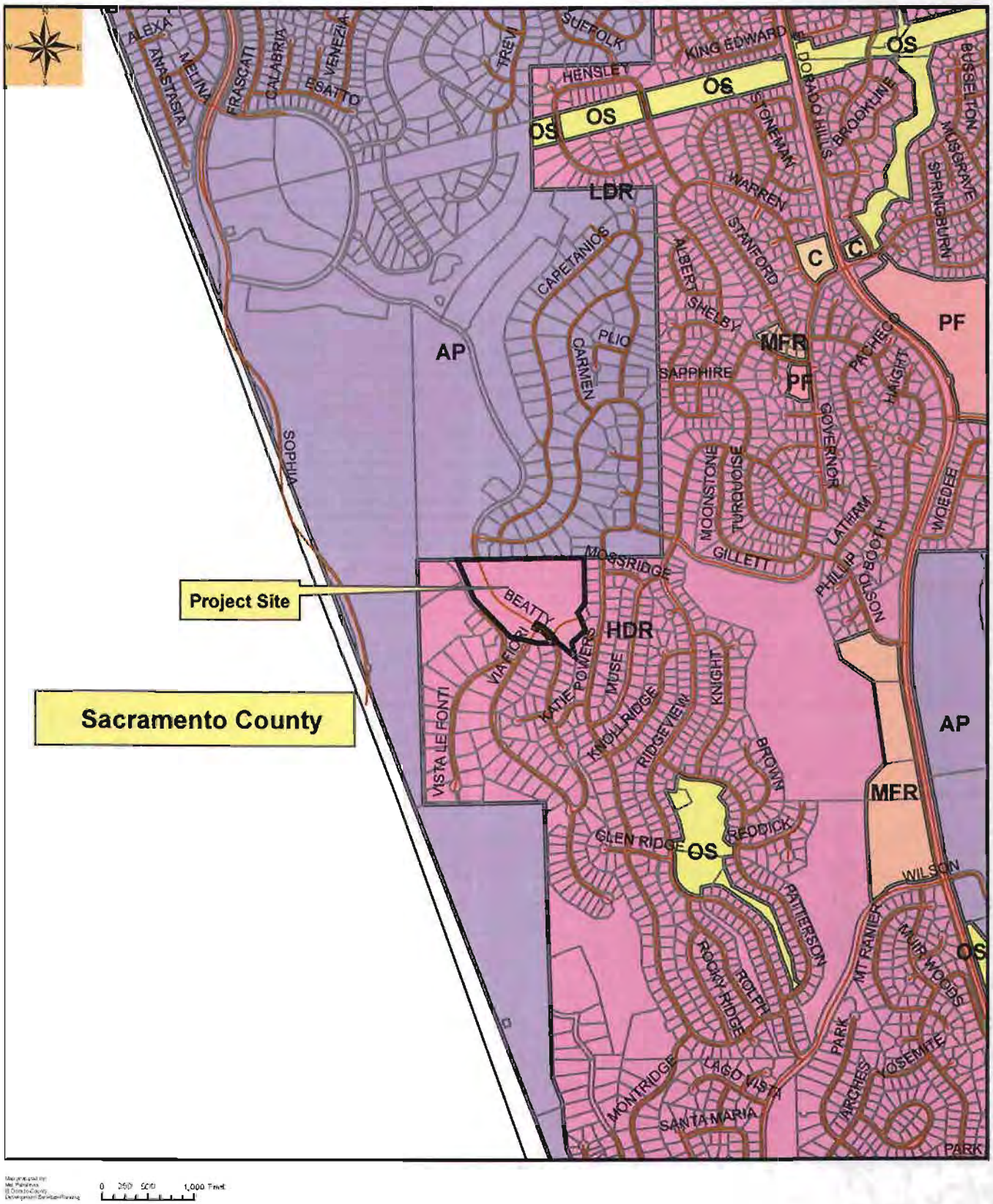


EXHIBIT M–Exhibit C- General Plan Land Use Map

Ridgeview Village Unit No.9
Tentative Map TM08-1477

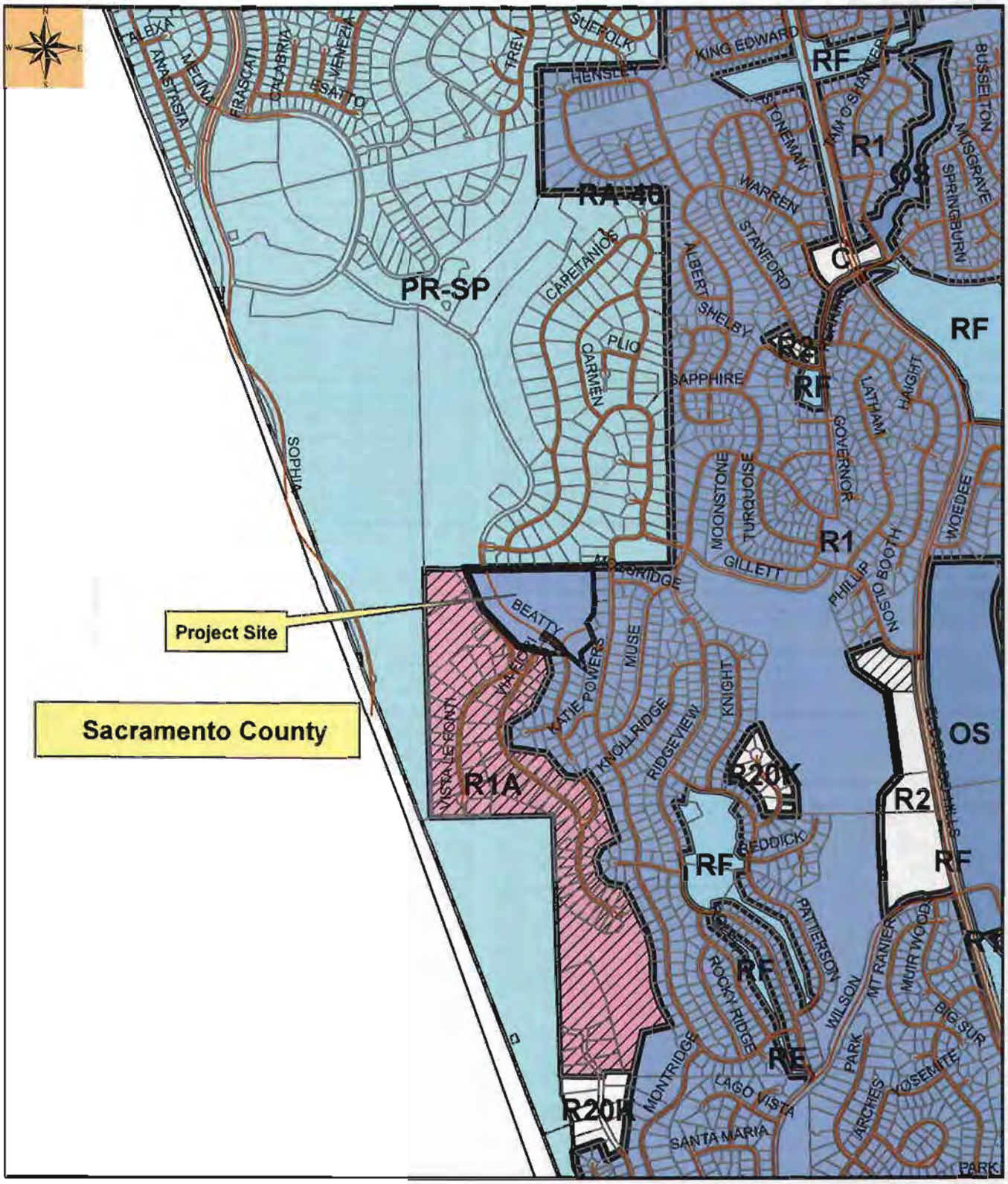


EXHIBIT M- . EXHIBIT M– EXHIBIT C.1

TENTATIVE MAP

RIDGEVIEW VILLAGE UNIT 9

SECTION 34, T.10 N., R.8 E., M.D.M.

COUNTY OF EL DORADO MARCH, 2013 STATE OF CALIFORNIA

SCALE 1" = 60'

VICINITY MAP

OWNER OF RECORD

APPLICANT

ENGINEER

MAP SCALE

CONTOUR INTERVAL

SOURCE OF TOPOGRAPHY

SECTION, TOWNSHIP & RANGE

ASSESSOR'S PARCEL NUMBER

PROPOSED ZONING

TOTAL AREA

TOTAL NO of LOTS

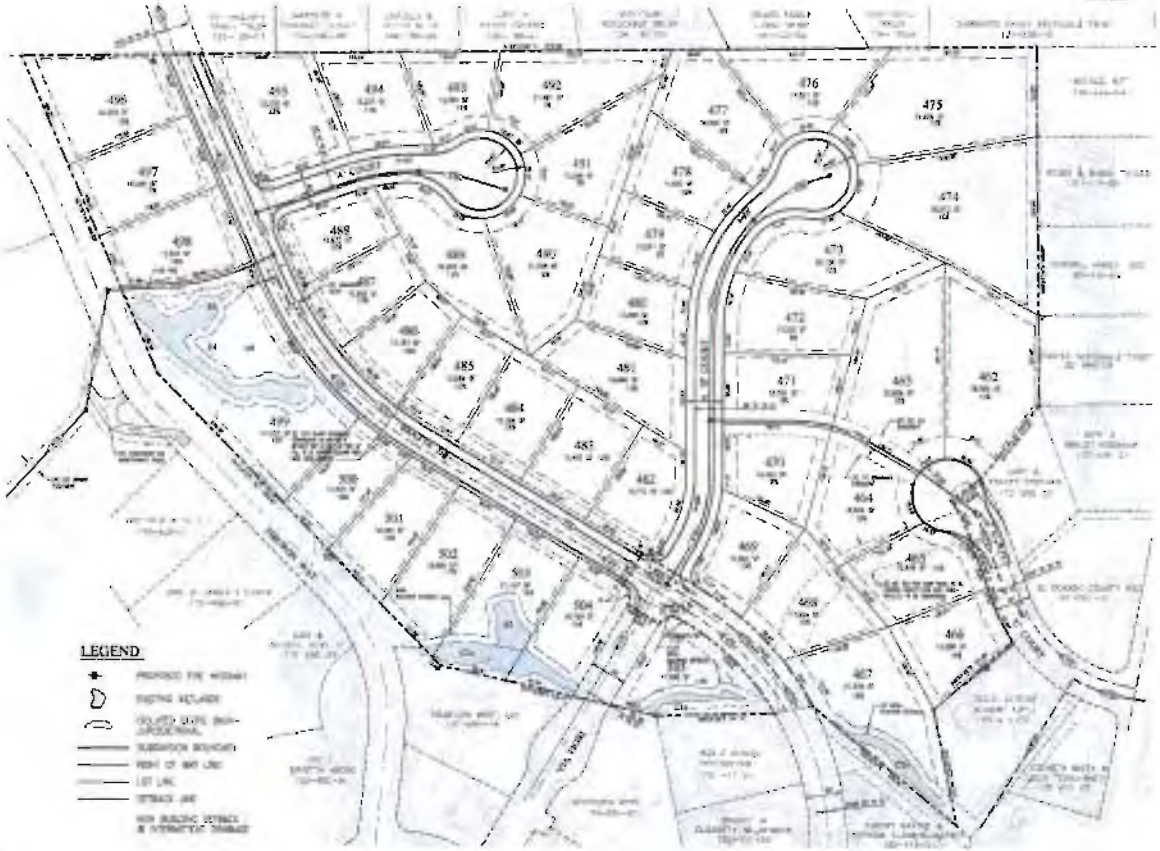
MINIMUM LOT AREA

WATER SUPPLY and SEWAGE DISPOSAL

PROPOSED STRUCTURAL FIRE PROTECTION

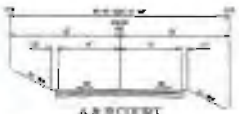
PHASING PLAN NOTICE

ENGINEER'S CERTIFICATE

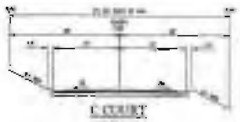


LEGEND

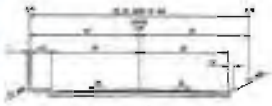
OFFSITE SEWER EXHIBIT



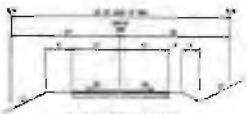
A & B COURT



C COURT



BEATTY DRIVE IMPROVEMENTS



D BEATTY DRIVE

GROSS AND NET* LOT AREAS

TYPICAL BUILDING SETBACKS ONE-FAMILY RESIDENTIAL (R1)

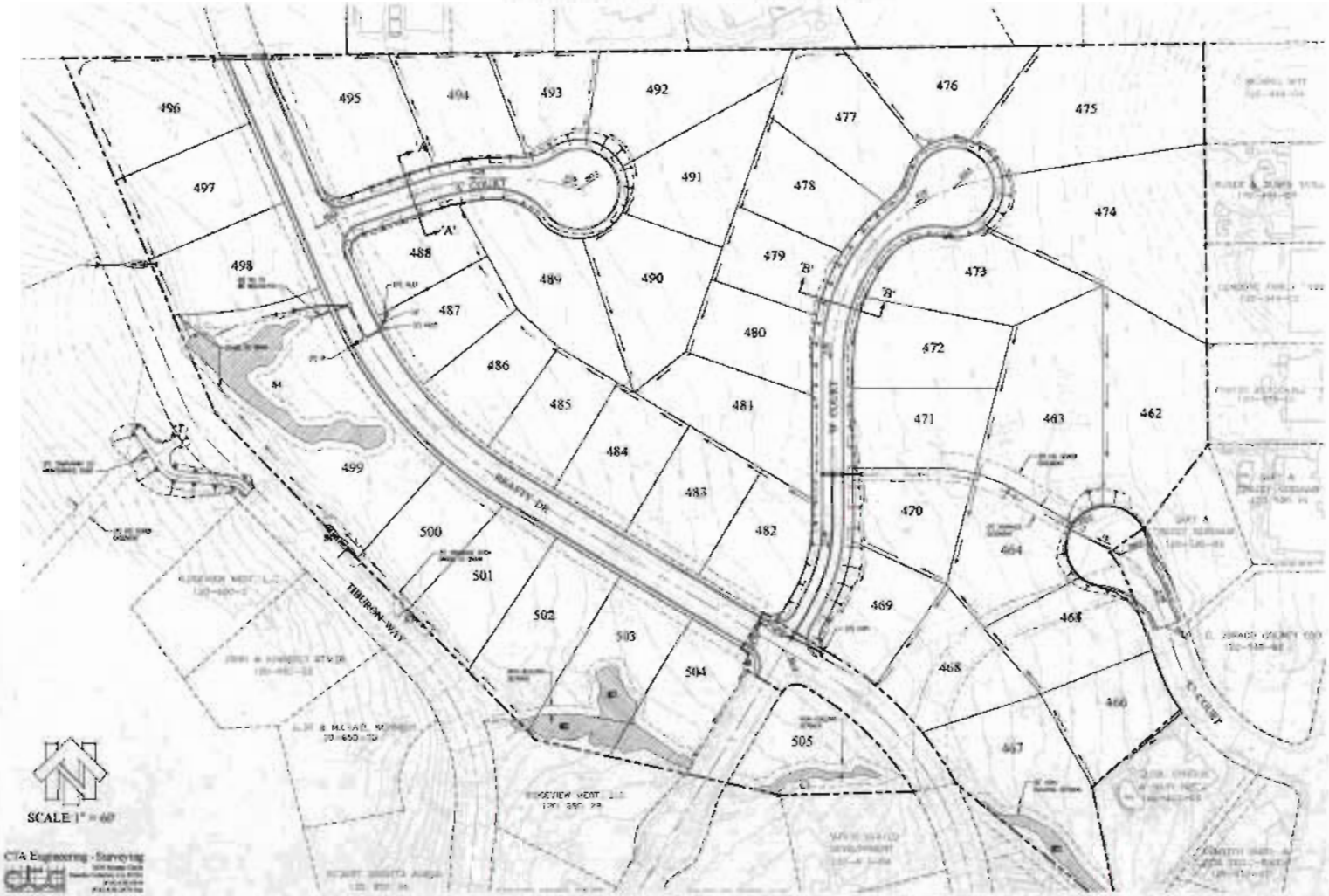
EXHIBIT M– EXHBIT D

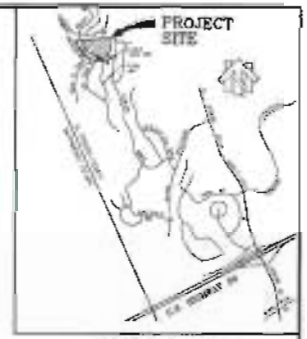
PRELIMINARY GRADING & DRAINAGE PLAN

RIDGEVIEW VILLAGE UNIT 9

SECTION 34, T.10 N., R.8 E., M.D.M.

COUNTY OF EL DORADO MARCH, 2013 STATE OF CALIFORNIA

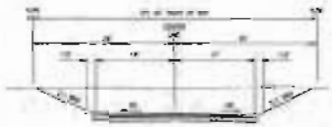




VICINITY MAP

LEGEND:

EARTHWORK: CUT - 7,480 CY
FILL - 1,100 CY
TO BE BALANCED ON SITE



SECTION A-A

SECTION B-B

CTA Engineering - Surveying

EXHIBIT M: EXHIBIT E

Air Quality Analysis for Ridgeview Village Unit #9 Residential Development (APN: 120-010-01) Proposed for El Dorado Hills, California

Prepared for:
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Phone: 916/337-8449

March 12, 2008

EXHIBIT M– EXHBIT F

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EXECUTIVE SUMMARY

The Ridgeview Village Unit #9 residential development, proposed for El Dorado Hills, California, consists of a 23-acre project site that would be developed with up to 48 single-family (detached) dwelling units. The site is located west of El Dorado Hills Boulevard off of Powers Drive and Beatty Drive. Primary access to the site will be provided from Powers Drive via Olson Lane and Wilson Boulevard.

During construction, emissions would be generated during site grading, construction of residences, paving of roads, and other related improvements. When the project is "operating", emissions would be generated by vehicle trips to and from residences as well as by area sources. Area sources include fuel combustion emissions associated with water and space heating (primarily from natural gas and wood) and from landscape maintenance equipment (gasoline). Area source emissions also include evaporative emissions associated with the use of a variety of consumer products such as paints, hair products, and deodorants.

The El Dorado County Air Quality Management District's (District) guidance document was used to evaluate the significance of the project's construction and operational impacts. The project's significant impacts are all associated with construction. No significant operational impacts were identified.

The project has the potential to cause significant construction-related air impacts. All construction impacts can be mitigated to below the District's significance thresholds, as described below:

The project's construction-related dust impacts can be mitigated to a less than significant level by complying with the District's Fugitive Dust Rule 223-1.

The project's diesel exhaust emissions can be mitigated to a less than significant level by using off-road construction equipment equipped with engines of 1996 or later model year.

The project is located at the edge of an area likely to contain naturally occurring asbestos (NOA) as defined by the El Dorado County's Asbestos Review Map. Therefore, this analysis assumes that the project's potential for disturbing asbestos containing soils is significant. Mitigation measures to reduce NOA to a less than significant level have been identified. Those measures include having a registered geologist onsite during grading activities and compliance with the District's asbestos rule (Rule 223-2) if NOA is identified during grading.

INTRODUCTION

The Ridgeview Village Unit #9 residential development, proposed for El Dorado Hills, California, consists of a 23-acre project site that would be developed with up to 48 single-family (detached) dwelling units. The site is located west of El Dorado Hills Boulevard off of Powers Drive and Beatty Drive. Primary access to the site will be provided from Powers Drive via Olson Lane and Wilson Boulevard.

Construction would start in the fall of 2009 and the project would be fully operational in 2010. This conservative estimate represents the project's highest potential for air quality impacts. Actual construction and building occupation (and associated air emissions) could occur more slowly based on the timeframe associated with project approval and changes in housing market economic conditions.

This air quality report is divided into a discussion of existing air quality conditions and environmental impacts. In the existing conditions section, the report describes the environmental setting followed by the regulatory setting. The environmental impacts discussion describes the significance criteria, evaluates whether the project would violate those criteria, and identifies mitigation measures to reduce or eliminate any significant air quality impacts.

EXISTING AIR QUALITY CONDITIONS

Air quality in a region is determined by existing environmental factors and the regulatory environment. The environmental factors include topography, meteorology, and existing air pollutant sources. These factors, together with the current regulatory structure that applies to the project area, are discussed below.

ENVIRONMENTAL SETTING

This section describes the meteorology and climate in the area of the proposed project, the health effects of the pollutants of most concern from the project, existing air quality in the project vicinity, and the sensitive receptors in the project area.

METEOROLOGY AND CLIMATE

Air quality is affected by several factors, including the rate, amount, and location of pollutant emissions; meteorological conditions that influence movement and dispersal of pollutants (i.e., wind speed, wind direction, and air temperature); and local surface topography (i.e., geographic features such as mountains and valleys).

The combined residential development project is located in El Dorado County, which is located within the Mountain Counties Air Basin (MCAB). The climate of the MCAB is influenced by the foothill and mountainous terrain of the region. El Dorado County is bordered by the Sacramento Valley on the west and Nevada to the east. The western portion of the County

consists of rolling Sierra Nevada foothills, while the central and eastern portions form granite peaks that reach up to 10,000 feet in elevation.

Hot dry summers and cool moist winters characterize the climate of El Dorado County. The western portion of the County experiences higher temperatures and lower annual rainfall, while the central and eastern portions of the County have lower temperatures and higher annual rainfall.

Wind direction and wind speed play a major role in dispersion and subsequent dilution of air pollutants. Although site-specific wind data are not available for the project site, air moves diurnally throughout the mountainous regions of the Sierra in a characteristic fashion, with air moving from the Central Valley floor up the canyons of the western Sierra slope during the morning and day, and down the canyons of the western Sierra slope to the Central Valley floor during the evenings and at night.

CRITERIA POLLUTANTS

National Ambient Air Quality Standards (NAAQS) have been established for several air pollutants, also called criteria pollutants (Table 1). California Ambient Air Quality Standards (CAAQS) have also been established that are equal to or more stringent than the NAAQS. The NAAQS and CAAQS are designed to protect human health and welfare, and to prevent materials soiling, visibility impacts, and crop damage. Ozone precursors, carbon monoxide, and particulate matter are the criteria pollutants that would be emitted in the greatest quantities by the proposed project.

OZONE. Ozone (O_3) 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 (NOx), which are themselves directly emitted. Ozone is primarily a summer and fall pollution problem. Ozone control involves limiting ozone precursors (i.e., ROG and NOx). In relatively low concentrations, ozone can damage vegetation and crack rubber. At higher concentrations, ozone can impact public health by directly affecting the lungs.

CARBON MONOXIDE. Carbon monoxide (CO) is generated in all forms of organic combustion (e.g., wood stoves, gas stoves, etc.), but is primarily generated by gasoline-fueled motor vehicles. CO is a colorless, odorless, non-reactive pollutant. Ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic and are also influenced by meteorological factors, such as wind speed and atmospheric mixing. When strong surface inversions that form on winter nights are coupled with near-calm winds, CO from automobile exhaust can become concentrated. CO can interfere with oxygen transport in the blood. It may cause dizziness and fatigue and can impair central nervous system function.

PARTICULATE MATTER. Inhalable particulate matter (PM10) is less than 10 microns (one one-millionth of a meter) in diameter. Fine particulate matter is less than 2.5 microns in diameter (PM2.5). These airborne particles in the air are small enough to be inhaled deeply 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

Table 1. California and National Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS[a]	NAAQS[b]
Ozone (O_3)	1 hour	0.09 ppm[c]	NA
	8 hour	0.07 ppm	0.08 ppm
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm	NA
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide (SO_2)	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
Inhalable Particulate Matter (PM10)	24 hour	50 $\mu g/m^3$[c]	N/A
	Annual	20 $\mu g/m^3$	50 $\mu g/m^3$
Fine Particulate Matter (PM2.5)	24 hour	NA	35 $\mu g/m^3$
	Annual	12 $\mu g/m^3$	15 $\mu g/m^3$
Sulfates	24 hour	25 $\mu g/m^3$	NA
Lead (Pb)	30 day	1.5 $\mu g/m^3$	NA
	Calendar quarter	NA	1.5 $\mu g/m^3$
Hydrogen Sulfide	1 hour	0.03 ppm	NA
Vinyl Chloride	24 hour	0.010 ppm	NA

[a] The California ambient air quality standards (CAAQS) for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM10 and PM2.5 are values not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

[b] The National Ambient Air Quality Standards (NAAQS), other than O_3 and those based on annual averages, are not to be exceeded more than once a year. The O_3 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; $\mu g/m^3$ = micrograms per cubic meter.

NA = not applicable.

certain substances can cause direct lung damage or can contain absorbed gasses that may be injurious. PM10 and PM2.5 can also be comprised of liquids in the form of aerosols and mists. A major component of particulate matter emissions include compounds that can create ozone, specifically ROG and NOx. These ozone precursors can react in the air to form inhalable aerosols. Particulate matter can remain in the atmosphere for up to 7 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.

NON-CRITERIA POLLUTANTS

Non-criteria air pollutants, also known as toxic air contaminants (TACs), include substances that can cause short- or long-term health effects, but for which no federal or state ambient air quality standards have been set. The TACs of most concern from the proposed project are diesel exhaust and asbestos.

DIESEL EXHAUST. The particulate component of diesel exhaust has been classified as a TAC by the California Air Resources Board (CARB). The El Dorado County Air Quality Management District (District) has established screening levels of diesel fuel use for projects. Those screening levels are evaluated in this air quality report.

ASBESTOS. Asbestos is listed as a TAC by CARB and a hazardous air pollutant (HAP) by the U.S. Environmental Protection Agency (EPA). Asbestos is of special concern in El Dorado County because it occurs naturally in surface deposits of several types of ultramafic minerals.

EXISTING AIR QUALITY

This section summarizes criteria pollutant concentrations for monitoring sites located near the project. No monitoring data are available in the project vicinity for the PM10 fraction of diesel exhaust or for asbestos.

The District collects ambient air quality data through a network of air monitoring stations. These data are summarized annually and published on CARB's website (http://www.arb.ca.gov/adam/welcome.html). Table 2 provides a four-year summary of the highest annual concentrations observed in the project area for ozone and PM10 for the years 2003-2006. Monitoring data for 2007 are not yet available. The monitoring data were collected at the monitoring stations in Folsom, at the Sacramento County Branch Center, and at the District's Placerville gaseous and particulate monitoring station.

CO monitoring results are not shown because no violations of the state or national standards were recorded at the Placerville–Gold Nugget Way site, the monitoring station closest to the project site. PM2.5 monitoring data are collected in both Sacramento and El Dorado counties. However, those stations are at Echo Summit, Lake Tahoe, and near downtown Sacramento, all locations that are distant from the project site.

The data show that the state 1-hour ozone standard was exceeded several times during each of the past four years at both the Folsom and Placerville monitoring stations. The 8-hour federal ozone standard was exceeded several times between 2003 and 2006 at both the Folsom and Placerville stations.

The PM10 monitoring data for the Sacramento County Branch Center shows exceedances of the 24-hour state standard during 2003 and 2005, but no violations in 2004 or 2006. PM10 monitoring in Placerville shows no violations of the PM10 state standard during the four most recent years of monitoring data. Neither the Sacramento County nor Placerville PM10 monitoring stations recorded any violations of the federal PM10 standards during the four-year period shown in Table 2.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution and odors than others because of 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 pollutants that may be present.

Regulatory Setting

Air quality within California is regulated by an overlapping array of federal, state, and local laws and regulations. The Federal Clean Air Act amendments (FCAA) of 1990 delegated certain clean air responsibilities to the states. In California, CARB has delegated several responsibilities to individual air districts. The roles and responsibilities of the federal, state, and local governments as they apply to the proposed project are discussed below.

Federal Air Quality Responsibilities

As required by the FCAA, the EPA has established and continues to update the NAAQS for the original six "criteria" air pollutants: ozone, CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), PM10, PM2.5, and lead (Pb). Standards for these pollutants (listed in Table 1) represent the levels of air quality necessary, with an adequate margin of safety, to protect the public health and welfare.

The EPA has recently approved changes to the ozone and PM10 federal standards. In place of the 1-hour ozone standard of 12 parts per million (ppm), the EPA approved an 8-hour standard of 0.08 ppm, effective June 15, 2005. In addition to the current PM10 standards, the EPA approved a PM2.5 standard of 35 ppm for a 24-hour average and 15 ppm for an annual average.

The FCAA requires states to classify air basins (or portions thereof) as either "attainment" or "non-attainment" with respect to criteria air pollutants, based on whether the NAAQS have been achieved, and to prepare air quality plans containing emission reduction strategies for those areas designated as "non-attainment." The Mountain Counties Air Basin, in which the proposed

project is located, is designated as a serious non-attainment area for federal 8-hour ozone NAAQS.

Table 2. Air Quality Monitoring Data Summary (2003-2006) for the Project Area

Pollutant	Monitoring Data by Year[a]			
	2003	2004	2005	2006
Ozone (O_3)				
Folsom - Natomas Street				
Highest 1-hour average, ppm	**0.140**	**0.111**	**0.120**	**0.133**
Highest 8-hour average, ppm	**0.118**	**0.094**	**0.108**	**0.110**
Days > State 1-hour standard	30	14	23	31
Days > Federal 8-hour standard	26	7	19	25
Percent of Year Covered	98	97	97	99
Placerville - Gold Nugget Way				
Highest 1-hour average, ppm	**0.145**	**0.106**	**0.114**	**0.114**
Highest 8-hour average, ppm	**0.114**	**0.095**	**0.104**	**0.102**
Days > State 1-hour standard	21	9	17	23
Days > Federal 8-hour standard	19	7	16	20
Percent of Year Covered	100	100	100	100
Particulate Matter (PM10)				
Sacramento - Branch Center				
Highest 24-hour average, $\mu g/m^3$	**75.0**	45.0	**61.0**	38.0
Days > State standard [b]	4	0	4	0
Percent of Year Covered	98	99	100	8
Placerville - Gold Nugget Way				
Highest 24-hour average, $\mu g/m^3$	9.0	28.0	27.0	21.0
Days > State standard [b]	0	0	0	0
Percent of Year Covered	98	100	100	5

Note: Underlined values represent those in excess of applicable National Ambient Air Quality Standards. **Bolded values** represent those in excess of the applicable California Ambient Air Quality Standards.

[a] ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.

[b] Particulate is usually measured every sixth day (rather than continuously like the other pollutants).

Source: CARB: http://www.arb.ca.gov/adam.

California Air Quality Responsibilities

The California Air Resources Board (CARB) has been delegated responsibility by the EPA for implementing many air quality responsibilities described in the FCAA. In addition, CARB has the primary responsibility for successful implementation of the California Clean Air Act (CCAA), which established the CAAQS. In 1988, California passed the CCAA, which like its federal counterpart, called for designations of areas as attainment or non-attainment (but in reference to CAAQS rather than NAAQS). El Dorado County has been designated as non-attainment for the 1-hour ozone and 24-hour PM10 CAAQS.

The CCAA distinguishes between criteria air pollutants and TACs. Criteria air pollutants are those for which health-based concentration standards were first promulgated under the 1970 Amendments to the FCAA. Regulation of criteria air pollutants is achieved through federal and state ambient air quality (concentration) standards (CAAQS) and emission limits for individual sources. TACs are airborne substances 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 CAAQS have not been set.

El Dorado County Air Pollution Control District Responsibilities

The District has several air quality responsibilities delegated to it under the FCAA and the CCAA. The District establishes rules and regulations to limit emissions from individual emission sources, conducts its own air quality monitoring program, issues permits for stationary sources, and prepares air quality plans for attaining the state and federal ambient standards. The project applicant would be required to comply with District Rule 223-1– Fugitive Dust: Construction, Bulk Material Handling, Other Earthmoving Activities and Carryout and Trackout Prevention. Rule 223-1 limits dust emissions from construction activities and was most recently amended on October 18, 2005. The District has also prepared air quality guidelines to facilitate the review of air quality impacts for projects in El Dorado County (El Dorado County Air Pollution Control District, 2002). Also, the District is responsible for evaluating the health risks for projects as required by the Air Toxics "Hot Spots" Information and Assessment Act of 1987.

In July 2001, CARB adopted airborne toxics control measures (ATCM) [17 CCR §93105] limiting emissions of asbestos from construction, grading, quarrying, and surface mining in areas with ultramafic rock. Unless replaced by a District regulation, these ATCMs must be enforced by the District. However, on July 19, 2005, the District adopted Rule 223-2 for asbestos regulation, which was subsequently amended on October 18, 2005. For projects in El Dorado County, project applicants must either demonstrate that no naturally occurring asbestos (NOA) occurs on the site or they must comply with Rule 223-2.

ENVIRONMENTAL IMPACTS

CEQA THRESHOLDS OF SIGNIFICANCE

Using the California Environmental Quality Act checklist evaluation criteria (http://ceres.ca.gov/topic/env_law/ceqa/rev/appg_102698.pdf), the project would result in significant air quality impacts if it would:

- conflict with or obstruct implementation of the applicable air quality plan;
- violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- expose sensitive receptors to substantial pollutant concentrations; or
- create objectionable odors affecting a substantial number of people.

Because the CEQA thresholds shown above are qualitative, several air districts, including the District, have developed their own quantitative thresholds. The District's thresholds can be grouped into two categories: construction and operational (El Dorado County Air Pollution Control District, 2002). These two categories are discussed separately below.

EL DORADO COUNTY CONSTRUCTION THRESHOLDS OF SIGNIFICANCE

For construction projects, the District has established four separate thresholds that apply to this project. They include:

- construction dust,
- asbestos,
- criteria pollutant emissions, and
- diesel exhaust combustion TAC emissions.

Each of these construction thresholds is described below.

CONSTRUCTION DUST THRESHOLD

Construction-related emissions are generally short term in duration, but may still cause adverse air quality impacts. PM10 is the pollutant of greatest concern with respect to construction activities. PM10 emissions can result from a variety of construction activities, including

excavation, grading, paving, vehicle travel on paved and unpaved surfaces, and vehicle equipment and exhaust.

Because PM2.5 air quality standards are relatively recent, the District's *Guide to Air Quality Assessment* (District 2002) focuses on PM10, rather than PM2.5. According to the guide, mass emissions of fugitive dust PM10 need not be quantified, and may be assumed to be not significant, if the project includes mitigation measures that will prevent visible dust beyond the property lines. However, without mitigation, uncontrolled construction dust would be considered a significant impact. Mitigation measures can reduce fugitive dust emissions by approximately 50-75%. Because the proposed project does not include the implementation of PM10 construction mitigation measures, construction emissions could have a potentially significant temporary air quality impact. Implementation of the following mitigation measure will reduce emissions to a less than significant level.

Impacts and Mitigation Measures: Construction Dust

Impact Air -1. Dust Emissions. The construction activities associated with site construction would generate PM10 dust emissions that could exceed either the state or federal ambient air quality standards for PM10. This would be a temporary potentially significant impact during construction.

> **Mitigation Measure: Dust Emissions.** The applicant shall comply with the District's recently enacted Rule 223-1, designed to control emissions associated with construction activities. Rule 223-1 can be found at the District's website at: http://www.co.el-dorado.ca.us/emd/apcd/construction_dust_rules.html. Compliance with Rule 223-1 will ensure that this impact is reduced to a less than significant level (El Dorado County Air Quality Management District, 2005).

Construction-Related Asbestos Dust Threshold

Several areas of El Dorado County contain ultramafic rocks and faults where serpentine rock and naturally occurring asbestos (NOA) can occur. Any project that is located in an area that includes ultramafic rock, which often contains NOA, could potentially release asbestos during construction. When this rock is broken or crushed, asbestos may be released and become airborne, causing a potential health hazard. Consequently, any project located in an area of known ultramafic rock is considered potentially significant with respect to the release of asbestos during construction.

Impacts and Mitigation Measures – Asbestos

Impact Air-2. Asbestos Emissions. Construction of the proposed project would involve grading, excavating, and trenching. The Ridgeview Village Unit #9 residential development project is just outside of the area designated as within ¼ mile buffer for an area found to have

NOA. This analysis is based on a review of the Asbestos Review Map of El Dorado County Western Slope. However, since the project is located at the edge of an asbestos review area, impacts are considered to be significant. The following mitigation measure should be implemented during construction.

Mitigation Measure: Asbestos Emissions. A registered geologist should be present onsite during the project's grading period. If the geologist identifies asbestos during grading activities, steps shall be taken immediately to comply with District's Rule 223-2. Rule 223-2 can be found at the District's website at:
http://www.co.el-dorado.ca.us/emd/apcd/construction_dust_rules.html.
Compliance with that rule will reduce the exposure of workers and residents living in the project vicinity to a less than significant level.

Construction-Related Criteria Pollutant Thresholds

The District has established maximum daily and construction period diesel fuel use thresholds designed to ensure that criteria pollutant emissions are less than the mass emission significance thresholds. A project's emissions of all criteria pollutants are deemed to be less than significant if its maximum daily fuel use is less than 337 gallons diesel fuel used for all equipment of 1995 model year or earlier or 402 gallons per day for all equipment of model year 1996 or later.

Table 3 shows estimates of the quantity of diesel fuel that would be consumed during project construction. First, the numbers and types of construction equipment that would be used were estimated. Horsepower and load factors for each type of equipment were identified. A typical 8-hour construction workday was assumed. The load factor identifies the percentage of total rated horsepower that each equipment type operates. For example, a load factor of 100% assumes that a construction vehicle operates at 100% load for 8 hours per day. The typical load factor is generally lower than 100% because equipment is typically not operated 100% of the time and, when it is operated, it does not always operate at 100% of its rated horsepower.

Impacts and Mitigation Measures: Combustion-Related Criteria Pollutant Emissions

Impact Air -3. Combustion-Related Criteria Pollutant Emissions. The project would increase diesel fuel use by a maximum of 336 gallons per day and 20,307 gallons over the construction period (see Table 3). The project's maximum quarterly diesel fuel use would average 133 gallons per day during the highest quarter of construction. This average of 133 gallons per day assumes 135 gallons per day for site grading (1.5 months @ 22 days per month) and 130 gallons per day for building/site construction (1.5 months @ 22 days per month). This increase in diesel combustion would result in the generation of ROG, NOx, CO, and combustion and fugitive dust PM10 emissions less than the significance thresholds. This is a less than significant impact.

Mitigation Measure: No mitigation is required.

Table 3. Construction Equipment Diesel Fuel Use Estimates

Construction Phase	Maximum Gallons/Day	Gallons/Construction Period
Phase 1 – Site Grading	135	4,445
Phase 2 – Building/Site Construction	130	14,300
Phase 3 – Asphalt	71	1,562
MAXIMUM/TOTAL	336	20,307

Notes: Daily fuel combustion maximum assumes no overlap between site grading and building construction or asphalt installation. That is, the site grading for the project must be completed before asphalt installation and building construction can begin. However, building construction and asphalt installation are assumed to overlap. Total gallons consumed during the construction period are based on the total fuel use over the three phases. Phase 1 assumed for 33 days, Phase 2 for 110 day, and Phase 3 for 22 days. Construction emissions based on the following assumptions:

Phase 1: Site Grading

Off Road Equipment Type	Number	Horsepower	Load Factor	Hrs/day	Total hp-hrs
Rubber Tired Dozers	1	357.00	0.46	8.00	1,313.8
Tractors/Loaders/Backhoes	1	108.00	0.55	8.00	475.3
Grader	1	174.00	0.61	8.00	849.2
Total					2,638.3

Diesel Fuel
7,000.00 Btus/hp-hr, 18,466,560 total Btus/day
137,000.00 Btus/gallon, 135 gallons off-road/day

Phase 2: Building Construction

Off Road Equipment Type	Number	Horsepower	Load Factor	Hrs/day	Total hp-hrs
Forklifts	2	145.00	0.30	8.00	696.0
Crane	1	399.00	0.43	8.00	1,372.6
Tractors/Loaders/Backhoes	1	108.00	0.55	8.00	475.2
Total					2,543.8

Diesel Fuel
7,000.00 Btus/hp-hr, 17,806,320 total Btus/day
137,000.00 Btus/gallon, 130 gallons off-road/day

Phase 3: Asphalt

Off Road Equipment Type	Number	Horsepower	Load Factor	Hrs/day	Total hp-hrs
Tractors/Loaders/Backhoes	1	108.00	0.55	8.00	475.2
Paver	1	100.00	0.62	8.00	496.0
Roller	1	95.00	0.56	8.00	425.6
Total					1396.8

Diesel Fuel
7,000.00 Btus/hp-hr, 9,777,600 total Btus/day
137,000.00 Btus/gallon, 71 gallons off-road/day

Notes:
Phase 1: 135 gallons/day @ 33 days = 4,455 gallons
Phase 2: 130 gallons/day @ 110 days = 14,300 gallons
Phase 3: 71 gallons/day @ 22 days = 1,562 gallons.

Construction-Related Diesel Combustion Toxic Air Contaminant Emissions

Over the entire construction phase, project impacts are considered less than significant if diesel fuel consumption is less than 37,000 gallons if toxics best available control technology (T-BACT) is applied, or 3,700 gallons if T-BACT is not applied. T-BACT is defined as the use of 1996 or later model year engines in all diesel construction equipment. The District has determined that keeping construction-related fuel use under the gallons per day limits will result in a less than significant health risk from diesel fuel related PM10.

Impacts and Mitigation Measures: Diesel Fuel Combustion Toxic Air Contaminant Emissions

Impact Air -4. Diesel Fuel Combustion Toxic Air Contaminant Emissions. The project would increase diesel fuel use by a maximum of 20,307 gallons over the construction period (Table 3). This increase in diesel combustion would result in the generation of PM10 emissions that exceed the District's significance thresholds of 3,700 gallons over the construction period if T-BACT is not applied. This is considered a significant impact.

Mitigation Measure: T-BACT for Toxic Air Contaminants. The project applicant shall ensure that T-BACT is applied to reduce emissions of TAC from off-road diesel equipment used during project construction. T-BACT is defined as the use of 1996 or later model year engines in all diesel equipment. Consequently, the project applicant must ensure that all diesel-powered equipment used on-site during construction is equipped with engines of 1996 or later model year. Implementation of this mitigation measure will reduce diesel fuel combustion-related TAC emissions to a less than significant level.

El Dorado County Operational Thresholds of Significance

The District has established three operational significance thresholds that apply to this project. They include:

- ozone precursor thresholds,
- other criteria pollutant thresholds, and
- toxic air contaminant (TAC) thresholds.

Each of these is discussed separately below.

Operational Ozone Precursor Thresholds

The District has established significance thresholds of 82 pounds per day for ROG and NOx associated with project operation. Emissions from sources that are below these levels are considered less than significant. The URBEMIS2007 model was used to estimate the increase in ROG and NOx emissions.

Table 4 shows the estimated increase in ROG and NOx associated with project operations for the summer and winter periods. On-road operational emissions are based on the trip generation rates included in the traffic report (Kimley-Horn and Associates, 2006). Winter emissions are higher because of area source emissions, especially those associated with fuel combustion from wood stoves and fireplaces. Detailed URBEMIS2007 results are included in Appendix A.

Table 4. Operational and Area Source ROG and NOx Emissions Associated with the Project (lbs/day)

Seasonal Emissions	ROG	NOx
Operational and Area Sources – Summer	10.3	8.2
Operational and Area Sources – Winter	24.1	13.9
Maximum	24.1	13.9
Air District Significance Thresholds	82	82

Notes: All values shown are expressed in pounds per day. Vehicle trip emissions are based on the trip generation rates associated with the project. Area source emissions include natural gas and wood combustion used for space and water heating, as well as landscape equipment emissions. Winter emissions assume that 35% homes with wood stoves, 10% with wood fireplaces, and 55% with natural gas fireplaces. Emissions estimated using URBEMIS2007 model. Detailed modeling results in Appendix A.

Impacts and Mitigation Measures: Ozone Precursors

Impact Air – 5. Increase in ROG and NOx Emissions. Project operations will generate vehicle trips traveling to and from the proposed project along with area source emissions associated with water and space heating, landscape maintenance, and consumer products. These emission sources will generate emissions of the ozone precursors, ROG and NOx. However, as shown in Table 4, the emissions of ROG and NOx would be substantially less than the significance threshold established by the District. Therefore, this impact is less than significant.

Mitigation: No mitigation is required.

Operational Criteria Pollutant Thresholds (CO, SO_2, NO_2, and PM10)

For the other criteria pollutants, CO, SO_2, NO_2, and PM10, significance is based on whether a project would cause or contribute to violations of the California or federal ambient air quality standards. However, if a project's ROG and NOx emissions are below the 82 pounds per day thresholds, then the project's emission impacts of CO, SO_2, NO_2, and PM10 are also considered to be less than significant. For PM10 and SO_2, even projects smaller than the threshold size must also be shown to not generate trips by heavy-duty diesel trucks in a greater percentage than occurs on public roadways.

Impacts and Mitigation Measures – Criteria Pollutants (CO, SO_2, NO_2, and PM10)

Impact Air-6. Increase in CO, SO_2, NO_2, and PM10 Concentrations. Since the individual and combined project emissions of ROG and NOx are substantially less than the 82 pounds per day significance threshold, the emissions and associated concentrations of CO, SO_2, NO_2, and PM10 are considered to be less than significant. Also, because the projects are residential, they would not generate heavy-duty diesel truck trips in a greater percentage than occurs on public roadways. Consequently, the project's contribution to ambient concentrations of CO, SO_2, NO_2, and PM10 is considered to be less than significant.

Mitigation: No mitigation is required.

Operational Toxic Air Contaminant (TAC) Thresholds

The District has identified the following criteria to be used in determining whether a land use project has a potentially significant TAC impact:

- the project generates heavy duty truck trips (from project operations) of 10 or more per day;
- the project uses more than 3,700 gallons of diesel fuel during construction if toxic-best available control technology (T-BACT) is not applied or 37,000 gallons if T-BACT is applied.

Impacts and Mitigation Measures – Toxic Air Contaminants

Impact Air-7. Increase in toxic air contaminant emissions. The project's proposed residences, when fully occupied, are unlikely to generate heavy-duty truck trips of 10 or more per day. The evaluation of construction related TAC emissions found that, with T-BACT, construction emissions of TAC would be less than significant.

Mitigation: No additional mitigation is required.

REFERENCES

El Dorado County Air Pollution Control District, 2002. Guide to Air Quality Assessment, Determining Significance of Air Quality Impacts Under the California Environmental Quality Act. Placerville, CA.

El Dorado County Air Quality Management District. 2005. October 12, 2005 Workshop on the Guide to Air Quality Assessment. Placerville, CA.

Kimley-Horn and Associates, 2006. Draft Traffic Impact and Operations Analysis Ridgeview Village Unit #9 El Dorado Hills, California. March 17, 2006. Roseville, CA.

Appendix A: URBEMIS Modeling Results

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\Tim Rimpo\Application Data\Urbemis\Version9a\Projects\ridgeview number 9.urb924

Project Name: Ridgeview Village Unit 9

Project Location: Mountain Counties Air Basin

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.48	0.62	2.49	0.00	0.01	0.01	771.23

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	6.84	7.59	77.05	0.04	6.80	1.33	3,956.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	10.32	8.21	79.54	0.04	6.81	1.34	4,727.23

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.05	0.60	0.26	0.00	0.00	0.00	767.81
Hearth - No Summer Emissions							
Landscape	0.40	0.02	2.23	0.00	0.01	0.01	3.42
Consumer Products	2.35						
Architectural Coatings	0.68						
TOTALS (lbs/day, unmitigated)	3.48	0.62	2.49	0.00	0.01	0.01	771.23

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	6.84	7.59	77.05	0.04	6.80	1.33	3,956.00
TOTALS (lbs/day, unmitigated)	6.84	7.59	77.05	0.04	6.80	1.33	3,956.00

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	23.00	9.58	dwelling units	48.00	459.84	3,931.49
					459.84	3,931.49

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	32.7	2.4	97.0	0.6
Light Truck < 3750 lbs	24.5	4.1	86.5	9.4
Light Truck 3751-5750 lbs	19.6	1.5	98.0	0.5
Med Truck 5751-8500 lbs	9.1	1.1	97.8	1.1
Lite-Heavy Truck 8501-10,000 lbs	2.5	0.0	64.0	36.0
Lite-Heavy Truck 10,001-14,000 lbs	1.2	0.0	41.7	58.3
Med-Heavy Truck 14,001-33,000 lbs	0.9	11.1	22.2	66.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	6.4	67.2	32.8	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.0	5.0	85.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\Tim Rimpo\Application Data\Urbemis\Version9a\Projects\ridgeview number 9.urb924

Project Name: Ridgeview Village Unit 9

Project Location: Mountain Counties Air Basin

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	16.37	2.41	84.16	0.27	13.56	13.05	3,298.89

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	7.74	11.44	86.83	0.04	6.80	1.33	3,487.37

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	24.11	13.85	170.99	0.31	20.36	14.38	6,786.26

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.05	0.60	0.26	0.00	0.00	0.00	767.81
Hearth	13.29	1.81	83.90	0.27	13.56	13.05	2,531.08
Landscaping - No Winter Emissions							
Consumer Products	2.35						
Architectural Coatings	0.68						
TOTALS (lbs/day, unmitigated)	16.37	2.41	84.16	0.27	13.56	13.05	3,298.89

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	7.74	11.44	86.83	0.04	6.80	1.33	3,487.37
TOTALS (lbs/day, unmitigated)	7.74	11.44	86.83	0.04	6.80	1.33	3,487.37

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
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Lite-Heavy Truck 8501-10,000 lbs	2.5	0.0	64.0	36.0
Lite-Heavy Truck 10,001-14,000 lbs	1.2	0.0	41.7	58.3
Med-Heavy Truck 14,001-33,000 lbs	0.9	11.1	22.2	66.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	6.4	67.2	32.8	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.0	5.0	85.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

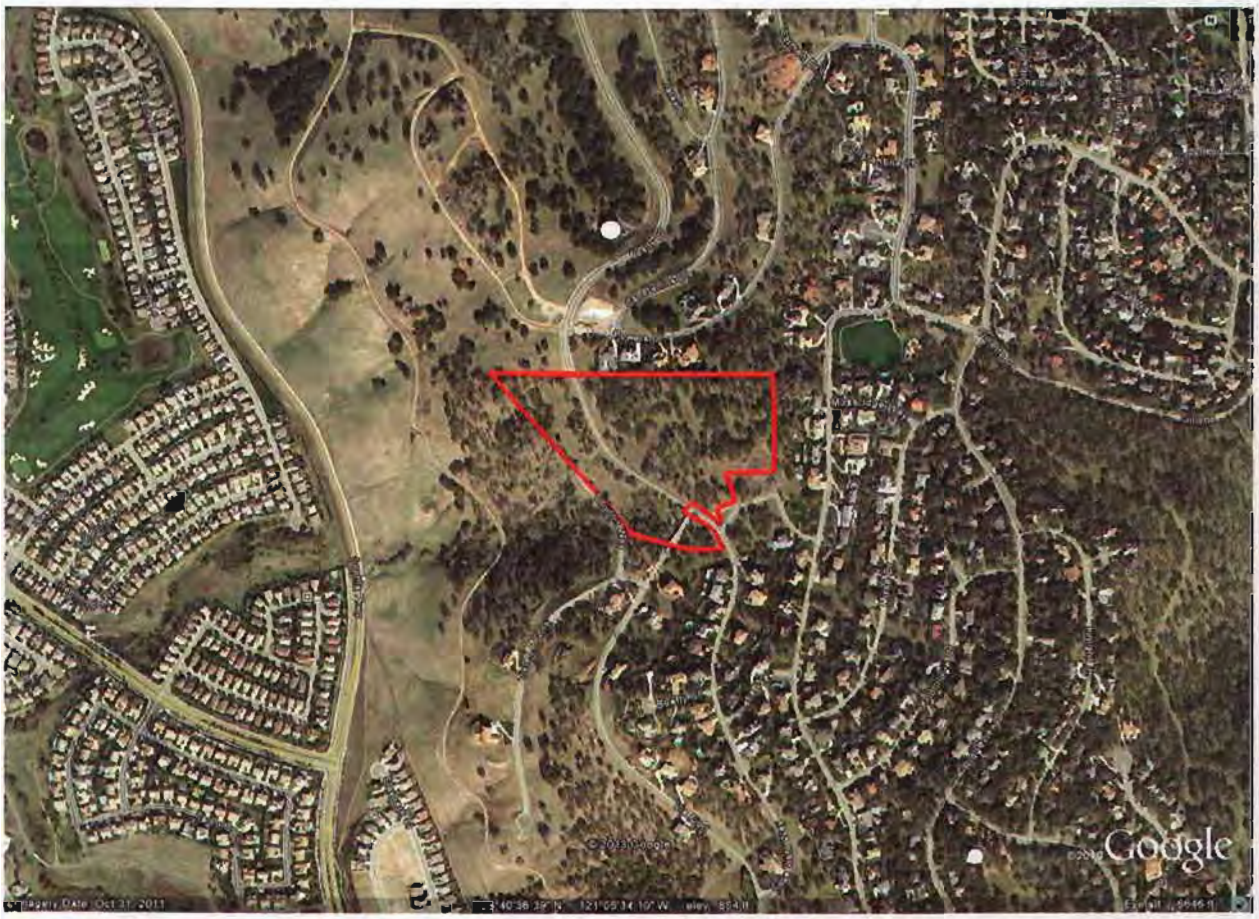
Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

RIDGEVIEW VILLAGE UNIT 9 PROJECT

GREENHOUSE GAS EMISSIONS



PREPARED BY

PMC

JANUARY 2013

1.0 INTRODUCTION

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APPENDICES

Appendix A: CalEEMod Output Files

This report documents the results of a greenhouse gas (GHG) impact analysis completed for the proposed Ridgeview Village Unit 9 project (project). The purpose of this impact analysis is to identify potential environmental impacts associated with GHG emissions as required by the California Environmental Quality Act (CEQA). The GHG impact analysis was prepared with consideration of the *El Dorado County Board of Supervisors Environmental Vision for El Dorado County Resolution No. 29-2008* as well as GHG impact significance thresholds developed by the San Luis Obispo Air Pollution Control District (SLOAPCD)[1].

1.1 PROJECT LOCATION

The proposed project site is located approximately two miles north of Interstate 50 and 0.6 mile west of El Dorado Hills Boulevard off of Powers Drive and Beatty Drive in the El Dorado Hills community. Lying approximately two miles north of the proposed project site is Folsom Lake. The project site is located within unincorporated El Dorado County.

The project site is approximately 23 acres and is loosely bound by Tiburon Way to the west, Julie Ann Road to the south, existing residential development with Powers Drive beyond to the east, and existing residential development to the north.

1.2 PROJECT DESCRIPTION

The project proposes to develop a residential development of 44 single-family residential dwelling units on approximately 23 acres. The minimum lot area would be 12,889 square feet.

[1] Use of SLOAPCD greenhouse gas thresholds is considered appropriate by the El Dorado County Air Quality Management District, the emission control officer with jurisdiction of El Dorado County and thus the project site (Baughman 2012).

2.1 CLIMATE CHANGE SETTING

Since the early 1990s, scientific consensus holds that the world's population is releasing GHGs faster than the earth's natural systems can absorb them. These gases are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of greenhouse gases beyond natural levels. The overabundance of greenhouse gases in the atmosphere has led to a warming of the earth and has the potential to severely impact the earth's climate system.

While often used interchangeably, there is a difference between the terms "climate change" and "global warming." According to the National Academy of Sciences, climate change refers to any significant, measurable change of climate lasting for an extended period of time that can be caused by both natural factors and human activities. Global warming, on the other hand, is an average increase in the temperature of the atmosphere caused by increased greenhouse gas emissions. The use of the term climate change is becoming more prevalent because it encompasses all changes to the climate, not just temperature.

To fully understand global climate change, it is important to recognize the naturally occurring greenhouse effect and to define the greenhouse gases that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are CO_2, CH_4, N_2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Table 1 provides descriptions of the primary greenhouse gases attributed to global climate change, including a description of their physical properties, primary sources, and contribution to the greenhouse effect.

TABLE 1
GREENHOUSE GASES

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
Methane (CH_4)	Methane is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years.[2]
Nitrous oxide (N_2O)	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]
Hydrofluorocarbons (HFCs)	Hydrofluorocarbons are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years).[4]
Perfluorocarbons (PFCs)	Perfluorocarbons are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F1_4). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for CF_4 and C_2F_6 are 50,000 and 10,000 years, respectively.[4,5]

Sulfur Hexafluoride (SF_6)	Sulfur hexafluoride is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide. Significant leaks occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years.[4]

Sources: [1]EPA 2011a, [2]EPA 2011b, [3]EPA 2010a, [4]EPA 2010b, [5]EFCTC 2003

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Gases with high global warming potential, such as HFCs, PFCs, and SF_6, are the most heat-absorbent. Methane traps over 21 times more heat per molecule than CO_2, and N_2O absorbs 310 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weights each gas by its global warming potential (GWP). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. **Table 2** shows the GWPs for different greenhouse gases for a 100-year time horizon.

TABLE 2
GLOBAL WARMING POTENTIAL FOR GREENHOUSE GASES

Greenhouse Gas	Global Warming Potential
Carbon Dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous oxide (N_2O)	310
Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs)	6,500
Sulfur Hexafluoride (SF_6)	23,900

Source: California Climate Action Registry 2009

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California is a significant emitter of CO_2 in the world and produced 477 million gross metric tons of carbon dioxide equivalent in 2008 (CARB 2010a). Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2008, accounting for 36.4 percent of total GHG emissions in the state (CARB 2010a). This category was followed by the electric power sector (including both in-state and out-of-state sources) (24.3 percent) and the industrial sector (19.3 percent) (CARB 2010a).

2.2 GREENHOUSE GAS LAWS AND REGULATIONS

The adoption of recent legislation has provided a clear mandate that climate change must be included in an environmental review for a project subject to CEQA. Several GHG emission-related laws and regulations are provided as follows.

FEDERAL REGULATION AND THE CLEAN AIR ACT

In the past, the US Environmental Protection Agency (EPA) has not regulated GHGs under the Clean Air Act (CAA) because it asserted that the act did not authorize the EPA to issue

mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. However, the U.S. Supreme Court held that the EPA must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, twelve states and cities, including California, together with several environmental organizations, sued to require the EPA to regulate GHGs as pollutants under the Clean Air Act (127 S. Ct. 1438 [2007]). The U.S. Supreme Court held that the EPA was authorized by the Clean Air Act to regulate CO_2 emissions from new motor vehicles. The Court did not mandate that the EPA enact regulations to reduce GHG emissions, but found that the only instances in which the EPA could avoid taking action were if it found that GHG emissions do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHG emissions contribute to climate change.

On December 7, 2009, the EPA issued an "endangerment finding" under the Clean Air Act, concluding that GHG emissions threaten the public health and welfare of current and future generations and that motor vehicles contribute to GHG pollution (EPA 2009). These findings provide the basis for adopting new national regulations to mandate GHG emission reductions under the federal Clean Air Act. The EPA's endangerment finding paves the way for federal regulation of GHG emissions.

It was expected that Congress would enact GHG legislation, primarily for a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate were controversial and it may be some time before Congress adopts major climate change legislation. Under the Consolidated Appropriations Act of 2008 (HR 2764), Congress has established mandatory GHG reporting requirements for some emitters of GHGs. In addition, on September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires annual reporting to the EPA of GHG emissions from large sources and suppliers of GHGs, including facilities that emit 25,000 metric tons or more a year of GHGs.

The following discussion summarizes the EPA's recent regulatory activities with respect to various types of GHG sources.

EPA and National Highway Traffic Safety Administration Joint Rulemaking for Vehicle Standards

In response to the Massachusetts v. EPA ruling discussed above, the Bush Administration issued an Executive Order on May 14, 2007, directing the EPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008.

On October 10, 2008, the National Highway Traffic Safety Administration (NHTSA) released a final environmental impact statement analyzing proposed interim standards for passenger cars and light trucks in model years 2011 through 2015. The NHTSA issued a final rule for model year 2011 on March 30, 2009 (NHSTA 2009).

On May 7, 2010, the EPA and the NHTSA issued a final rule regulating fuel efficiency and GHG pollution from motor vehicles for cars and light-duty trucks for model years 2012–2016 (EPA 2010c). On May 21, 2010, President Obama issued a memorandum to the Secretaries of Transportation and Energy, and Administrators of the EPA and the NHTSA calling for the establishment of additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA issued a

Supplemental Notice of Intent announcing plans to propose stringent, coordinated federal greenhouse gas and fuel economy standards for model year 2017-2025 light-duty vehicles. The agencies proposed standards projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. California has announced its support of this national program. The final rule was adopted in October 2012, and NHSTA intends to set standards for model years 2022-2025 in a future rulemaking.

Heavy-duty Engines and Vehicles Fuel Efficiency Standards

In addition to the regulations applicable to cars and light-duty trucks, on August 9, 2011, the EPA and the NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks, which applies to vehicles from model year 2014–2018. Both EPA and NHTSA have adopted standards for CO_2 emissions and fuel consumption, respectively, tailored to each of three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this program will reduce GHG emissions and fuel consumption for affected vehicles by 6 percent to 23 percent.

Energy Independence and Security Act

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. Among other key measures, the Act would do the following, which would aid in the reduction of national GHG emissions, both mobile and non-mobile:

1) Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.

2) Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

3) While superseded by NHTSA and EPA actions described above, EISA also set miles per gallon targets for cars and light trucks and directed the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

Voluntary Programs

The EPA administers a variety of voluntary programs and partnerships with GHG emitters in which the EPA partners with industries that produce and utilize synthetic gases to reduce emissions of particularly potent GHG emissions. For example, the EPA's National Clean Diesel Campaign (NCDC) promotes diesel emission reduction strategies. The NCDC works to reduce the pollution emitted from diesel engines across the country through the implementation of varied control strategies by working with manufacturers, fleet operators, air quality professionals, environmental and community organizations, and state and local officials to reduce diesel emissions. NCDC activities include: developing new emissions standards for locomotive and marine diesel

engines; and promoting the reduction of emissions for existing diesel engines, including use of cleaner fuels, retrofitting and repairing existing fleets, idling reduction among others. The EPA also administers the State and Local Climate and Energy Program which provides technical assistance, analytical tools, and outreach support to state, local, and tribal governments.

Other applicable regulations and policies

In addition to the federal regulations and programs described above, there are still more policies and programs to address climate change. A database compiled by the International Energy Agency lists more than 300 policies and measures addressing climate change in the United States.

STATE REGULATION

California has adopted various administrative initiatives and also enacted a variety of legislation relating to climate change, much of which sets aggressive goals for GHG emissions reductions within the state. However, none of this legislation provides definitive direction regarding the treatment of climate change in the environmental review documents prepared under California Environmental Quality Act (CEQA). In particular, the amendments to the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or thresholds of significance, and do not specify greenhouse gas reduction mitigation measures. Instead, the CEQA amendments continue to rely on lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below. In addition, no state agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating any significant effects in CEQA documents. Thus, lead agencies exercise their discretion determining how to analyze GHG.

The discussion below provides a brief overview of California Air Resources Board (CARB) and Office of Planning and Research (OPR) documents and of the primary legislation that relates to climate change that may affect the emissions associated with the proposed project. It begins with an overview of the primary regulatory acts that have driven GHG regulation and analysis in California.

Executive Order S-3-05 (Statewide GHG Targets)

California Executive Order S-03-05 (June 1, 2005) mandates a reduction of GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Although the 2020 target has been incorporated into legislation (AB 32), the 2050 target remains only a goal of the Executive Order.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

The California Global Warming Solutions Act of 2006 (AB 32) 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) was signed into law in September 2006 after considerable study and expert testimony before the Legislature. The law instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The Act directed CARB to set a GHG emission limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. Based on CARB's calculation of 1990 baseline emissions levels, California must reduce GHG emissions by approximately 29 percent below "business-as-usual" predictions of year 2020 GHG emissions to achieve this goal.[2]

The bill required CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. CARB accomplished the key milestones set forth in AB 32 including the following:

- forecasts have been revised, that % below BAU has become a bit of a moving target. May be better to say 15% below 2008 levels (when the scoping plan was developed)

- June 30, 2007. Identification of discrete early action GHG emissions reduction measures. On June 21, 2007, CARB satisfied this requirement by approving three early action measures. These were later supplemented by adding six other discrete early action measures.

- January 1, 2008. Identification of the 1990 baseline GHG emissions level and approval of a statewide limit equivalent to that level and adoption of reporting and verification requirements concerning GHG emissions. On December 6, 2007, CARB approved a statewide limit on GHG emissions levels for the year 2020 consistent with the determined 1990 baseline.

- January 1, 2009. Adoption of a scoping plan for achieving GHG emission reductions. On December 11, 2008, CARB adopted Climate Change Scoping Plan: A Framework for Change (Scoping Plan), discussed in more detail below.

- January 1, 2010. Adoption and enforcement of regulations to implement the "discrete" actions. Several early action measures have been adopted and became effective on January 1, 2010.

- January 1, 2011. Adoption of GHG emissions limits and reduction measures by regulation. On October 28, 2010, CARB released its proposed cap-and-trade regulations, which would cover sources of approximately 85 percent of California's GHG emissions (CARB 2010b). CARB's Board ordered CARB's Executive Director to prepare a final regulatory package for cap-and-trade on December 16, 2010.

- January 1, 2012. GHG emissions limits and reduction measures adopted in 2011 become enforceable.

AB 32 Scoping Plan

As noted above, on December 11, 2008, CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emission level would require a reduction of GHG emissions of approximately 29 percent below

[2] Emissions forecasts have since been revised and the percent below "business-as-usual" necessary to achieve AB 32 goals is now considered to be closer to 15 percent.

what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business as usual"). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations will occur through the end of year 2013. The key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, heavy-duty truck measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation (CARB 2008).

In 2009, a coalition of special interest groups brought a challenge to the Scoping Plan alleging that it violated AB 32 and that the environmental review document (called a "Functional Equivalent Document") violated CEQA by failing to appropriately analyze alternatives to the proposed cap-and-trade program. On May 20, 2011, the San Francisco Superior Court entered a final judgment ordering that CARB take no further action with respect to cap and trade rulemaking until it complies with CEQA. While CARB disagrees with the trial court finding and appealed the decision on May 23, 2011, in order to remove any doubt about the matter and in keeping with CARB's interest in public participation and informed decision-making, CARB revisited the alternatives. The revised analysis includes the five alternatives included in the original environmental analysis: a "no project" alternative (that is, taking no action at all); a plan relying on a cap-and-trade program for the sectors included in a cap; a plan relying more on source-specific regulatory requirements with no cap-and-trade component; a plan relying on a carbon fee or tax; and, a plan relying on a variety of proposed strategies and measures. The public hearing to consider approval of the AB 32 Scoping Plan Functional Equivalent Document and the AB 32 Scoping Plan was held on August 24, 2011. On this date the Scoping Plan was re-approved by the Board.

In August 2012, CARB released revised estimates of the expected 2020 emission reductions. The revised analysis relies on emissions projections updated in light of current economic forecasts which account for the economic downturn since 2008 as well as reduction measures already approved and put in place. This reduced the projected 2020 emissions from 596 million metric tons (MMT) CO_2e to 545 $MMTCO_2e$. The reduction in projected 2020 emissions means that the revised Business As Usual (BAU) reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now only 21 percent.

Assembly Bill 1493

Assembly Bill 1493 ("the Pavley Standard" or AB 1493) (Health and Safety Code Sections 42823 and 43018.5) required CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks of model year 2009 through 2016. The bill also required the California Climate Action Registry to develop and adopt protocols for the reporting and certification of GHG emissions reductions from mobile sources for use by CARB in granting emission reduction credits. The bill authorizes CARB to grant emission reduction credits for reductions of GHG emissions prior to the date of enforcement of regulations, using model year 2000 as the baseline for reduction.

In 2004, CARB applied to the EPA for a waiver under the federal Clean Air Act to authorize implementation of these regulations. The waiver request was formally denied by the EPA in December 2007 after California filed suit to prompt federal action. In January 2008, the State Attorney General filed a new lawsuit against the EPA for denying California's request for a waiver to regulate and limit GHG emissions from these vehicles. In January 2009, President Barack Obama issued a directive to the EPA to reconsider California's request for a waiver. On June 30, 2009, the EPA granted the waiver to California for its GHG emission standards for motor vehicles. As part of this waiver, the EPA specified the provision that CARB may not hold a manufacturer liable or responsible for any noncompliance caused by emission debits generated by a manufacturer for the 2009 model year. CARB has adopted a new approach to passenger vehicles – cars and light trucks -- by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. These standards will apply to all passenger and light-duty trucks used by customers, employees of, and deliveries to, the proposed project.

Low Carbon Fuel Standard

Executive Order S-01-07 (January 18, 2007) requires a 10 percent or greater reduction in the average fuel carbon intensity (CI) for transportation fuels in California regulated by CARB. CARB identified the Low Carbon Fuel Standard (LCFS) as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009. In 2009, CARB approved for adoption of the LCFS regulation, which became fully effective in April 2010 and is codified at Title 17, California Code of Regulations, Sections 95480-95490. The LCFS will reduce GHG emissions by reducing the CI of transportation fuels used in California by at least 10 percent by 2020. CI is a measure of the GHG emissions associated with the various production, distribution, and use steps in the "lifecycle" of a transportation fuel.

On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. One of the district court's rulings preliminarily enjoined CARB from enforcing the regulation. In January 2012, CARB appealed that decision to the Ninth Circuit Court of Appeals, and then moved to stay the injunction pending resolution of the appeal. On April 23, 2012, the Ninth Circuit granted the CARB's motion for a stay of the injunction while it continues to consider CARB's appeal of the lower court's decision.

Clean Cars

In January 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot and GHG emissions with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

Renewable Portfolio Standards (Senate Bill 1078, Senate Bill 107 and Senate Bill X1-2)

Established in 2002 under SB 1078, and accelerated in 2006 under SB 107 and again in 2011 under SBX1-2, California's Renewable Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. The 33 percent standard is consistent with the RPS goal established in the Scoping Plan. As interim measures, the RPS requires 20 percent of retail sales to be sourced from renewable energy by 2013, and 25 percent by 2016. Initially, the RPS provisions applied to investor-owned utilities, community choice aggregators, and electric service providers. SBX1-2 added, for the first time, publicly owned utilities to the entities subject to RPS. The expected growth in RPS to meet the standards in effect in 2008 is not reflected in the BAU calculation in the AB 32 Scoping Plan, discussed below. In other words, the Scoping Plan's 2020 BAU does not take credit for implementation of RPS that occurred after its adoption.

Senate Bill 375

SB 375 (codified at Government Code and Public Resources Code[3]) signed in September 2008, provides for a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 will be implemented over the next several years and includes provisions for streamlined CEQA review for some infill projects such as transit oriented development. SB 375 also requires Metropolitan Planning Organizations (MPOs) to incorporate a "sustainable communities strategy" (SCS) in their regional transportation plans (RTPs) that will achieve GHG emission reduction targets by reducing vehicle miles traveled (VMT) from light-duty vehicles through the development of more compact, complete, and efficient communities.

SB 375 is similar to the Regional Blueprint Planning Program, established by the California Department of Transportation, which provides discretionary grants to fund regional transportation and land use plans voluntarily developed by MPOs working in cooperation with Councils of Governments. The Scoping Plan relies on the requirements of SB 375 to implement the carbon emissions reductions anticipated from land use decisions.

California Building Energy Efficiency Standards

Energy Conservation Standards for new residential and commercial buildings were originally adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6 of the California Code of Regulations [CCR, 2008]). In general, Title 24 requires the design of building shells and building components

[3] Senate Bill 375 is codified at Government Code Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588, 14522.1, 14522.2, and 65080.01 as well as Public Resources Code Sections 21061.3, 21159.28, and Chapter 4.2.

to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24) was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). Part 11 establishes voluntary standards on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. Some of these standards have become mandatory in the 2010 edition of the Part 11 Code. Current mandatory standards include:

- 20 percent mandatory reduction in indoor water use, with voluntary goal standards for 30, 35 and 40 percent reductions;
- Separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects;
- Diversion of 50 percent of construction waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects;
- Mandatory inspections of energy systems (i.e. heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies;
- Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particle board.

The California Energy Commission has opened a public process and rulemaking proceeding the adoption of changes to the 2013 Building Energy Efficiency Standards contained in the CCR, Title 24, Part 6 (also known as the California Energy Code), and associated administrative regulations in Part 1 (collectively referred to here as the Standards). The proposed amended standards will be adopted in 2014. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential construction. The standards, which take effect on January 1, 2014, will offer builders better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses.

2.3 CLIMATE CHANGE IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the application of the following State CEQA Guidelines Appendix G thresholds of significance:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Thresholds of significance illustrate the extent of an impact and are a basis from which to apply mitigation measures. Significance thresholds for greenhouse gas emissions resulting from land use development projects have not been established in El Dorado County (the El Dorado County Air Quality Management District (EDCAQMD) has not yet established significance thresholds for GHG emissions from project operations). In April 2012, the San Luis Obispo County Air Pollution

Control District (SLOAPCD) published its GHG threshold. Utilization of SLOAPCD's GHG threshold was considered reasonable and appropriate by EDCAQMD staff (Baughman 2012)).

As previously stated, the project proposes to construct a residential development of 44 single-family residential dwelling units. This analysis identifies and quantifies the GHG emissions of the proposed project and compares them to the SLOAPCD recommended threshold of 1,150 metric tons of CO_2e annually. The project would be considered to have a significant impact if the projected emissions generated by the proposed project would surpass 1,150 metric tons of CO_2e annually. If mitigation can be applied to lessen the emissions such that the project meets its share of emission reductions needed to address the cumulative impact, the project would be considered less than significant. This GHG impact analysis also considers the goals of *El Dorado County Board of Supervisors Environmental Vision for El Dorado County Resolution No. 29-2008.*

METHODOLOGY

The resultant GHG emissions of the proposed project were calculated by PMC using the California Emissions Estimator Model (CalEEMod), version 2011.1.1, computer program (see **Appendix A**). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for the use of government agencies, land use planners, and environmental professionals. This model is the most current emissions model approved for use in California by various other air districts.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contributes substantially to the phenomenon of global climate change and its associated environmental impacts and as such is addressed only as a cumulative impact.

GHG emissions associated with the project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term regional emissions associated with project-related new vehicular trips and indirect source emissions, such as electricity usage for lighting. In accordance with the SLOAPCD threshold determination, projected GHGs from site preparation (i.e., tree removal, grubbing) and construction activities have be quantified and amortized over the life of the project (30 years). The amortized site preparation and construction emissions are added to the annual average operational emissions. The project operational GHG emissions resulting from the proposed project are identified in **Table 3**.

TABLE 3
ESTIMATED PROJECT GREENHOUSE GAS EMISSIONS – PROJECT OPERATION (METRIC TONS PER YEAR)

Emissions Source	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)	CO_2e
Proposed Project – 44 Residential Units				

Emissions Source	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)	CO_2e
Construction Amortized over 30 Years[1]	107	0.00	0	107
Area Source (landscaping, hearth)	103	0.04	0	105
Energy	149	0.01	0	150
Mobile	507	0.03	0	508
Waste	6	0.38	0	14
Water	6	0.09	0	9
Total	**878**	**0.55**	**0**	**893**

Source: CalEEMod version 2011.1.1. Diesel-fueled construction equipment load factors reduced 33% to account for off-road emission overestimation (CARB 2010c). [1] *Emissions generated from site preparation include the one-time release of stored carbon dioxide from removed trees and initially disturbed soil. See* ***Appendix A*** *for emission model outputs.*

As shown in **Table 3**, the proposed project is estimated to result in 893 metric tons of CO_2e per year. Therefore, the proposed project would not surpass the project threshold of 1,150 metric tons of CO_2e annually and this impact is less than cumulatively considerable and thus less than significant.

Impact 2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The proposed project is also subject to compliance with the Global Warming Solutions Act (AB 32). As identified under Impact 1, the resultant emissions projected to be generated from the proposed project would not surpass SLOAPCD GHG significance thresholds, which were prepared with the purpose of complying with the requirements of AB 32. Therefore, the proposed project would not conflict with AB 32.

In addition, El Dorado County does not have local policies or ordinances with the purpose of reducing GHG emissions with the exception of El Dorado County Board of Supervisors Environmental Vision for El Dorado County, Resolution No. 29-2008, which sets forth broad goals to address positive environmental changes. Some of the primary goals of Resolution No. 29-2008 are to promote carpooling, reduce vehicle miles traveled, and promote recycling and utilization of recycled products. There are no aspects of the proposed project that would inhibit these goals.

The proposed project would not be considered to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG emissions and therefore represents a less than significant impact.

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Ridgeview Village Unit 9

El Dorado-Mountain County County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Single Family Housing	44	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Company**	Pacific Gas & Electric Company
Climate Zone	1		2.7		
		Precipitation Freq (Days)			
			70		

1.3 User Entered Comments

Off-road Equipment - Diesel-fueled construciton load factors reduced 33% to account for offroad emission overestimation. Source - California Air Resources Board. 2010. "Staff Report: Proposed Amendments to the Regulation for In-Use Off Road Diesel-Fueled Fleets and the OFFROAD Large Spark-Ignition Fleet Requirements." October 2010.

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013											0.00	447.51	447.51	0.05	0.00	448.52
2014											0.00	178.71	178.71	0.02	0.00	179.11
Total											**0.00**	**626.22**	**626.22**	**0.07**	**0.00**	**627.63**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											45.45	57.72	103.17	0.04	0.00	105.41
Energy											0.00	148.72	148.72	0.01	0.00	149.64
Mobile											0.00	507.06	507.06	0.03	0.00	507.60
Waste											6.39	0.00	6.39	0.38	0.00	14.33
Water											0.00	6.39	6.39	0.09	0.00	8.94
Total											**51.84**	**719.89**	**771.73**	**0.55**	**0.00**	**785.92**

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
Vegetation Land Change					-2,553.00
Total					**-2,553.00**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	24.55	24.55	0.00	0.00	24.61
Total											**0.00**	**24.55**	**24.55**	**0.00**	**0.00**	**24.61**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	0.74	0.74	0.00	0.00	0.74
Total											**0.00**	**0.74**	**0.74**	**0.00**	**0.00**	**0.74**

3.3 Grading - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	101.30	101.30	0.01	0.00	101.50
Total											**0.00**	**101.30**	**101.30**	**0.01**	**0.00**	**101.50**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	2.46	2.46	0.00	0.00	2.47
Total											**0.00**	**2.46**	**2.46**	**0.00**	**0.00**	**2.47**

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	294.29	294.29	0.03	0.00	295.00
Total											**0.00**	**294.29**	**294.29**	**0.03**	**0.00**	**295.00**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	10.97	10.97	0.00	0.00	10.98
Worker											0.00	13.20	13.20	0.00	0.00	13.22
Total											**0.00**	**24.17**	**24.17**	**0.00**	**0.00**	**24.20**

3.4 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	144.95	144.95	0.02	0.00	145.27
Total											**0.00**	**144.95**	**144.95**	**0.02**	**0.00**	**145.27**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	5.46	5.46	0.00	0.00	5.47
Worker											0.00	6.36	6.36	0.00	0.00	6.36
Total											**0.00**	**11.82**	**11.82**	**0.00**	**0.00**	**11.83**

3.5 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	17.95	17.95	0.00	0.00	18.01
Paving											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**17.95**	**17.95**	**0.00**	**0.00**	**18.01**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	1.20	1.20	0.00	0.00	1.21
Total											**0.00**	**1.20**	**1.20**	**0.00**	**0.00**	**1.21**

3.6 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	2.55	2.55	0.00	0.00	2.56
Total											**0.00**	**2.55**	**2.55**	**0.00**	**0.00**	**2.56**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	0.24	0.24	0.00	0.00	0.24
Total											**0.00**	**0.24**	**0.24**	**0.00**	**0.00**	**0.24**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	507.06	507.06	0.03	0.00	507.60
Unmitigated											0.00	507.06	507.06	0.03	0.00	507.60
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	421.08	443.52	385.88	1,200,980	1,200,980
Total	421.08	443.52	385.88	1,200,980	1,200,980

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	85.86	85.86	0.00	0.00	86.40
Electricity Unmitigated											0.00	85.86	85.86	0.00	0.00	86.40
NaturalGas Mitigated											0.00	62.86	62.86	0.00	0.00	63.24
NaturalGas Unmitigated											0.00	62.86	62.86	0.00	0.00	63.24
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Single Family Housing	1.1779e+006											0.00	62.86	62.86	0.00	0.00	63.24
Total												**0.00**	**62.86**	**62.86**	**0.00**	**0.00**	**63.24**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Single Family Housing	295156					85.86	0.00	0.00	86.40
Total						**85.86**	**0.00**	**0.00**	**86.40**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											45.45	57.72	103.17	0.04	0.00	105.41
Unmitigated											45.45	57.72	103.17	0.04	0.00	105.41
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											45.45	57.18	102.63	0.04	0.00	104.85
Landscaping											0.00	0.54	0.54	0.00	0.00	0.55
Total											**45.45**	**57.72**	**103.17**	**0.04**	**0.00**	**105.40**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					6.39	0.09	0.00	8.94
Unmitigated					6.39	0.09	0.00	8.94
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Single Family Housing	2.86678 / 1.80732					6.39	0.09	0.00	8.94
Total						**6.39**	**0.09**	**0.00**	**8.94**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					6.39	0.38	0.00	14.33
Unmitigated					6.39	0.38	0.00	14.33
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Single Family Housing	31.5					6.39	0.38	0.00	14.33
Total						**6.39**	**0.38**	**0.00**	**14.33**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					-2,553.00	0.00	0.00	-2,553.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

9.1 Vegetation Land Change

Vegetation Type

	Initial/Final	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	Acres	tons				MT			
Trees	23 / 0					-2,553.00	0.00	0.00	-2,553.00
Total						**-2,553.00**	**0.00**	**0.00**	**-2,553.00**

County of El Dorado
Air Quality Management District

330 Fair Lane, Placerville Ca 95667
Tel. 530.621.7501 Fax 530.295.2774
www.edcgov.us/AirQualityManagement

Dave Johnston
Air Pollution Control Officer

February 19, 2013

Mel Pabalinas, Senior Planner
County of El Dorado
Development Services Department
2850 Fairlane Court
Placerville, CA 95667

SUBJECT: District Review of Ridgeview Village Unit 9 Project, Air Quality Analysis, Rimpo & Assoc. (March 2008) Greenhouse Gas Emissions, PMC Consulting, (January 2013)

Dear Mr. Pabalinas:

The El Dorado County Air Quality Management District (AQMD) has reviewed the above referenced Air Quality (AQ) Analysis and Greenhouse Gas (GHG) Emissions Analysis for the proposed project. The project involves the development of 44 residential home sites with minimum lot sizes of 12,889 sf on 23 acres adjacent to existing similar residential development in the Ridgeview Village area of El Dorado Hills.

Comments:

While the AQ Analysis is a few years old, it's still valid as AQMD's California Environmental Quality Act (CEQA) thresholds of significance, as outlined in the *Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts under the California Environmental Quality Act* (February 2002)[1] have not changed. Additionally, more stringent emissions limitations have been placed on off-road diesel engines used for construction by the state, and the project has been reduced from 48 residential lots to 44, resulting in an overstatement of potential AQ impacts. The analysis used URBEMIS 2007, version 9.2.4 modeling software. Construction impacts were determined to be less than significant with mitigation, and operational impacts were determined to be less than significant.

As noted in the GHG emissions document, neither El Dorado County nor AQMD have established GHG thresholds. The lack of thresholds does not relieve the Lead Agency from complying with the CEQA mandate to analyze all potentially significant impacts, including GHG emissions, and applying appropriate and feasible mitigation measures. In the absence of County adopted thresholds, AQMD recommends using the adopted thresholds of other lead agencies that are based on consistency with the goals of AB 32. Since climate change is a global problem and the location of the individual source of GHG emissions is somewhat irrelevant, it's appropriate to use thresholds established by other jurisdictions as a basis for impact significance determinations. Projects exceeding these thresholds would have a potentially significant impact and be required to mitigate those impacts to a less than significant level. Until the County adopts a Climate Action Plan (CAP) consistent with CEQA Guidelines Section 15183.5, and/or establishes GHG thresholds, AQMD recommends an interim

[1] http://www.edcgov.us/Government/AirQualityManagement/Guide_to_Air_Quality_Assessment.aspx

approach to evaluating GHG emissions utilizing significance criteria adopted by the San Luis Obispo Air Pollution Control District (SLOAPCD) to determine the significance of GHG emissions. SLOAPCD's thresholds were developed using California Air Resources Board (CARB) approved California Emissions Estimation Model (CalEEMod).

The GHG Analysis used CalEEMod (version 2011.1.1.) and concludes the proposed project would result in less than significant construction and operational GHG emissions as the potential emissions are less than the 1,150 Metric tons of CO_2 equivalent.

Summary:

AQMD concurs with the findings of the AQ and GHG Analyses and thanks you for the opportunity to comment on this project.

Respectfully,

Adam Baughman,
Air Quality Engineer
Air Quality Management District

S:\CEQA\AQMD Comments\2013Planning\Ridgeview Village Unit 9\Ridgeview Unit 9 - AQMD GHG Analysis Comments.doc

REVISED JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

RIDGEVIEW UNIT 9 PROPERTY

GIBSON & SKORDAL, LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 105
Sacramento, California 95825

REVISED JURISDICTIONAL DELINEATION AND SPECIAL STATUS SPECIES EVALUATION

RIDGEVIEW UNIT 9 PROPERTY

EL DORADO COUNTY, CALIFORNIA

March 2008
Revised: October 2008

Prepared For:

Pacific States Development Corp.
991 Governor Drive, Suite 103
El Dorado Hills, California 95762

Prepared By:

GIBSON & SKORDAL, LLC
Wetland Consultants
2277 Fair Oaks Blvd., Suite 105
Sacramento, California 95825

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Appendix A	Data Forms
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FIGURES

Figure 1	Study Area Locator Map	After Page 1
Figure 2	Study Area Vicinity Map	After Page 1
Figure 3	Study Area Soils Map	After Page 3

TABLES

Table 1	Study Area Acreage Totals by Feature Type	After Page 4
Table 2	Evaluation of Special Status Species Habitats	After Page 6

INTRODUCTION

This report presents the results of a revised special status species assessment and a delineation of waters of the United States, including wetlands, which potentially may be regulated by the U. S. Army Corps of Engineers under the authority of Section 404 of the Federal Clean Water Act. The special status species assessment and delineation of waters of the United States were conducted within the study area for the below described Ridgeview Unit 9 property.

LOCATION

The approximately 22.8-acre study area is located in Section 34, Township 10 North, Range 8 East, El Dorado County, California MDB&M. The parcel can be found at UTM 666,087.00 M E; 4,282,439.69 M N (Zone 10 North) and is portrayed on the Clarksville, California 7. 5 Minute Series Quadrangle. Figure 1 is a locator map, and Figure 2 is a vicinity map.

To access the site from Sacramento, drive east on Highway 50 into El Dorado county and exit at El Dorado Hills Boulevard. Travel north on El Dorado Hills Boulevard, then turn left onto Olson Lane, which enters into a housing development. In relatively quick succession turn left on Gillette Drive, turn left on Ridgeview Drive, turn right onto Muse Drive, turn right on Powers Drive, and then left on Julie Ann Way. Follow Julie Anne Way until it intersects with Beatty Drive; the study area is located directly to the north.

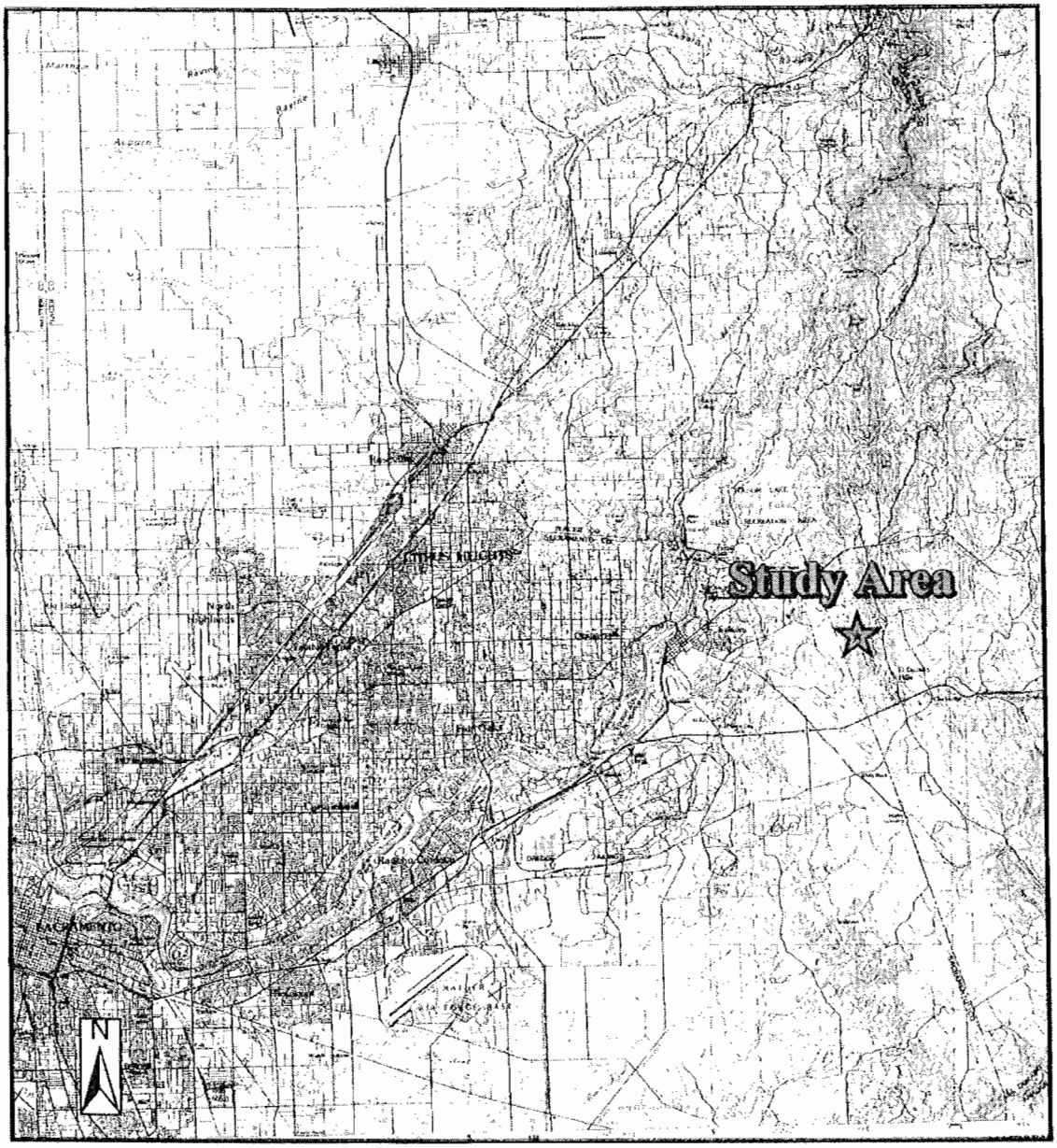
METHODOLOGY

This delineation was performed in accordance with the 1987 **"Corps of Engineers Wetlands Delineation Manual,"**[1] the **"Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region,"**[2] and Sacramento District's "**Minimum Standards for Acceptance of Preliminary Wetlands Delineations"** dated November 30, 2001. Corps' regulations (33 CFR 328) were used to determine the presence of waters of the United States other than wetlands. The **"U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook, May 30, 2007"**[3] was consulted in evaluating

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

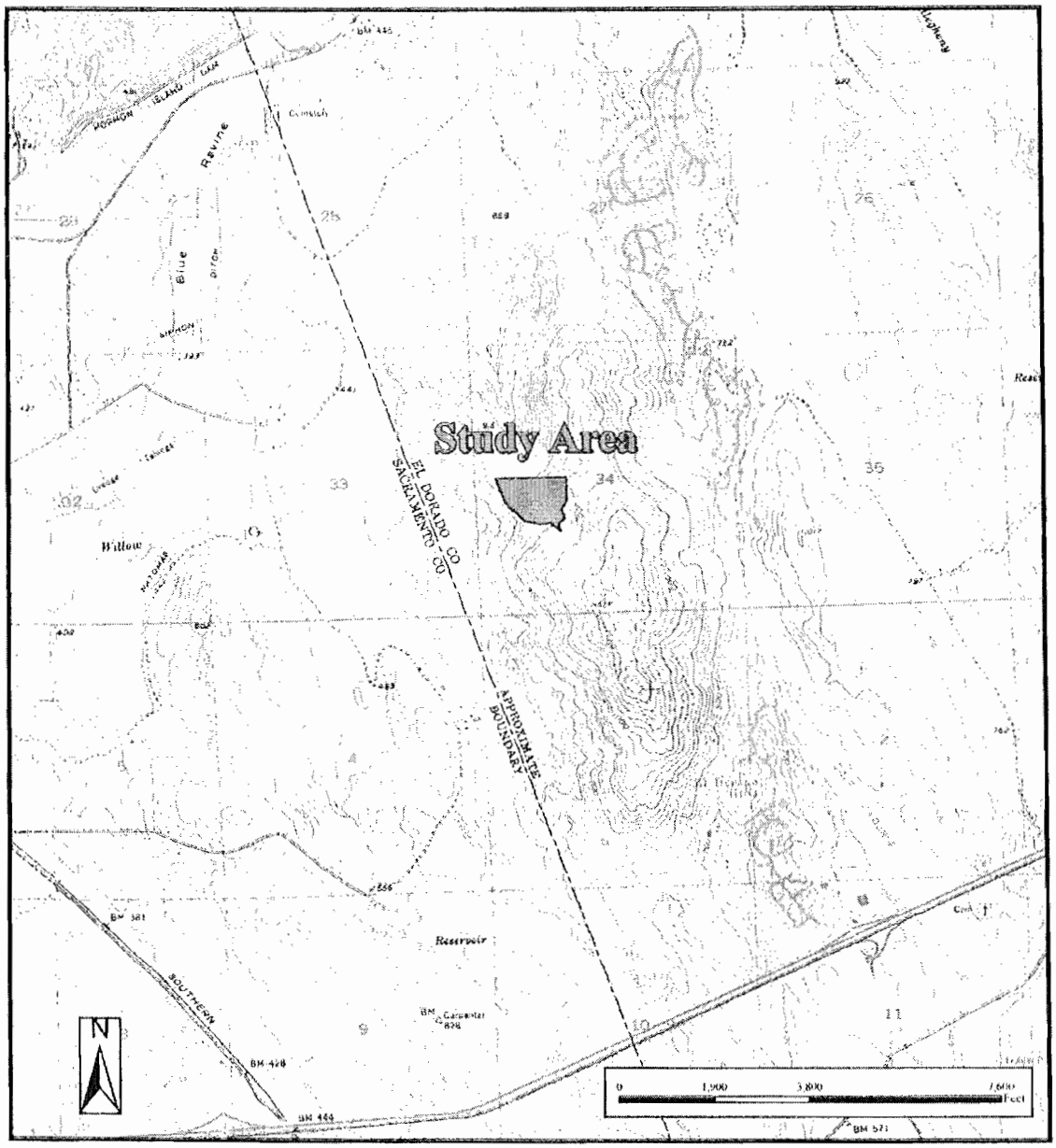
[2] Wetlands Regulatory Assistance Program. December 2006. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. U.S. Army Engineer Research and Development Center, Vicksburg, Miss.

FIGURE 1
Study Area Locator Map



Source: USGS Sacramento, California 1:250,000 Quadrangle.
Section 34, Township 10 North, Range 8 East, MDB&M;
UTM 666,087.00 M E; 4,282,439.69 M N, Zone 10N.

FIGURE 2
Study Area Vicinity Map



Source: USGS Clarksville and Folsom, California 7.5 Minute Quadrangles.
Section 34, Township 10 North, Range 8 East, MDB&M;
UTM 666,087.00 M E; 4,282,439.69 M N, Zone 10N.

the jurisdictional status of the various waterbodies existing within the study area. The **"National List of Plant Species That Occur in Wetlands: California (Region 0)"**[4] was used to determine the wetland indicator status of plants observed in the study area.

Field surveys were conducted on February 28, 2008, within the study area to delineate water features, including wetlands that are potentially regulated under Section 404 of the Federal Clean Water Act. Data point and water feature locations were surveyed utilizing a Trimble ProXR GPS unit equipped with sub-meter accuracy. The delineation map was prepared by digitizing and layering the GPS survey data over May 2002 aerial photography. Detailed data on vegetation, soils, and hydrology were taken in the field. Data sheets documenting the basis for determining which areas are wetland or upland are provided in Appendix A. Appendix B contains a delineation map of the study area.

A verification visit was performed by Mr. Peck Ha of the Sacramento District of the U.S. Army Corps of Engineers on August 19, 2008. Mr. Ha's suggested revisions were incorporated into this report and the attached delineation map accordingly.

The study area was assessed for the potential presence of special status species. Initially, a record search of the California Natural Diversity Database (CNDDB) was conducted for the Coloma, Shingle Springs, Latrobe, Clarksville, Folsom SE, Folsom, Buffalo Creek, Pilot Hill, and Rocklin 7.5 Minute USGS quadrangles to identify all documented sightings of special status species in the vicinity of the site. In addition to species identified in the CNDDB search, we included other special status species that may be present based on historic or known range data.

GENERAL SITE CONDITIONS AND HABITAT

Existing Field Conditions

The study area is located in the foothills on hilly terrain at an average elevation of about 850 feet. Tiburon Way marks the western boundary, and the immediately surrounding lands are occupied by residential developments. With the exception of three roads which traverse the parcel and service the surrounding housing allotments, the study area is undeveloped and contains no habitable structures. The parcel generally slopes/drains from east to west. No recent grading,

[3] U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook. May 30, 2007. U.S. Army Corps of Engineers & U.S. Environmental Protection Agency.
[4] Reed, P.B. 1988. National List of Plant Species That Occur In Wetlands: California (Region 0). Biological Report 88(26.10). May 1988. National Ecology Center, National Wetlands Inventory, U.S. Fish & Wildlife Service, St. Petersburg, Florida.

grazing, or disking was noted at the time of field surveys. Appendix F contains digital photos of the site.

Plant Communities

The site is dominated by foothill oak woodland and consists primarily of live oak (*Quercus wislizenii*) and blue oak (*Quercus douglasii*). The herbaceous understory is chiefly composed of soft chess (*Bromus mollis*), and dog tail (*Cynosurus echinatus*). Additional observed species include valley oak (*Quercus lobata*), Himalayan blackberry (*Rubus procerus*), Mediterranean barley (*Hordeum hystrix*), perennial rye (*Lolium perenne*), California buckeye (*Aesculus californica*), and ripgut brome (*Bromus diandrus*).

Hydrology

The site generally slopes and drains to the west. The largest water feature is an unnamed intermittent tributary (C1 on the enclosed delineation map) that flows from the southwest corner of the study area. Surface water from C1 eventually empties into an unnamed tributary of Willow Creek, Willow Creek, Lake Natoma, and the navigable American River, respectively. Additional hydrological information is provided below in the analysis of jurisdiction.

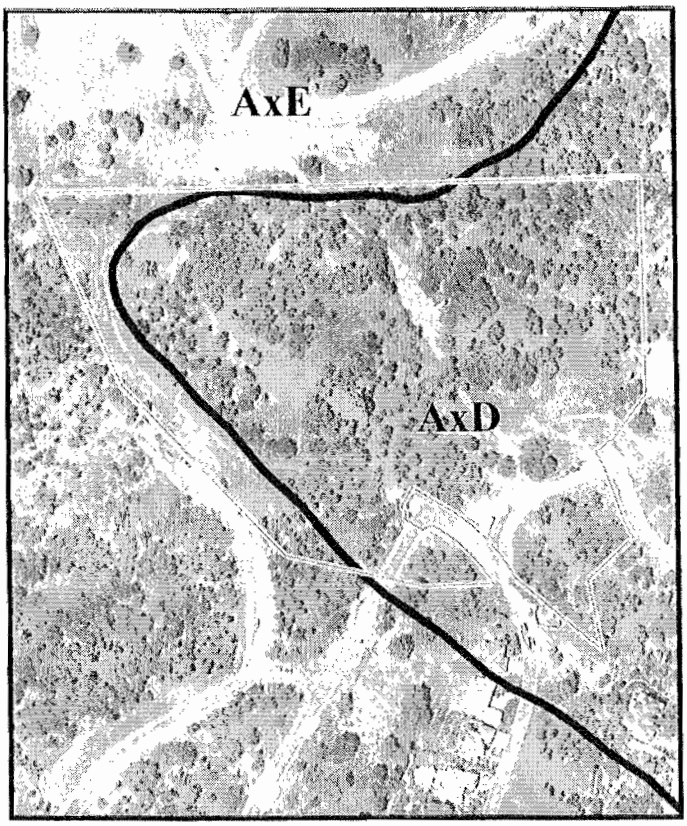
Soils

According to the April 1974, "**Soil Survey for El Dorado Area, California**" two soil map units occur within the study area. The first is Auburn very rocky silt loam, 2 to 30% slopes (AxD), which is a well-drained, shallow ruptic-lithic xerochrept composed of 5 to 25% rock outcrops. The water holding capacity is 2 to 4 inches, and the depth to bedrock (and effective plant rooting range) varies between 20 to 26 inches. Contained within this unit are inclusions of Argonaut very rocky loam, Boomer very rocky loam, and Sobrante very rocky silt loam. The second mapped unit is Auburn very rocky silt loam, 30 to 50% slopes (AxE). With the exception of the increased slopes this unit is very similar to AxD. Common inclusions include Boomer very rocky loam and an unnamed soil similar to AxE except with a darker surface.

None of the above soil map units are listed in the June 1991, "**Hydric Soils of the United States.**" Figure 3 is a soils map.

FIGURE 3

Study Area Soils Map



Map Symbol	Mapping Unit	Subgroup	Drainage Class
AxD	Auburn very rocky silt loam, 2-30% slopes	Ruptic-Lithic Xerochrept	Well drained
AxE	Auburn very rocky silt loam, 30-50% slopes	Ruptic-Lithic Xerochrept	Well drained

Soil Survey Geographic (SSURGO) database for El Dorado Area, California, U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, Texas, January 4, 2007

FINDINGS

Potential Wetlands and Waters of the United States

Approximately 0.4621 acre of water features were mapped within the study area including 0.2544 acre of seeps and 0.2077 acre of channels. Table 1 lists acreage totals by feature type, and Appendix B provides a delineation map displaying the study area boundary, surveyed water features, and data points. Appendix C provides a list of plant species observed in the study area including their status as wetland indicator species.

Channels

Approximately 0.2077 acres of channels were delineated within the study area. These features typically possessed ordinary high water marks and distinct beds and banks with sandy to cobbly substrates. All were dry at the time of field surveys except for isolated parts C3 which contained several inches of standing water. In many locations the soils contained a high percentage of cobble and/or gravel.

Seeps

Four seeps totaling 0.2544 acre were delineated within the study area. Seeps are most often associated with sloping terrain and driven by water derived primarily from groundwater seepage in the winter and spring. Recorded plant species included cattails (*Typha sp.*), soft rush (*Juncus effusius*), dallis grass (*Paspalum dilatatum*), Baltic rush (*Juncus balticus*), Mediterranean barley (*Hordeum hystrix*), perennial rye (*Lolium perenne*), loosestrife (*Lythrum hyssopifolia*), and tall flatsedge (*Cyperus eragrostis*). The soils range from loams to sandy loams with matrices colors of 5Y 5/2 and 7.5YR3/3. Prominent redoximorphic features occur in the matrix and root channels, and vary between 10 and 15 percent. The wetland hydrology indicators noted are saturation to the surface and a positive FAC-Neutral test.

JURISDICTIONAL FINDINGS

The delineated areas shown on Appendix B represent those aquatic features that exhibit the requisite physical and/or biological characteristics to be considered wetlands or other potential waters of the United States (e.g. ponds, creeks, canals, etc.) subject to the Corps' jurisdiction pursuant to Section 404 of the Clean Water Act. Whether they are, in fact, jurisdictional depends on their relationship to traditional navigable waters. The Corps of Engineers jurisdiction under

Table 1: Study Area Acreage Totals by Feature Type

Seeps

Ref. No.	Area (ft^2)	Area (ac)
S1	333	0.0076
S2	128	0.0029
S3	2,286	0.0525
S4	8,336	0.1914
	Area (ft^2)	Area (ac)
Total:	11,083	0.2544

Channels

Ref. No.	Area (ft^2)	Area (ac)
C1a	2,382	0.0547
C1b	1,386	0.0318
C1c	5,280	0.1212
	Area (ft^2)	Area (ac)
Total:	9,048	0.2077

Grand Total

Area (ft^2)	Area (ac)
20,131	0.4621

Section 404 of the Clean Water Act is defined in 33 CFR 328 and is further defined in "U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook" and its various appendices (the "Guidance"). Under the Guidance, waters of the United States that are potentially regulated pursuant to Section 404 of the Clean Water Act fall into one of the following categories.

I – Jurisdictional

A. Traditional navigable waters ("TNWs") and their adjacent (abutting and non-abutting) wetlands;

B. Non-navigable tributaries to TNWs that are relatively permanent waters (RPWs) and wetlands that directly abut such tributaries.

II – Potentially jurisdictional depending on whether there is a significant nexus to TNWs

A. Non-navigable tributaries to TNWs that are not relatively permanent waters (Non-RPWs) and their adjacent wetlands (abutting and non-abutting)

B. Wetlands adjacent to, but not abutting, RPWs

III – Potentially jurisdictional depending on whether there is a commerce clause nexus

A. Interstate and intrastate waterbodies and their adjacent wetlands that are not direct or indirect tributaries to TNWs (isolated waterbodies)

B. Interstate and intrastate wetlands that are not adjacent to TNWs or tributaries to TNWs (isolated wetlands)

Appendix D contains two exhibits prepared by Gibson & Skordal, LLC to help visualize these categories of potential jurisdiction with respect to the jurisdictional standard for each category. The first exhibit is a color-coded map showing the various categories discussed above, and the second is a chart showing the sequential questions that must be addressed to determine the jurisdictional status of specific wetlands.

The Corps of Engineers has determined that all mapped features are jurisdictional.

SPECIAL STATUS SPECIES EVALUATION

This report summarizes our evaluation of the potential presence of special status species within the study area. The special status species evaluation considers those species identified as having relative scarcity and/or declining populations by the United States Fish & Wildlife Service (FWS) or California Department of Fish & Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern by CDFG. We also included those species considered to be "special animals" or "fully protected" by the CDFG and those plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (CNPS).

A record search of the CNDDB was conducted to identify all documented sightings of special status species in the vicinity of the study area. In addition to species identified in the CNDDB search, we included other special status species that may occur in the study area based on historical range data. Appendix G contains a CNDDB elemental occurrence map.

Table 2 provides a list of special status species that were evaluated including their listing status, habitat associations, and whether potential habitats occur in the study area. The following is a detailed summary of special status species and their habitats as they relate to the study area.

American Badger

American badger (*Taxidea taxus*) is a listed CDFG species of special concern. This burrowing carnivorous mammal is solitary and very territorial preferring to feed on small mammals, lizards, snakes, insects, and carrion. It has no known natural enemies and inhabits dry, open fields, grasslands, and pastures.

Though the pasture provides appropriate foraging and burrowing habitat, it is unlikely that this species occupies the site due to the increasing urbanization of the area.

Pallid Bat

Pallid bat (*Antrozous pallidus*) is a listed CDFG species of special concern. It favors roosting sites in crevices in rock outcrops, caves, abandoned mines, and human-made structures such as barns, attics, and sheds. Though pallid bats are gregarious, they tend to group in smaller colonies of 10 to 100 individuals. It is a nocturnal hunter and captures prey in flight, but unlike most

TABLE 2:
EVALUATION OF SPECIAL STATUS SPECIES HABITATS

	Federal Status	State Status	CNPS Listing	Habitat Association	Potential Habitat In Study Area
Mammals					
Antrozous pallidus (pallid bat)	None	Species of Special Concern		Roosts in rock outcrops, hollow trees, abandoned mines, barns, and attics.	Though suitable habitat is present, the lack of recent sightings makes it unlikely that the species is present.
Lasionycteris noctivagans (silver-haired bat)	None	Species of Special Concern		Roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. It forages in open wooded areas near water features.	Yes
Taxidea taxus (American badger)	None	Species of Special Concern		This species prefers dry open fields, grasslands, and pastures.	Species not likely to be present due to area urbanization.
Birds					
Accipiter cooperi (Cooper's hawk)	None	Species of Special Concern		Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	Foraging and nesting habitat present.
Agelaius tricolor (tricolored blackbird)	None	Species of Special Concern		Colonial nester in cattails, bulrush, or blackberries associated with marsh habitats.	Foraging and nesting habitat present.
Ammodramus savannarum (grasshopper sparrow)	None	CDFG-Special Animals		Favors native grasslands. Feeds on insects, particularly grasshoppers, which it forages from open ground.	Foraging and nesting habitat present.
Ardea alba (great egret)	None	CDFG-Special Animals		Rivers, streams, lakes, marsh and other aquatic habitats.	No
Ardea herodias (great blue heron)	None	CDFG-Special Animals		Rivers, streams, lakes, marsh and other aquatic habitats.	No
Athene cunicularia (burrowing owl)	None	Species of Special Concern		Nests in abandoned ground squirrel burrows associated with open grassland habitats.	No
Buteo Swainsoni (Swainson's hawk)	None	Threatened		Nests in tall cottonwoods, valley oaks or willows. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	No

TABLE 2:
EVALUATION OF SPECIAL STATUS SPECIES HABITATS

Elanus leucurus (white-tailed kite)	None	Fully Protected		Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.	No
Haliaeetus leucocephalus (bald eagle)	Threatened	Endangered		Documented as wintering & nesting in El Dorado Co., they typically nest in oak woodland within 1 mile of lakes, rivers, or larger streams.	Nesting habitat present.
Laterallus jamaicensis coturniculus (California black rail)	None	Threatened		Nests and forages in salt, brackish, and fresh marshes with abundant vegetative cover.	No
Phalacrocorax auritus (double-crested cormorant)	None	CDFG-Special Animals		Nests in colonies on rocks, cliff, or in trees. It prefers open water habitats such as coastlines, ponds, rivers, lakes, estuaries, or lagoons.	No
Progne subis (purple martin)	None	Species of Special Concern		This insectivore prefers open areas near bodies of water or wetlands. It is a colonial nester which utilizes cavities in trees, cliff faces, buildings.	Foraging and nesting habitat present.
Amphibians & Reptiles					
Emys marmorata marmorata (northwestern pond turtle)	None	Species of Special Concern		Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	No
Phrynosoma coronatum (California horned lizard)	None	Species of Special Concern		Diverse habitat associations, but normally a low land species associated with sandy scrub habitat in washes.	No
Rana aurora draytonii (California red-legged frog)	Threatened	Species of Special Concern		Breeds in permanent to semi-permanent aquatic habitats including lakes, ponds, marshes, creeks, and other drainages.	No
Rana boyii (foothill yellow-legged frog)	None	Species of Special Concern		Occur from sea level to about 6,000 feet. Prefers gravelly or sandy streams with open banks near woodlands.	No
Spea (=Scaphiopus) hammondii (western spadefoot toad)	None	Species of Special Concern		Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	No
Invertebrates					
Andrena blennospermatis (solitary or ground nesting bee)	None	None		Forages in vernal pools for pollen from blennosperma (*Blennosperma nanum*), and nests in nearby uplands.	No

TABLE 2:
EVALUATION OF SPECIAL STATUS SPECIES HABITATS

Banksula californica (cave obligate harvestman)	None	None		Only known from Alabaster Cave in which has since been partially destroyed by historic mining. Presently, it is sealed with cement.	No
Branchinecta conservatio (Conservancy fairy shrimp)	Endangered	None		Vernal pools and other seasonal wetlands.	No
Branchinecta lynchi (vernal pool fairy shrimp)	Threatened	None		Vernal pools and other seasonal wetlands.	No
Branchinecta mesovallensis (midvalley fairy shrimp)	None	None		Vernal pools and other seasonal wetlands.	No
Desmocerus californicus dimorphus (valley elderberry longhorn beetle)	Threatened	None		Dependent upon elderberry plant (Sambucus mexicana) as primary host species	No, elderberry bushes were not observed.
Hydrochara rickseckeri (Ricksecker's water scavenger beetle)	None	None		Ponds, lakes, streams, rivers, vernal pools, and other freshwater features.	Yes
Lepidurus packardi (vernal pool tadpole shrimp)	Endangered	None		Vernal pools and other seasonal wetlands.	No
Linderiella occidentalis (California linderiella)	None	None		Vernal pools and other seasonal wetlands.	No
Plants					
Allium jepsonii (Jepson's onion)	None	None	CNPS-1B.2	Prefers cismontane woodland or lower montane coniferous forests associated with serpentine soils or volcanic slopes.	No
Balsamorhiza macrolepis var. *macrolepis* (big-scale balsamroot)	None	None	CNPS-1B.2	Prefers chaparral, cismontane woodland, and valley and foothill grasslands.	Yes
Calystegia stebbinsii (Stebbin's morning glory)	Endangered	Endangered	CNPS-1B.1	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No

TABLE 2:
EVALUATION OF SPECIAL STATUS SPECIES HABITATS

Ceanothus roderickii (Pine Hill ceanothus)	Endangered	Rare	CNPS-1B.2	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No
Chlorogalum grandiflorum (Red Hills soaproot)	None	None	CNPS-1B.2	Foothill chaparral, cismontane woodland, and lower montane coniferous forest. Sometimes found in Gabbro soils.	No
Clarkia biloba ssp. *brandegeeae* (Brandegee's clarkia)	None	None	CNPS-1B.2	Generally associated with chaparral and cismontane woodland, but may occur in foothill oak woodland and grassland.	Yes
Eryngium pinnatisectum (Tuolumne button-celery)	None	None	CNPS-1B.2	Cismontane woodlands, lower montane coniferous forests, and vernal pools.	No
Fremontodenderon decumbens (Pine Hill flannelbush)	Endangered	Rare	CNPS-1B.2	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No
Galium californicum ssp. *sierrae* (El Dorado bedstraw)	Endangered	Rare	CNPS-1B.2	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No
Gratiola heterosepala (Bogg's Lake hedge-hyssop)	None	Endangered	CNPS-1B.2	Vernal pools and margins of lakes/ponds.	No
Helianthemum suffrutescens (Bisbee Peak rush rose)	None	None	CNPS-3.2	Open areas within chaparral. Sometimes found in Gabbro soils.	No
Juncus leiospermus var. *ahartii* (Ahart's dwarf rush)	None	None	CNPS-1B.2	Margins of vernal pools.	No
Legenere limosa (legenere)	None	None	CNPS-1B.1	Vernal pools and other seasonally flooded features.	No
Navarretia myersii ssp. *myersii* (Pin cushion navarretia)	None	None	CNPS-1B.1	Vernal pools and other seasonally flooded features.	No
Orcuttia tenuis (slender orcutt grass)	Threatened	Endangered	CNPS-1B.1	Vernal pools and other seasonally flooded features.	No
Orcuttia viscida (Sacramento orcutt grass)	Endangered	Endangered	CNPS-1B.1	Vernal pools and other seasonally flooded features.	No
Packera layneae (Layne's ragwort)	Threatened	Rare	CNPS-1B.2	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No

TABLE 2:
EVALUATION OF SPECIAL STATUS SPECIES HABITATS

Pseudobahia bahiifolia (Hartweg's golden sunburst)	Endangered	Endangered	CNPS-1B.1	Prefers grassland or open woodland with clay soils at elevations around 150 meters.	No
Sagittaria sanfordii (Sanford's arrowhead)	None	None	CNPS-1B.2	Emergent marsh habitat, typically associated with drainages, canals, or irrigation ditches.	No
Wyethia reticulata (El Dorado Co. mule ears)	None	None	CNPS-1B.2	Foothill chaparral and cismontane woodland associated with Gabbro soils.	No

American bats, the species has been observed foraging for flightless insects, which it seizes after landing. The sole occurrence within the target quadrangles is based upon a specimen collected two miles northwest of Folsom in 1942.

Though rock outcrops and numerous trees are present, the dearth of recent sightings makes it unlikely that pallid bats occupy the study area.

Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) is a listed CDFG species of special concern. Primarily considered a coastal and montane forest species, the silver-haired bat roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. This insectivore's favored foraging sites include open wooded areas near water features.

The site contains the appropriate roosting and foraging habitat for this species.

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is a federal threatened and state endangered raptor that typically nests within one mile of large bodies of water including lakes, streams, or rivers. They prey on fish, waterfowl, squirrels, rabbits, and muskrats, though bald eagles have been observed feeding on carrion. They are solitary nesters and may be monogamous. For the last 40 years, wintering adults have been documented in the Bass Lake area, which is located roughly 3.5 miles east of the study area.

The site contains the appropriate nesting habitat for this species.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a raptor species currently listed as threatened in California by the CDFG. Breeding pairs typically nest in tall cottonwoods, valley oaks, or willows associated with riparian corridors, grassland, irrigated pasture, and cropland with a high density of rodents. The Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter. The closest recorded occurrence of a nest site is approximately 6.5 miles southwest of the study area near the intersection of White Rock and Scott Roads.

It is unlikely that Swainson's hawks frequent the study area due to the predominance of oak woodland habitat.

Cooper's Hawk

Cooper's hawk (*Accipiter cooperi*), which is also known as the blue darter or chicken hawk, is listed by CDFG as a species of special concern. This raptor is an ambush predator that prefers to forage in or near wooded locations for birds, domestic poultry, and small mammals. Unlike falcons which use their beaks, Cooper's hawks subdue prey by continuously squeezing with talon-equipped feet. It has been observed on occasion drowning captured prey in water. This species prefers tree nesting in wooded areas typically 10 to 60 feet above ground level.

The study area contains suitable foraging and nesting habitat for this species.

White-Tailed Kite

White-tailed kite (*Elanus leucurus*), also known as black-shouldered kite, is a CDFG fully protected species. This non-migrating bird typically attains a wingspan of approximately 40 inches and feeds primarily on insects, small mammals, reptiles, and amphibians, which it forages from open grasslands. It builds a platform-like nest of sticks in trees or shrubs and lays 3 to 5 eggs, but may brood a second clutch if prey is abundant. The kite's distinct style of hunting includes hovering before diving onto its target.

It is unlikely that white-tailed kites frequent the study area due to the predominance of oak woodland habitat.

Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are listed by CDFG as a species of special concern due to declining populations in the region. They are colonial nesters favoring dense stands of cattails, bulrush, or blackberry thickets associated with drainages, ditches, and canals. The CNDDB lists several occurrences within a relatively close proximity to the parcel, the closest of which is located approximately 1.3 miles northwest of the site along Natomas ditch 0.7 miles south of Green Valley Road.

The study area contains suitable foraging and nesting habitat.

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a ground nesting raptor species that is afforded protection by CDFG as a species of special concern due to declining populations in the Great Central Valley of California. They typically inhabit open grasslands and nest in abandoned ground squirrel burrows, cavities associated with raised mounds, levees, or soft berm features. The nearest CNDDB occurrence is about 9.6 miles southwest of the site.

The study area does not contain the necessary foraging and nesting habitat for burrowing owl.

Grasshopper Sparrow

The grasshopper sparrow (*Ammodramus savannarum*) is listed by CDFG as a species of special concern. This relatively small song bird favors open grasslands and feeds primarily on insects, particularly grasshoppers, which it forages from the ground. It builds on the ground well concealed cup-like nests composed of grass blades. It is also known to form loose breeding colonies.

The required nesting and foraging habitats are present within the study area.

Great Egret

The great egret (*Ardea alba*) is listed by CDFG as a special animal. This bird usually forages alone in shallow open water and wetlands for fish, amphibians, and aquatic invertebrates. The species has recovered from historic persecution by plume hunters, but destruction of wetlands, especially in the West where colonies are few and widely scattered, poses a current threat. Great egrets prefer breeding habitat in or near open waters and wetlands.

The required nesting and foraging habitats are not present.

Great Blue Heron

The great blue heron (*Ardea herodias*) is listed by CDFG as a special animal. This wading bird forages in wetlands and shallow open waters for fish, aquatic invertebrates, small mammals, and amphibians. It usually nests in rookeries that are situated in wetlands or near open waters.

The study area does not support the required nesting and foraging habitats for this species.

California Black Rail

The California black rail (*Laterallus jamaicensis coturniculus*) is listed as threatened in California by the CDFG. It favors salt, brackish, and fresh marshes at low elevations where it forages for seeds, insects, and isopods. It is a solitary nester favoring the edges of wetlands with tall grass and open space. Its range is poorly understood due mainly to its secretive nature. The data search revealed a single occurrence within the Rocklin quadrangle on Clover Creek about two miles northwest of Loomis or approximately 12 miles northwest of the study area.

The site does not support the required nesting and foraging habitat to support this species.

Purple Martin

The purple martin (*Progne subis*) is a California species of special concern. This bird winters in South American and migrates to Mexico, the United States, and southern Canada to breed. It is a colonial nester and utilizes natural cavities such as hollow trees, cliffs, and abandon woodpecker dens. Purple martins also take advantage of created nesting sites such as bird houses or gourds. It feeds on winged insects which it catches on the fly, and it prefers open areas near lakes, ponds, marshes or other water features.

The site appears to provide foraging and nesting habitat for purple martins.

Double-Crested Cormorant

The double-crested cormorant (*Phalacrocorax auritus*) is listed by CDFG as a species of special concern. This diving aquatic bird is the most widespread cormorant in North America. It prefers open water habitats such as ponds, rivers, estuaries, lagoons, and open coastlines where is forages for fish, amphibians, and crustaceans. It constructs nests near water in colonies on cliffs, rocks, or in trees.

Based on the lack of suitable habitat, double-crested cormorants are not likely to occur within the project area.

California Red-Legged Frog

The California red-legged frog (*Rana aurora draytonii*) is a federally threatened and a CDFG species of special concern. This species is the largest indigenous frog west of the Continental divide. Once harvested for food with an annual take of approximately 80,000 animals per year in the late 1800s and early 1900s, the red-legged frog's numbers declined. To bolster diminishing populations, the larger and much more aggressive bull frog (*Rana catesbiana*) was introduced from the eastern United States in 1886. Bull frogs, which are voracious feeders, extirpated the native frogs from much of its historic range. Habitat destruction associated with placer mining, drought, ranching, farming, and urbanization further reduced populations, and in June 1996, the frog was officially assigned protection under the Endangered Species Act. Presently, red-legged frogs are believed to occupy only about 10% of its original range. This species requires deeper (2' to 3') slow moving or still aquatic habitats with abundant emergent vegetation, but it is known also to forage and disperse in nearby uplands.

On March 13, 2001, the service designated approximately 4.1 million acres as California red-legged frog critical habitat, or habitat that has been deemed as essential to the survival and recovery of the species. However, on November 6, 2002, a U.S. District Court ordered the service to submit a new critical habitat proposal citing deficiencies in the initial economic impact analysis. The service was mandated to adopt a new final rule no later than November 2005. To date thirty-one new Units have been proposed and are presently undergoing the review process. According to the service's Sacramento Office website, Unit 3 (Weber Creek/Consumnes Unit) is the closest proposed critical habitat to the project site; Unit 3 is located at least 20 miles to the east. Though the study area is not in or near proposed red-legged frog critical habitat, an occurrence was recorded about 4 miles to the northwest in 2005.

The study area does not contain the required habitat for California red-legged frog.

Foothill Yellow-Legged Frog

The foothill yellow-legged frog (*Rana boyii*) is a state species of special concern that prefers slow moving, gravelly or sandy bottomed streams with open, sunny banks. This species is known to forage in adjacent woodlands for invertebrates, and is found from the Umpqua Basin in Oregon south through the Coastal Range and Sierra foothills of California.

The study area does not contain the necessary habitat to support this species.

Northwestern Pond Turtle

The northwestern pond turtle (*Emys marmorata marmorata*) is a California species of special concern. Its favored habitats include streams, large rivers and canals with slow-moving water, aquatic vegetation, and open basking sites. Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals and some plants. Northwestern pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks.

The necessary habitat is not present for northwestern pond turtle.

Western Spadefoot Toad

The western spadefoot toad (*Spea hamondii)* is a California species of special concern. It is a nocturnally active animal, and prefers to forage in grassland, scrub, and chaparral for a variety of insects, worms, and other invertebrates. This species breeds from January to May in vernal pools, pools in ephemeral stream courses, and other fish-free water features. Females commonly lay more than 500 eggs in one season. The tadpoles develop in 3 to 11 weeks, and must complete their metamorphosis before the temporary pools dry.

The required habitat is not present to support western spadefoot toads.

California Horned Lizard

The California horned lizard (*Phrynosoma coronatum*) is a California species of special concern. Several factors including commercial pet collecting (which was banned in 1981) and habitat destruction have resulted in the population decline of the species. This lizard's ability to change color to match its background, and its low, flattened profile make it difficult to detect. When threatened, the horned lizard can shoot streams of blood from its eyes up to a distance of four feet. Ants compose about 50% of their diet, but it will consume other insects as well. Mature females produce clutches of 6 to 21 eggs from May to June, which hatch in August and September. It lives in several diverse habitats, but the California horned lizard typically prefers lowland sandy scrub habitats.

The study area does not contain the preferred scrub habitat most commonly associated with this species.

Vernal Pool Branchiopods

The federally threatened vernal pool fairy shrimp *(Branchinecta lynchi)* and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*) as well as the non-listed California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*) have been documented by the CNDDB as occurring within the proximity of the study area. Due to the dearth of available distribution information and its recent discovery in western Placer County, we also included the endangered Conservancy fairy shrimp (*Branchinecta conservatio*) in our special status species habitat assessment even though it is not listed as occurring in any of the target quadrangles. These species exclusively inhabit vernal pools or other seasonally ponded wetlands that sustain inundation during the winter before drying in the late spring.

The site lacks the necessary habitat to support the above branchiopods.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is a federal threatened species that is dependent upon the elderberry plant (*Sambucus sp.*) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region and numerous occurrences of valley elderberry longhorn beetle have been recorded around the study area.

The apparent lack of elderberry shrubs would preclude the likelihood that valley elderberry longhorn beetles occur within the study area. However, due to the heavy plant growth associated with the site, we recommend that surveys be performed in June when elderberries are in full bloom and less problematic to locate.

Solitary or Ground-Nesting Bee

The solitary bee (*Andrena blennospermatis*) is not a state or federal listed species; however, it has been assigned a State Ranking code of S2 meaning that 6 to 20 elemental occurrences or 1,000 to 3,000 individuals have been identified within the state. This ground nesting species collects pollen from the vernal pool flower, blennosperma (*Blennosperma nanum*), which it caches in several individual underground brood chambers. In each individual chamber the

female deposits a solitary egg that will hatch and feed on the specially treated pollen ball. These bees forage in vernal pool habitat supporting blennosperma and burrow and nest in adjacent uplands.

The site's lack of vernal pools would greatly reduce the likelihood that this ground-nesting regular occupies the parcel.

Ricksecker's Water Scavenger Beetle

This aquatic beetle (*Hydrochara rickseckeri*) is not a state or federal listed species; however, it has been assigned a State Ranking code of S1S2 meaning that <6 to 20 elemental occurrences or <1,000 to 3,000 individuals have been identified within the state. The habits of this poorly understood species have not been thoroughly documented. They are believed to be scavengers and metamorphose from a predacious larval stage. This species favors shallow, weedy freshwater habitats such as vernal pools, lakes, ponds, and slow moving streams. It is capable of flight, but its dispersal capabilities are not well understood.

The study area provides the required habitat to support this species.

Cave Harvestman

The cave-obligate harvestman (*Banksula californica*) was recorded by CNDDB as occurring within the vicinity of the study area. Though it maintains no special state or federal status, it has been assigned a State Ranking of SH meaning that all elemental occurrences are historical. The very rare *Banksula californica* is poorly understood and known only from specimens collected from Alabaster Cave around 1900. The Alabaster Cave in El Dorado County has since been partially destroyed by historic mining, and it is presently sealed with cement.

The site lacks the caves necessary to support these species.

Special Status Plants Requiring Gabbro Soils

Several special status species plants associated with the mildly acidic Gabbro soils are identified on the CNDDB as occurring within the target quadrangles and include Stebbin's morning glory (*Calystegia stebbinsii*), Pine Hill flannelbush (*Fremontodon decumbens*) Pine Hill ceanothus (*Ceanothus roderickii*), El Dorado bedstraw (*Galium californicum sierrae*), Layne's ragwort (*Packera layneae*), and El Dorado mule ears (*Wyethia reticulata*). Gabbro soils are derived from

igneous rock and possess peculiar characteristics such as high concentrations of magnesium, iron, nickel, chromium, and cobalt and low amounts of calcium and plant nutrients such as phosphorus. This unusual soil has resulted in the evolution of a unique community of plants, many of which are only found in El Dorado County.

Most of the above plants have only been documented in chaparral or cismontane woodland associated with the Gabbro soils region around Pine Hill. The absence of suitable habitat in the study would eliminate all Gabbro soil associated plants from occurring in the study area.

The CNDDB also lists the presence of two additional sensitive plant species associated with Gabbro soils. Brisbee Peak rush-rose (*Helianthemum suffrutescens*) and Red Hills soaproot (*Chlorogalum gradiflorum*) have been documented in the Gabbro region, but are known to grow on other soil types as well. Both occur in chaparral, but Red Hills soaproot is also found in cismontane woodlands, and lower montane coniferous forest.

The appropriate habitat types for these species are not present within the study area.

Plants Associated with Vernal Pools and Other Wet Habitats

Special status plant species identified by CNDDB as occurring in the general vicinity of the study area include dwarf pin cushion navarretia (*Navarretia myersii* ssp. *myersii*), legenere (*Legenere limosa*), slender orcutt grass (*Orcuttia tenuis*), Sacramento orcutt grass (*Orcuttia viscida*), Tuolumne button-celery (*Eryngium pinnatisectum*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), Sanford's arrowhead (*Sagittaria sanfordii*), and Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*). Pincushion navarretia, Ahart's dwarf rush, slender orcutt grass, Sacramento orcutt grass, and legenere are strongly associated with vernal pools or other seasonal wetlands. Bogg's Lake hedge-hyssop is found in vernal pools, but it also favors other shallow water habitats such as lake margins and marshes. Tuolumne button-celery occurs in vernal pools, but it is also found in other habitats such as cismontane woodland and lower coniferous montane forests. Sanford's arrowhead generally occurs in deep aquatic or emergent marsh habitats near drainages, canals, ditches, or ponds.

The appropriate habitat for Sanford's arrowhead is not present within the study area.

Other Special Status Plant Species

Several other special status species plants, such as Jepson's onion (*Allium jepsonii*), big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*), Hartweg's golden sunburst (*Pseudobahia bahiifolia*), and Brandegee's clarkia (*Clarkia biloba brandegeeae*) have been recorded as occurring within the proximity of the study area.

Jepson's onion grows in cismontane woodland and lower cismontane coniferous forests associated with serpentine soils or volcanic slopes. Big-scale balsamroot is found in valley or foothill grasslands or cismontane woodland habitats; it sometimes is found on serpentine soils. Brandegee's clarkia is generally associated with chaparral and cismontane woodland, but is also documented in foothill oak woodland and grassland. Hartweg's golden sunburst is a federal and California endangered species associated with grasslands and/or open forests with clay soils.

Of the above species, habitat is present within the study area for big-scale balsam root and Brandegee's clarkia.

SUMMARY OF SPECIAL STATUS SPECIES HABITAT ASSESSMENT

Based on the presence of suitable habitat the following species may occur within the study area: silver-haired bat, Cooper's hawk, tricolored blackbird, grasshopper sparrow, bald eagle, purple martin, Ricksecker's water scavenger beetle, big-scale balsamroot, and Brandegee's clarkia.

The apparent lack of elderberry shrubs would preclude the likelihood that valley elderberry longhorn beetles occur within the study area. However, due to the heavy plant growth associated with the site, we recommend that surveys be performed in June when elderberries are in full bloom and less problematic to locate.

If future development of the study area will occur during the raptor nesting season, which extends from February to September, we recommend that a pre-construction nesting survey be completed within two weeks of the start of work.

APPENDIX A

DATA FORMS

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ridgeview Unit 9 City/County: El Dorado Sampling Date: 2/28/2008

Applicant/Owner: Pacific States Development Corp. State: CA Sampling Point: 01

Investigator(s): J. Gibson / M. Hirkala Section, Township, Range: S 34, T 10N, R 8E

Landform (hillslope, terrace, etc.): Seep Local relief (concave, convex, none): Concave Slope (%): 2%

Subregion (LRR): C Lat: 38° 40' 36.43193" N Long: 121° 05' 36.27798" W Datum: WGS 84

Soil Map Unit Name: Auburn very rocky silt loam, 2-30% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐
Hydric Soil Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0%		
Herb Stratum			
1. Lythrum hyssopifolia	5	No	FACW
2. Cyperus eragrostis	60	Yes	FACW
3. Geranium dissectum	5	No	UPL
4. Juncus balticus	30	Yes	OBL
5.			
6.			
7.			
8.			
Total Cover:	100%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0%		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x1=	30
FACW species	65	x2=	130
FAC species	0	x3=	0
FACU species	0	x4=	0
UPL species	5	x5=	25
Column Totals:	100 (A)		185 (B)

Prevalence Index = B/A = 1.85

Hydrophytic Vegetation Indicators:

Yes Dominance Test is > 50%

Yes Prevalence Index is ≤ 3.0

___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOILS

Sampling Point: 01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type	Loc	Texture	Remarks
1-16	5Y 5/2	90%	7.5Y 4/6	10%	C	M, RC	Clay loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix. Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR C)**
- ☐ 1 cm Muck (A9) **(LRR D)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surace (F7)
- ☒ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	Yes ☒	No ☐	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (inches): To Surface

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ridgeview Unit 9 City/County: El Dorado Sampling Date: 2/28/2008
Applicant/Owner: Pacific States Development Corp. State: CA Sampling Point: 02
Investigator(s): J. Gibson / M. Hirkala Section, Township, Range: S 34, T 10N, R 8E
Landform (hillslope, terrace, etc.): Toe of Slope Local relief (concave, convex, none): none Slope (%):
Subregion (LRR): C Lat: 38° 40' 36.67155" N Long: 121° 05' 36.36018" W Datum: 05
Soil Map Unit Name: Auburn very rocky silt loam, 2-30% slopes NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒
Hydric Soil Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☐	No ☒	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0%		
Herb Stratum			
1. Vulpia myuros	25	Yes	FACU
2. Geranium dissectum	5	No	UPL
3. Lolium perenne	2	No	FAC
4. Centaurea solstitialis	5	No	UPL
5. Bromus diandrus	45	Yes	UPL
6. Deschampsia danthoniodes	2	No	FACW
7. Festuca arundicea	15	No	FAC
8. Bromus mollis	2	No	FACU
Total Cover:	101%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0%		

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x1=	0
FACW species	2	x2=	4
FAC species	17	x3=	51
FACU species	27	x4=	108
UPL species	55	x5=	275
Column Totals:	101 (A)		438 (B)

Prevalence Index = B/A = 4.34

Hydrophytic Vegetation Indicators:

No Dominance Test is > 50%
No Prevalence Index is ≤ 3.0
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOILS

Sampling Point: 02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type	Loc	Texture	Remarks
1-6	5YR 3/3	100%					Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix. Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR C)**
- ☐ 1 cm Muck (A9) **(LRR D)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surace (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ridgeview Unit 9 City/County: El Dorado Sampling Date: 2/28/2008

Applicant/Owner: Pacific States Development Corp. State: CA Sampling Point: 03

Investigator(s): J. Gibson / M. Hirkala Section, Township, Range: S 34, T 10N, R 8E

Landform (hillslope, terrace, etc.): Seep Local relief (concave, convex, none): Concave Slope (%): 4%

Subregion (LRR): C Lat: 38° 40' 33.27100" N Long: 121° 05' 32.44666" W Datum: WGS 84

Soil Map Unit Name: Auburn very rocky silt loam, 2-30% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐
Hydric Soil Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0%		
Herb Stratum			
1. Paspalum dilatum	3	No	FAC
2. Typha sp.	100	Yes	OBL
3. Juncus effusus	5	No	OBL
4. Cyperus eragrostis	5	No	FACW
5.			
6.			
7.			
8.			
Total Cover:	113%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0%		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	105	x1=	105
FACW species	5	x2=	10
FAC species	3	x3=	9
FACU species		x4=	0
UPL species		x5=	0
Column Totals:	113 (A)		124 (B)

Prevalence Index = B/A = 1.1

Hydrophytic Vegetation Indicators:

Yes Dominance Test is > 50%

Yes Prevalence Index is ≤ 3.0

___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOILS

Sampling Point: 03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type	Loc	Texture	Remarks
1-16	7.5YR 3/3	85%	5YR 4/4	15%	C	M	Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix. Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR C)**
- ☐ 1 cm Muck (A9) **(LRR D)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surace (F7)
- ☒ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	Yes ☐	No ☐	Depth (inches): _____
Water Table Present?	Yes ☐	No ☐	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (inches): To Surface

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ridgeview Unit 9 City/County: El Dorado Sampling Date: 2/28/2008

Applicant/Owner: Pacific States Development Corp. State: CA Sampling Point: 04

Investigator(s): J. Gibson / M. Hirkala Section, Township, Range: S 34, T 10N, R 8E

Landform (hillslope, terrace, etc.): Shoulder of Slope Local relief (concave, convex, none): None Slope (%): 3%

Subregion (LRR): C Lat: 38° 40' 33.27100" N Long: 121° 05' 32.11808" W Datum: WGS 84

Soil Map Unit Name: Auburn very rocky silt loam, 2-30% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒
Hydric Soil Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☐	No ☒	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0%		
Herb Stratum			
1. Unidentified upland Bromus sp.	45	Yes	-----
2. Bromus mollis	5	No	FACU
3. Centaurea solstitialis	5	No	UPL
4. Sylibum marianum	30	Yes	UPL
5. Cirsium arvense	5	No	FAC
6. Ranunculus muricatus	1	No	FACW
7. Erodium botrys	5	No	UPL
8. Geranium dissectum	5	No	UPL
Total Cover:	101%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0%		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x1=	0
FACW species	1	x2=	2
FAC species	5	x3=	15
FACU species	5	x4=	20
UPL species	90	x5=	450
Column Totals:	101 (A)		487 (B)

Prevalence Index = B/A = 4.82

Hydrophytic Vegetation Indicators:

No Dominance Test is > 50%

No Prevalence Index is ≤ 3.0

____ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: The only Bromus sp. listed in the Service's 1988 "National List of Plant Species that Occur in Wetlands: California (Region 0)" with an indicator status of FAC - or wetter is Bromus ciliatus (FAC). This species is not found in the study area's bio-region.

SOILS

Sampling Point: 04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type	Loc	Texture	Remarks
1-12	5YR 3/4	100%					Loam	

Type: C=Concentration, D=Depletion, RM=Reduced Matrix. Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR C)**
- ☐ 1 cm Muck (A9) **(LRR D)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surace (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:

- ☐ 1 cm Muck (A9) **(LRR C)**
- ☐ 2 cm Muck (A10) **(LRR B)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
Type: ____
Depth (inches): ____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
- ☐ Sediment Deposits (B2) **(Nonriverine)**
- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☐ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations

Surface Water Present?	Yes ☐	No ☒	Depth (inches): ____
Water Table Present?	Yes ☐	No ☒	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ☐	No ☒	Depth (inches): ____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX B

DELINEATION MAP

APPENDIX C

PLANT LIST

PARTIAL LIST OF PLANTS OBSERVED ON THE RIDGEVIEW UNIT 9 PROPERTY AND THEIR STATUS AS WETLAND INDICATOR SPECIES

Scientific Name	Common Name	Status [1&2]
Aesculus californica	California buckeye	UPL
Anagallis arvensis	scarlet pimpernel	FAC
Artemesia douglasiana	Douglas' wormwood	FACW
Baccharis pilularis ssp. Consanguinea	coyote brush	UPL
Brassica campestris	field mustard	UPL
Bromus diandrus (B. rigidus)	rip-gut grass	UPL
Bromus mollis	soft chess	FACU-
Centaurea calcitrapa	purple star-thistle	UPL
Centaurea solstitialis	yellow star-thistle	UPL
Cirsium arvense	Canada thistle	FAC-
Claytonia perfoliata	Miner's lettuce	FAC
Conyza canadensis	Canada horseweed	FAC
Cynosurus echinatus	dogtail	UPL
Cyperus eragrostis	tall flatsedge	FACW
Epilobium sp.	willow herb	-----
Erodium botrys	filaree	UPL
Erodium cicutarium	cut-leaf filaree	UPL
Festuca arundinacea	tall fescue	FAC-
Geranium dissectum	cut-leaf geranium	UPL
Heteromeles arbutifolia	toyon	UPL
Hordeum leporinum	barley	NI
Hypochaeris glabra	smooth cats tongue	UPL
Juncus xiphioides	iris-leaf rush	OBL
Lactuca serriola	prickly lettuce	FAC
Lolium perenne (L. multiflorum)	perennial ryegrass	FAC*
Lupinus nanus	sky lupine	UPL
Lythrum hyssopifolia	loosestrife	FACW
Muhlenbergia rigens	deer grass	FACW
Pinus sabiniana	foothills pine	UPL
Polypogon monspeliensis	annual rabbit-foot grass	FACW+
Quercus douglasii	blue oak	UPL
Quercus wislizenii	interior live oak	UPL
Rubus procerus	Himalayan blackberry	FAC
Rumex crispus	curly dock	FACW-
Salix sp.	willow	-----
Senecio vulgaris	common groundsel	NI
Silybum marianum	milk thistle	UPL

[1] Reed, P.B. 1988. National List of Plant Species That Occur in Wetlands: California (Region 0). Biological Report 88(26.10) May 1988. National Ecology Research Center, National Wetland Inventory, U.S. Fish and Wildlife Service, St. Petersburg, Fl.

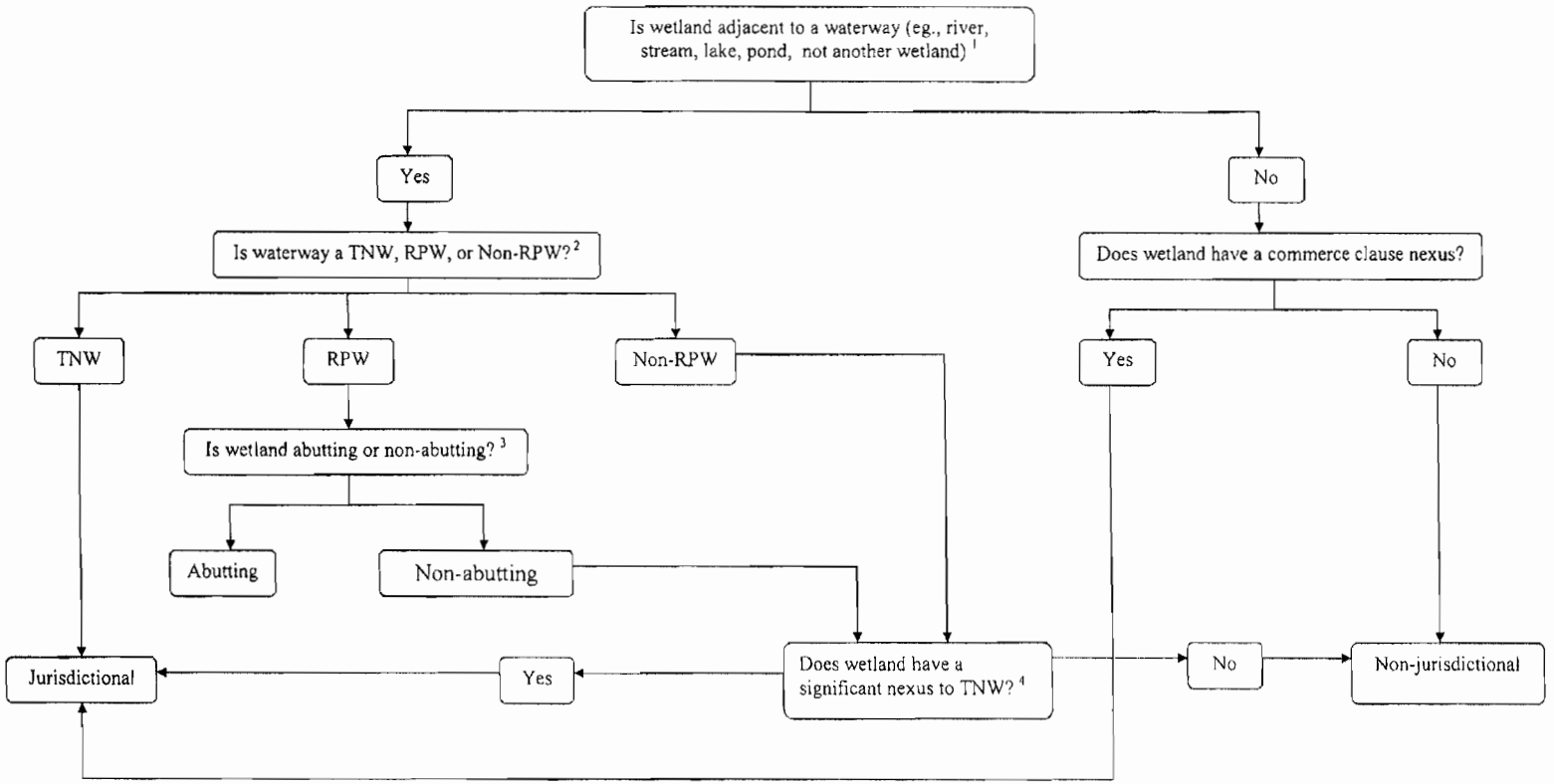
[2] OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; UPL = upland; and NI = no indicator.

Taeniatherum caput-medusae	medusa-head	UPL
Toxicodendron diversilobum	poison oak	UPL
Trifolium sp.	clover	-----
Typha sp.	cattail	OBL
Verbena hastata	blue vervain	FACW
Vicia villosa	winter vetch	-----
Wyethia mollis	mule ears	UPL

APPENDIX D

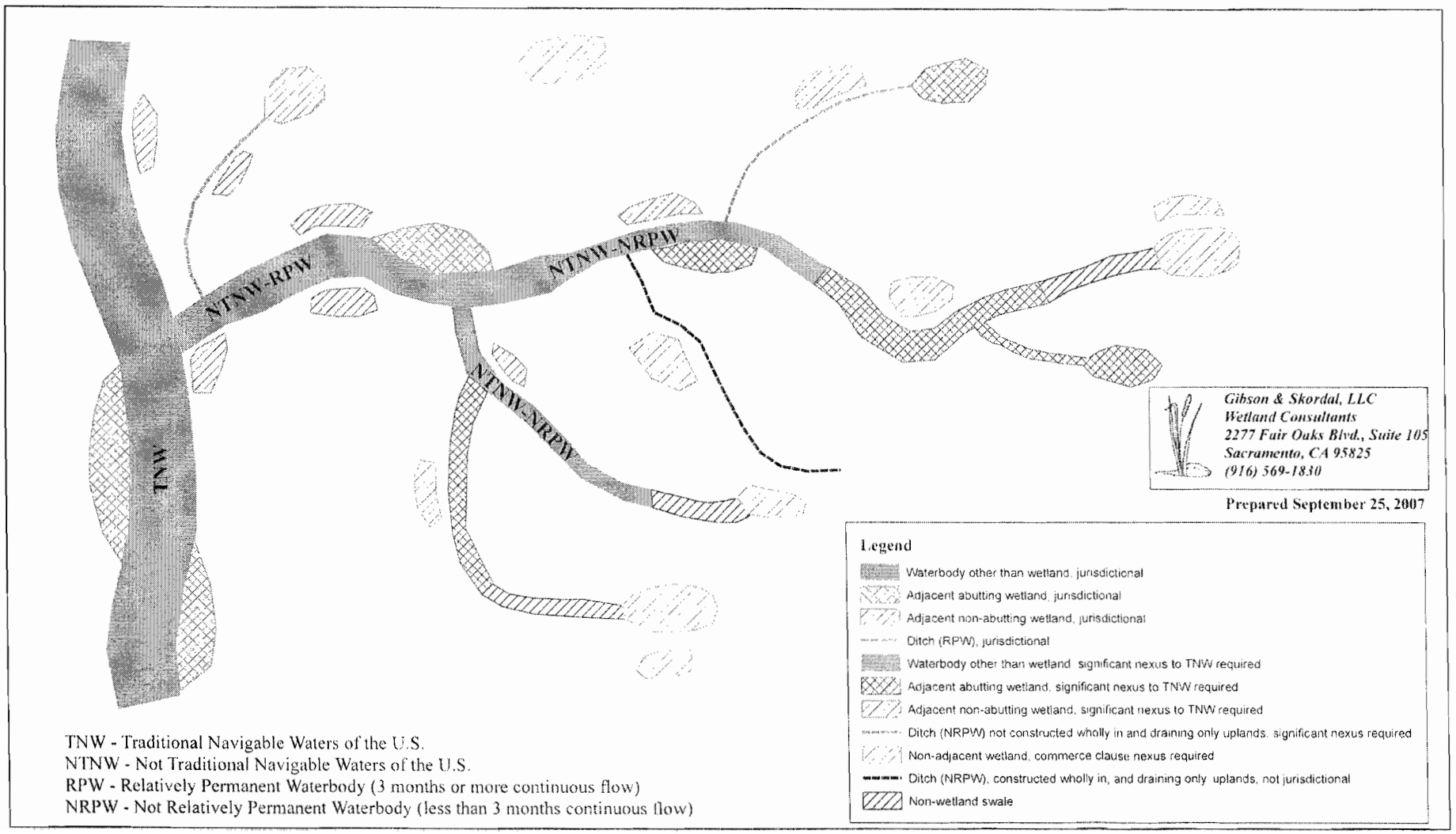
JURISDICTIONAL CATEGORY EXHIBITS

Jurisdiction Criteria for Wetlands



[1] For purposes of this exhibit, it is assumed that waterbody is either a TNW or a tributary to a TNW.
[2] TNW = Traditional Navigable Water, RPW = Relatively Permanent Waterbody, Non-RPW = Not a Relatively Permanent Waterbody.
[3] The term abutting is synonymous with contiguous.
[4] Depending on the situation, the significant nexus evaluation will be based on either the wetland by itself or the wetland in combination with its adjacent waterbody and other similarly situated wetlands.

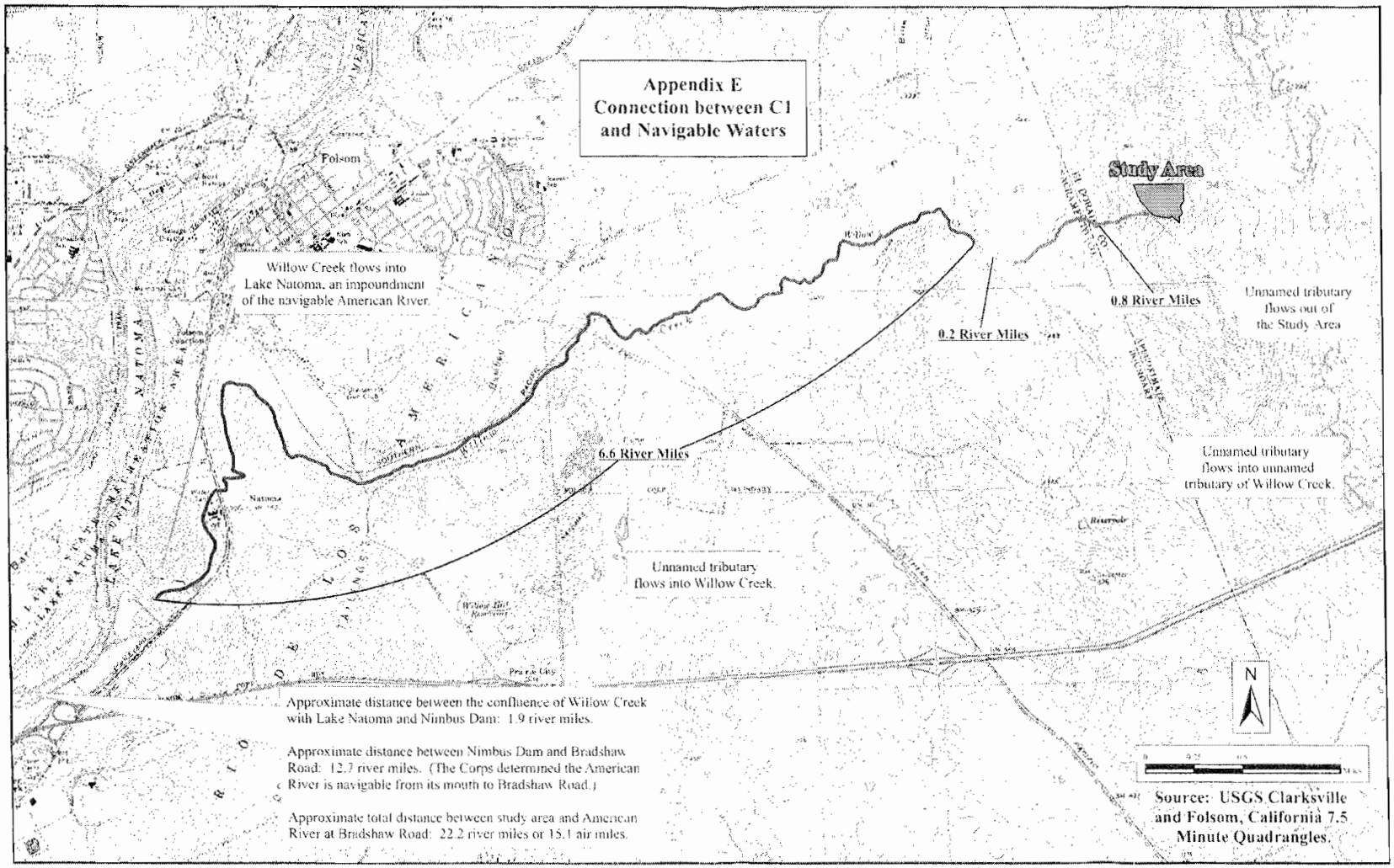
RAPANOS CARABELL EXHIBIT



TNW - Traditional Navigable Waters of the U.S.
NTNW - Not Traditional Navigable Waters of the U.S.
RPW - Relatively Permanent Waterbody (3 months or more continuous flow)
NRPW - Not Relatively Permanent Waterbody (less than 3 months continuous flow)

APPENDIX E

CONNECTION TO NAVIGABLE WATERS EXHIBIT


Appendix E
Connection between C1
and Navigable Waters
Folsom
Study Area
Willow Creek flows into
Lake Natoma, an impoundment
of the navigable American River.
0.8 River Miles
Unnamed tributary
flows out of
the Study Area
0.2 River Miles
6.6 River Miles
Unnamed tributary
flows into unnamed
tributary of Willow Creek.
Unnamed tributary
flows into Willow Creek.
Approximate distance between the confluence of Willow Creek
with Lake Natoma and Nimbus Dam: 1.9 river miles.
Approximate distance between Nimbus Dam and Bradshaw
Road: 12.7 river miles. (The Corps determined the American
River is navigable from its mouth to Bradshaw Road.)
Approximate total distance between study area and American
River at Bradshaw Road: 22.2 river miles or 15.1 air miles.
N
Source: USGS Clarksville
and Folsom, California 7.5
Minute Quadrangles.

APPENDIX F

DIGITALS

Photo 1 - Looking Upslope at Terminus of DD1 2/28/2008

Photo 2 - Looking Upslope at Beginning of DD2 2/28/2008

Photo 3 - Looking Downslope at Beginning of DD2 2/28/2008

Photo 4 - Looking Upstream at CH1 2/28/2008

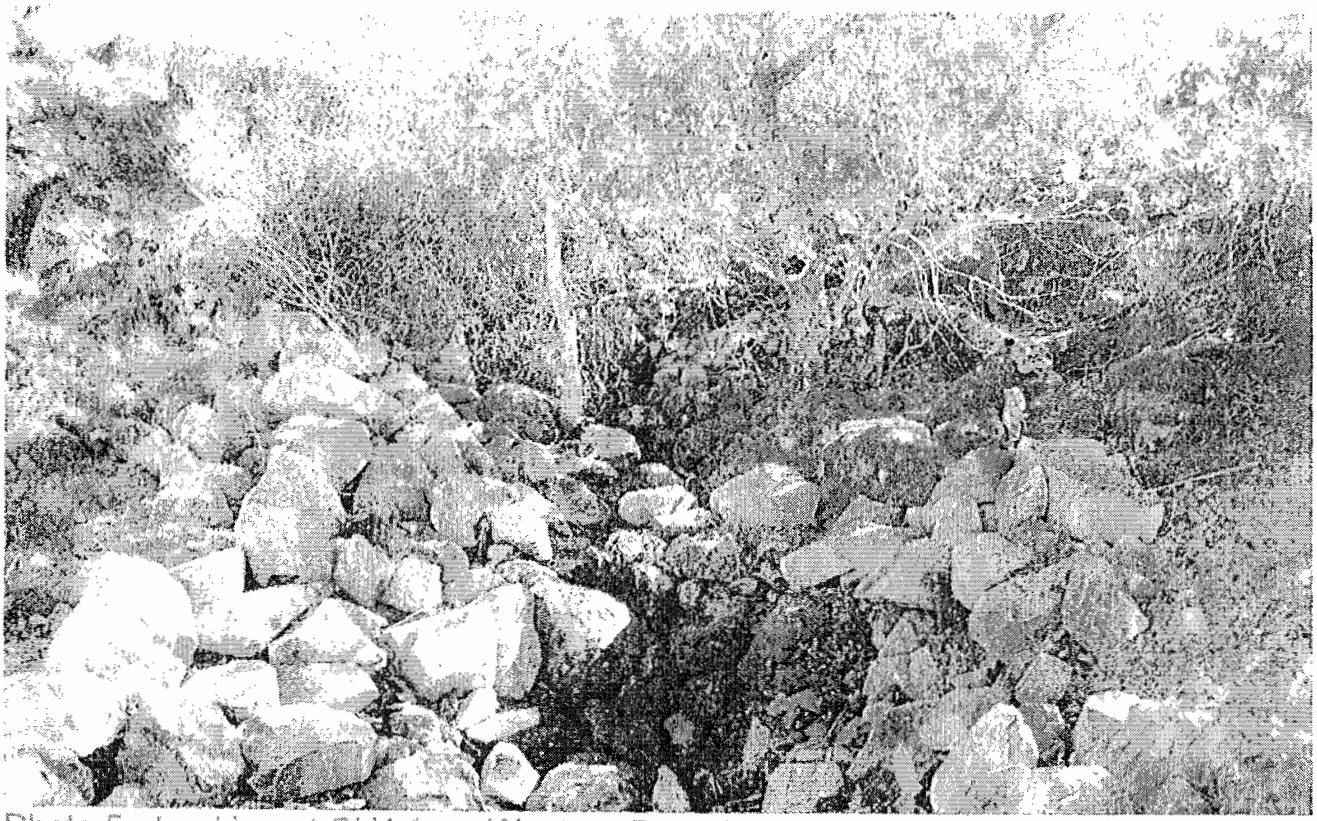


Photo 5 - Looking at CH1 from Western Boundary 2/28/2008

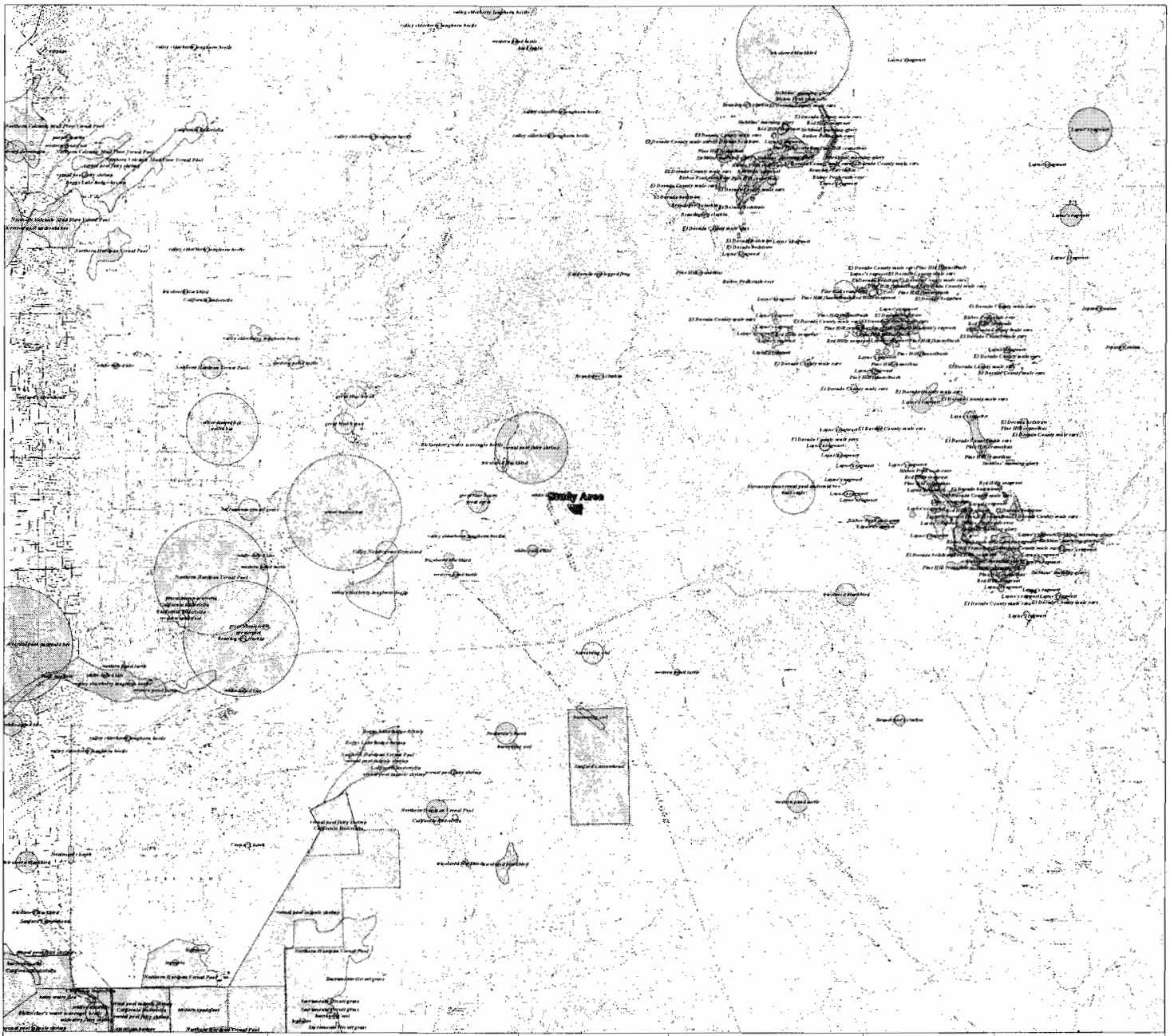
Photo 6 - S1 in Roadside Cut 2/28/2008

Photo 7 - S3 Looking South 2/28/2008

Photo 8 - 30 Inch Culvert Supplementing S5 2/28/2008

APPENDIX G

CNDDB OCCURRENCE MAP



CNDDB OCCURRENCE MAP

Ridgeview Unit #9
El Dorado Hills
El Dorado County, California

The elemental occurrence location data was provided by the California Department of Fish and Game's Natural Diversity Data Base (Version 3.1.0). The size of elemental occurrence polygons are dependent upon several factors including DFG mapping policies and the age and specificity of reported special status species sightings.

Source: USGS Roseville, Rocklin, Pilot Hill, Coloma, Shingle Springs, Clarksville, Folsom, Citrus Hts, Latrobe, Folsom SE, Buffalo Creek, and Cummulus, California 7.5 Minute Quadrangles.

N

0 0.5 1 2
Miles

Prepared For

Pacific States Development Company
991 Governor Drive, Suite 103
El Dorado Hills, California 95762

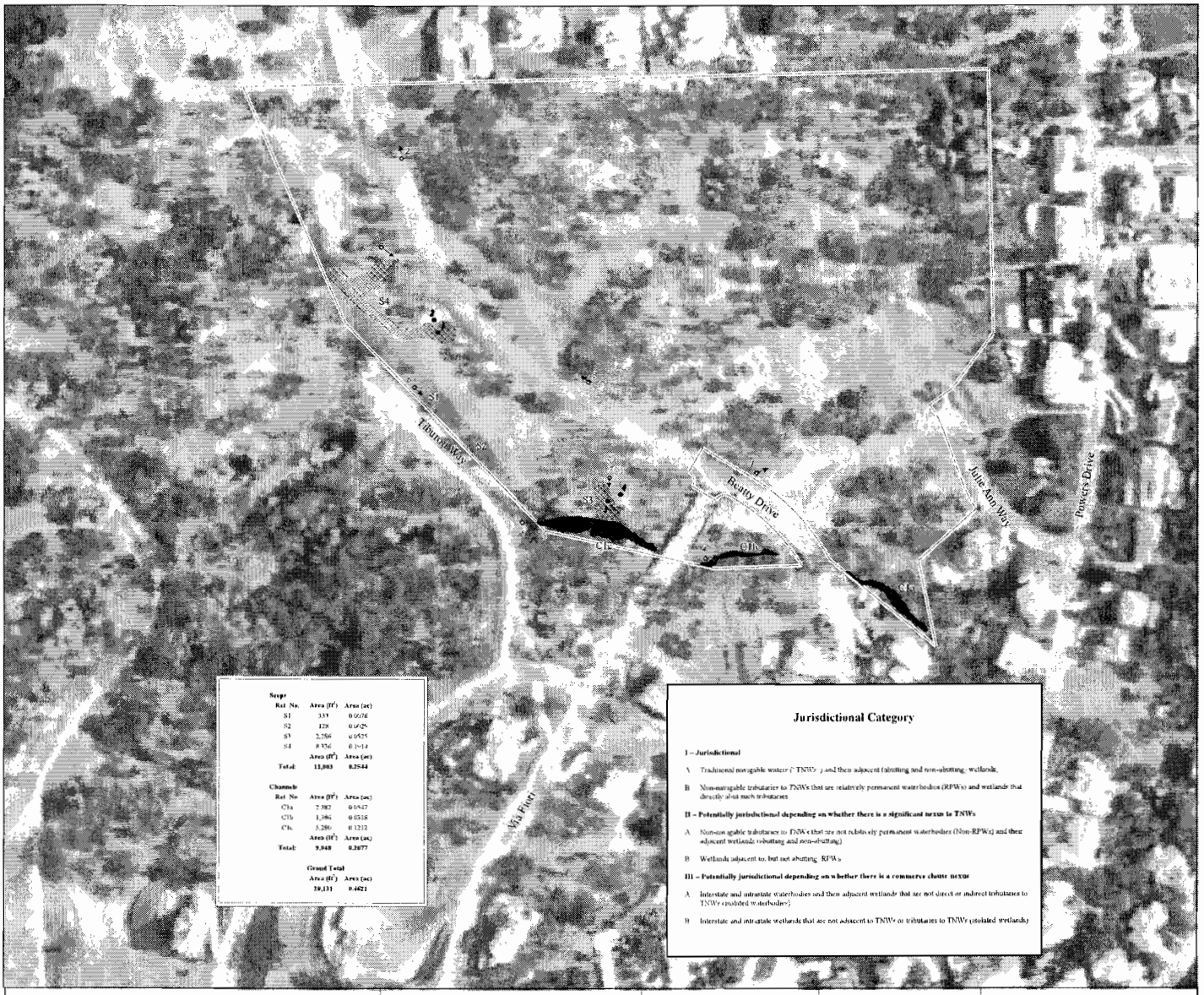
GIBSON & SKORDAL, LLC
WETLAND CONSULTANTS
2277 Fair Oaks Blvd. Ste. 105
Sacramento CA 95825
(916) 569-1500

Prepared By: M. Hirkala

Prepared Date: March 2008

Data Aerial Flown:

CNDDB Shapefiles: September 2007 (Commercial Version)



Seeps		
Ref No.	Area (ft²)	Area (ac)
S1	337	0.0078
S2	128	0.0029
S3	2,256	0.0525
S4	8,356	0.1914
	Area (ft²)	Area (ac)
Total:	11,083	0.2544

Channels		
Ref No.	Area (ft²)	Area (ac)
Cha	7,382	0.1547
Chb	1,386	0.0318
Chc	5,280	0.1212
	Area (ft²)	Area (ac)
Total:	9,048	0.2077

Grand Total	
Area (ft²)	Area (ac)
20,131	0.4621

Jurisdictional Category

I – Jurisdictional

A. Traditional navigable waters ("TNWs") and their adjacent (abutting and non-abutting) wetlands.

B. Non-navigable tributaries to TNWs that are relatively permanent waterbodies (RPWs) and wetlands that directly abut such tributaries

II – Potentially jurisdictional depending on whether there is a significant nexus to TNWs

A. Non-navigable tributaries to TNWs that are not relatively permanent waterbodies (Non-RPWs) and their adjacent wetlands (abutting and non-abutting)

B. Wetlands adjacent to, but not abutting, RPWs

III – Potentially jurisdictional depending on whether there is a commerce choate nexus

A. Interstate and intrastate waterbodies and their adjacent wetlands that are not direct or indirect tributaries to TNWs (isolated waterbodies)

B. Interstate and intrastate wetlands that are not adjacent to TNWs or tributaries to TNWs (isolated wetlands)

JURISDICTIONAL DELINEATION

Ridgeview Unit 9 Property

El Dorado County, California

- Data Points
- Photo Points
- Abutting Wetland (Category IB)
- Channel (Category IB)
- Study Area Boundary (22.8 acres)

N

0 50 100 200

Feet

Prepared For:

Pacific States Development Corp.
991 Governor Drive
Suite 103
El Dorado Hills, California 95762

GIBSON & SKORDAL, LLC
WETLAND CONSULANTS
2277 Fair Oaks Blvd., Ste. 105
Sacramento, CA 95825
Telephone: (916) 569-1830

Prepared By: M. Hiikela

Prepared Date: February 2008

Revised Date: October 2008

Aerial Photo: May 2002

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

January 21, 2009

Regulatory Division (SPK-2008-00875)

Mr. Bill Fisher
Pacific States Development Corp.
991 Governor Drive, Suite 103
El Dorado Hills, California 95762-4293

Dear Mr. Fisher:

We are responding to your request for a jurisdictional determination (JD) for the Ridgeview Unit 9 Property site in accordance with our Regulatory Guidance Letter (RGL) 08-02. This approximately 22.8-acres site is located in Section 34, Township 10 North, Range 8 East, MDB&M, Latitude 38.67691 North, Longitude -121.09176 West, El Dorado County, California.

Based on available information, we concur with the estimate of potential waters of the United States, as depicted on Matt Hirkala and Jim Gibson, Gibson and Skordal's October 2008 Jurisdictional Delineation Ridgeview Unit 9 Property, El Dorado County, California drawing. The approximately 0.4621-acre of wetlands or other water bodies present within the survey area may be jurisdictional waters of the United States. These waters may be regulated under Section 404 of the Clean Water Act.

A copy of our RGL 08-02 Preliminary Jurisdictional Determination Form for this site is enclosed. Please sign and return a copy of the completed form to this office. Once we receive a copy of the form with your signature we can accept and process a Pre-Construction Notification or permit application for your proposed project.

You should not start any work in any potentially jurisdictional waters of the United States unless you have Department of the Army permit authorization, or if you intend to request an approved JD for this site. In certain circumstances, as described in RGL 08-02, an approved JD may later be necessary.

This determination has been conducted to identify the potential limits of wetlands and other water bodies which may be subject to Corps of Engineers' jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

We appreciate your feedback. At your earliest convenience, please complete our customer survey at *http://www.spk.usace.army.mil/customer_survey.html*. Your passcode is "conigliaro".

Please refer to identification number SPK-2008-00875 in any correspondence concerning this project. If you have any questions, please contact Mr. Peck Ha at our California North Branch, at the address above, email *peckha@usace.army.mil*, or telephone (916) 557-6617. You may also use our website: *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

Paul Maniccia
for

Nancy A. Haley
Chief, California North Branch

Enclosures

Copy Furnished without enclosures:

Mr. Jim Gibson, Gibson and Skordal, LLC, 2277 Fair Oaks Blvd., Suite 105, Sacramento, CA 95825
Ms. Sandy Morey, California Department of Fish and Game, 1701 Nimbus Road, Rancho Cordova, CA 95670
El Dorado County, Planning and Development Services, 2850 Fairlane Court, Building "C", Placerville, CA 95667

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):

January 20, 2009

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Jim Gibson
2277 Fair Oaks Blvd, Suite 105
Sacramento, California 95825

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Sacramento District, Ridgeview Unit 9 Property, 200800875

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: (USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: California County/parish/borough: El Dorado City: El Dorado Hills
Center coordinates of site (lat/long in degree decimal format): Lat. 38.67691 North, Long. -121.09176 West.
Universal Transverse Mercator: 10
Name of nearest waterbody: Willow Creek

Identify (estimate) amount of waters in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.
Cowardin Class: Riverine
Stream Flow: Intermittent
Wetlands: 0.4621acres.
Cowardin Class: Scrub-shrub

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal:

Non-Tidal:

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:
☒ Field Determination. Date(s): August 19, 2008

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Jurisdictional Delineation, Ridgeview Unit 9 Property, El Dorado County, California, October 2008, Gibson and Skordal, LLC.

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

- ☒ Office concurs with delineation map.
- ☐ Office concurs with data sheets/delineation report.

☐ Data sheets prepared by the Corps: .

☐ Corps navigable waters' study: .

☐ U.S. Geological Survey Hydrologic Atlas: .

- ☐ USGS NHD data.
- ☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name: USGS Clarksville and Folsom, California 7.5 Minute Quad.

☒ USDA Natural Resources Conservation Service Soil Survey. Citation:1974Soil Survey Geographic (SSURGO) database for El Dorado Area, California: January 4, 2007

☐ National wetlands inventory map(s). Cite name: .

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps: .

☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date):Provided by Gibson and Skordal. or ☒ Other (Name & Date):Gibson and Skordal.

☐ Previous determination(s). File no. and date of response letter: .

☒ Other information (please specify):Corps site visit August 19, 2008

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

1/23/2009

Signature and date of Regulatory Project Manager (REQUIRED)

Peek Ha.

Pacific States Development Corp
William J Gibson, Pres
1-30-09

Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

SITE ASSESSMENT FORM

Project Biologist & Contact Information: *(attach qualifications)*	**James C. Gibson, Gibson & Skordal, LLC, 2277 Fair Oaks Boulevard, Suite 105, Sacramento, California 95825 Attachment A provides Resume**
APN(s):	**APN 120-010-01**
Address:	**Beatty Drive, El Dorado Hills, California**
General Plan Designation:	**High Density Residential**
Zoning:	**R1**
Project Description: *(attach site photos)*	**See Attachment B – Project Description, and Attachment C – Site Photos**
Alternative Setback Requested:	**20-foot buffers on Channel (C1) and Seep 3 (S3). See letter in Attachment D discussing buffer adequacy.**

Would the project, at the proposed alternative setback, directly or indirectly have the potential to cause any impact, conflict with, or disturbance to:	**YES**	**NO**
a) Riparian Vegetation?		**See Attachment D**
b) Creeks or Streams?		**See Attachment D**
c) Wetlands or Lakes?		**See Attachment D**
d) Movement of Wildlife and/or Any Wildlife Migration Corridor?		**See Attachment D**
e) Any Candidate, Listed or Special Status Plant or Animal Species?		**No**
f) Are all applicable Best Management Practices incorporated into the project? *(attach BMPs)*	**Yes, See Attachment E**	
g) **Was alternative setback request subject to prior County approval? (If yes, provide Tentative Map # and environmental documents)**		**No**

Conclusions: The channel and seep would not be significanty impacted by the proposed reduced setbacks.

I affirm that all of the information contained in this document is true and correct to the best of my knowledge and I acknowledge and agree that any material misinformation in this document can result in the denial or revocation of any permits or County approvals for this project.

Biologist: James C. Gibson **Date:** 8/14/08

Applicant/Owner: Allan Fader **Date:** 8/6/08

ATTACHMENT A

RESUME OF JAMES C. GIBSON

GIBSON & SKORDAL, LLC

Wetland Consultants

2277 Fair Oaks Blvd., Suite 105
Sacramento, California 95825
Telephone (916) 569-1830
Facsimile (916) 569-1835

James C. Gibson
Thomas M. Skordal
Karen Shaffer
Ginger E. Fodge
Samuel R. Garcia

RESUME OF JAMES C. GIBSON

SUMMARY

Mr. Gibson has in-depth experience in and knowledge of environmental planning and regulatory fields. His experience as a wetlands consultant and 18-years as an Environmental Resource Planner and Environmental Specialist with the Corps of Engineers have provided him with solid working knowledge of environmental resource laws and regulations including Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, National Environmental Policy Act, Fish and Wildlife Coordination Act, Endangered Species Act, and California Environmental Quality Act.

As a consultant, Mr. Gibson has served as project manager for a wide range of wetland related projects throughout the west. He has been responsible for conducting jurisdictional delineations and special status species surveys, providing project planning assistance, obtaining governmental approvals, preparation of mitigation and monitoring plans, supervision of mitigation construction, and mitigation monitoring. He has also provided expert and factual testimony for litigation.

During Mr. Gibson's 11 years as an Environmental Specialist for the Sacramento District Corps of Engineers, Regulatory Section, he was responsible for providing technical expertise in environmental matters, including delineation of wetlands subject to Corps regulatory jurisdiction; management and preparation of environmental impact statements and environmental assessments for complex and controversial permit actions; review of other agencies' environmental documents; coordination with resource agencies, applicants, and others with respect to regulatory actions, mitigation plans, permit conditions, and violations; and providing assistance to regulatory personnel and applicants on environmental matters. He was the Sacramento District Regulatory Wetlands Expert for Northern California, Nevada, and portions of Utah and Colorado. He also served 7 years as an Environmental Resource Planner for the Sacramento District Corps of Engineers, Environmental Resources Section. He was responsible for planning, coordinating, and preparing Environmental Assessments and Environmental Impact Statements for Corps' Civil Works projects.

Mr. Gibson has conducted formal technical training in the delineation of wetlands utilizing the Corps' Wetland Delineation Manual and "Federal Manual for Identifying and Delineating Jurisdictional Wetlands".

EXPERIENCE

Gibson & Skordal, LLC January 2002 to Present
2277 Fair Oaks Blvd., Suite 105
Sacramento, California 95825

Principal, Wetland Consultant.

Gibson & Skordal August 1992 to December 2001
2277 Fair Oaks Blvd., Suite 395
Sacramento, California 95825

Principal, Wetland Consultant.

Huffman & Associates, Inc. March 1990 to July 1992
4204 Power Inn Road
Sacramento, California 95826

Vice President and Principal. Senior Wetland Regulatory Specialist and manager of Huffman and Associates, Inc., Sacramento, California office.

Private Consultant August 1988 to March 1990
8291 Caribbean Way
Sacramento, California 95826

Wetland Regulatory Consultant. Wetland Regulatory Consulting.

U.S. Army Corps of Engineers March 1977 to August 1988
Sacramento District
1325 J Street
Sacramento, California 95814

Environmental Specialist. Responsible for environmental aspects of Corps of Engineers' Regulatory Program in California, Nevada, Utah, and Colorado.

U.S. Army Corps of Engineers March 1970 to March 1977

Sacramento District
1325 J Street
Sacramento, California 95814

Environmental Resource Planner (Lieutenant 1970-1972). Responsible for environmental aspects of Corps of Engineers' Civil Works projects primarily in California.

U.S. Army Corps of Engineers December 1969 to March 1970

Ft. Belvoir, Virginia
Second Lieutenant. Combat Engineer.

EDUCATION

B.S., 1969. Wildlife Science, Texas A&M University, College Station, Texas

U.S. Army Engineer Officer Training Course, 1970. Combat Engineer, Ft. Belvoir, Virginia

SPECIAL COURSES

Wetland Delineation Refresher, Wetland Training Institute, Ontario, California, 1994.

Wetlands Development and Restoration, Corps of Engineers' Training, Tiburon, California, 1988.

Wetland Methodologies, Corps of Engineers' Training, Olympia, Washington, 1987.

Wetlands Specialist, Corps of Engineers' Training, Pocomoke City, Maryland, 1985.

Wetland Soils and Hydrology, Corps of Engineers' Training, Hickory Corner, Michigan, 1985.

Environmental Laws and Regulations, University of Alabama, Huntsville, Alabama, 1984.

Public Involvement, Corps of Engineers' Training, St. Louis, Missouri, 1983.

Effective Briefing Techniques, Department of Army, Sacramento, California, 1983

Wetland Science and Technology, Oregon State University, Otter Rock, Oregon, 1977.

Introduction to Water Resource Planning, Corps of Engineers, Sacramento, California, 1976.

Environmental Impact Reporting and Evaluation, California State University, Sacramento, California, 1974.

Environmental Law for the Layman, University of California Extension, Sacramento, California, 1972.

Aquatic Biology, University of California Extension, Weed, California, 1970.

PROFESSIONAL CERTIFICATIONS

Certified Professional Wetland Scientist
Certified Wildlife Biologist

PROFESSIONAL AFFILIATIONS

Association of State Wetland Managers
The Wildlife Society
Society of Wetland Scientists
Society for Ecological Restoration

APPOINTMENTS AND HONORS

Sacramento District Chief of Regulatory Section, Letter of Commendation for support in executing a successful regulatory program in Sacramento District, 1987.

South Pacific Division Engineer, nominee for the Office of the Chief of Engineers Don Lawyer Outstanding Regulator Award for exceptional performance in regulatory functions, 1986.

South Pacific Division Engineer, Special Act Award for personal dedication and technical expertise associated with a highly complex permit action in the San Francisco Bay area, 1986.

Sacramento District Engineer, Special Act Award for being instrumental in obtaining favorable judgment by the Federal District Court in a regulatory case in Northern California, 1985.

Sacramento District Chief of Construction - Operations Division, Letter of Appreciation for outstanding contribution to the success of Sacramento District's regulatory program in Utah, 1982.

Sacramento District Engineer, Sustained Superior Performance Award for environmental planning efforts associated with civil works activities, 1976.

Sacramento District Engineer, Special Act Award for involvement in Sacramento River Wild and Scenic River Study and Report, 1975.

Sacramento District Chief of Environmental Planning Section, Letter of Appreciation for wildlife mitigation plan development, 1973.

Sacramento District Engineer, Letter of Commendation for contribution to civil works projects of the District, 1972.

LITIGATION INVOLVEMENT

Prudential Development Co. v. Stanford Ranch Inc. et al., Superior Court of the State of California in and for the County of Placer.

Kramer Ranch v. Zentner & Zentner, et al., Superior Court of California in and for the County of Sacramento.

Citizens for Glenwood Canyon Scenic Corridor v. United States Army Corps of Engineers, United States District Court, District of Colorado.

City of Sparks v. L. David Kiley, Second Judicial District Court, State of Nevada, County of Washoe.

Concerned Citizens of Eagle County, Colorado v. Richard E. Woodrow, United States District Court, District of Colorado.

Great Salt Lake Minerals and Chemical Corporation v. Marsh, United States District Court, District of Utah, Central Division.

People v. Marsh, United States District Court, Northern District of California.

Robert W. Akers v. United States of America, United States District Court, Eastern District of California.

United States of America v. Robert W. Akers, United States District Court, Eastern District of California.

William S. Stryker, M.D. v. Musick, Peeler & Garrett, Superior Court of the State of California for the County of Los Angeles Central District.

ATTACHMENT C

SITE PHOTOGRAPHS

CH1 Looking Upstream from Tiburon Way 2/28/2008

CH1 Upstream of Via Fiori Court 2/28/2008

Looking South at S3 2/28/2008

ATTACHMENT D

LETTER TO COUNTY

GIBSON & SKORDAL, LLC

Wetland Consultants

2277 Fair Oaks Blvd., Suite 105
Sacramento, California 95825
Telephone (916) 569-1830
Facsimile (916) 569-1835

James C. Gibson
Thomas M. Skordal
Karen Shaffer
Ginger E. Fodge
Samuel R. Garcia

April 29, 2011

Rommel (Mel) Pabalinas, Senior Planner
El Dorado County Planning Department
4505 Golden Foothills Parkway
El Dorado Hills, California 95762

Subject: **Buffers Associated with Ridgeview Unit 9 Property – El Dorado County, California**

Dear Mr. Pabalinas:

This letter provides you with flow classification of the stream that is located along the southern boundary of the site. I am also providing you with alternative buffer widths for consideration by the County.

The channel (C1) that flows along the southern boundary of the property is intermittent in nature. I have included this information in the revised delineation report.

With respect to buffers, the question was raised whether 20-foot buffers along the stream channel and from the seeps (S1-S4) would be adequate to preserve the resource values of these features. All of the riparian vegetation would be preserved if buffers were reduced to 20 feet, and it is my opinion that the channel and associated riparian habitat would not be significantly impacted by the reduced buffer. Currently, there is a sewer lift station approximately 12 feet from the channel, and a house approximately 20 feet from the channel immediately upstream of the property. In addition, there are three road crossings in a 600-foot reach of the creek.

The seeps are also being proposed for 20-foot buffers. These wetlands receive their moisture from subsurface sources and should not be significantly impacted by the reduced buffers.

To minimize impacts to the above resources, BMP's should be implemented to minimize impacts to the resources during construction such as inclusion of silt fences and/or waddles to prevent sediments from entering the stream and wetland. In addition, orange construction fencing should be placed outside of the 20-foot buffers during construction to avoid inadvertent impacts.

If you have any questions or need additional information, please call me.

Sincerely,

James C. Gibson
Principal

cc: Mr. Bill Fisher
Pacific States Development
985 Governor Drive, Suite 103
El Dorado Hills, California 95762

Ms. Olga Sciorelli
CTA Engineering & Surveying
3233 Monier Circle
Rancho Cordova, California 95742

ATTACHMENT E

BEST MANAGEMENT PRACTICES

BEST MANAGEMENT PRACTICES
RIDGEVIEW UNIT NO. 9 PROJECT

A Storm Water Pollution Prevention Program (SWPPP) will be required by a National Pollutant Discharge Elimination System (NPDES) construction permit. To protect the channel and wetlands, the following Best Management Practices (BMP's) will be incorporated into the SWPPP.

1. Silt fences and /or waddles will be installed to prevent sediments from entering the creek and wetlands.

2. Orange construction fencing will be placed outside the identified buffers for the creek and all protected wetlands to avoid impacts from construction equipment. Buffers will not be used to store construction equipment or temporary stockpiling.

3. Drip pans will be placed under all work vehicles.

4. Fuel waste will be contained throughout the site during construction.

5. The construction site will be winterized utilizing the distribution of straw and/or hydroseeding.

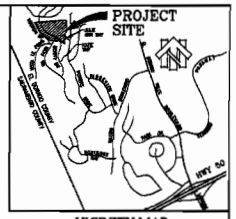
TREE PRESERVATION PLAN

RIDGEVIEW VILLAGE UNIT 9

SECTION 34, T.10 N., R.8 E., M.D.M.

COUNTY OF EL DORADO APRIL 2013 STATE OF CALIFORNIA

SCALE:1" = 60'

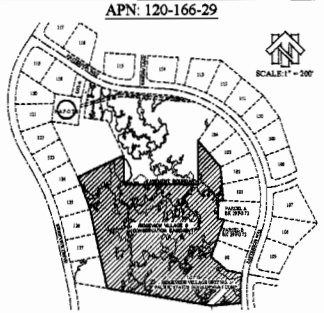


VICINITY MAP
NOT TO SCALE

NOTES

1. TOTAL SITE AREA = 22.4 AC
   TOTAL SITE CANOPY = 14.37 AC. (64.4% OF PROJECT SITE)
   TREES EXCLUDED FROM CALCULATION = 0.08 AC
   ALLOWABLE REMOVAL UNDER OPTION "A" = 30% (EXISTING CANOPY) =4.29 AC
   TOTAL REMOVAL PER PLAN =4.29 AC
   14.198 AC EXCLUDE DEAD, DISEASED AND NON-OAK CANOPY AREA
   TOTAL HEALTHY OAK CANOPY LOSS = 4.29 AC.
   MITIGATION AREA REQUIRED = 4.29 AC.
2. THE PROJECT PROPONENT SHALL COMPLY WITH THE PROVISIONS OF POLICY 7.4.4.4 BY MEETING THE RETENTION REQUIREMENTS AND 1:1 REPLACEMENT RATIO OF OPTION A, PROVIDING ON - OR OFF-SITE MITIGATION AS ESTABLISHED IN OP POLICY 7.4.4.4. AND ITS INTERIM GUIDELINES.
3. GRANTING OF ANY REQUIRED EASEMENTS SHALL BE REQUIRED AS A CONDITION OF APPROVAL OF ALL DISCRETIONARY PERMITS FOR WHICH THESE PROVISIONS APPLY, AND SHALL BE COMPLETED PRIOR TO ISSUANCE OF A GRADING OR BUILDING PERMIT, FILING OF A PARCEL OR FINAL MAP, OR OTHERWISE COMMENCING WITH THE PROJECT.
4. THE MITIGATION MAY BE PHASED TO REFLECT THE TIMING OF THE TREE CANOPY REMOVAL SUCH AS REMOVAL ASSOCIATED WITH STREET AND INFRASTRUCTURE GRADING AND GRADING ASSOCIATED WITH CONSTRUCTION OF SINGLE FAMILY DWELLINGS AND ACCESSORY STRUCTURES.
5. THE PROJECT IMPACTS WILL RESULT IN THE FOLLOWING MITIGATION ALLOCATION:
   OPTION A REMOVAL (ROADS & GRADING)..... 1.58 (BY DEVELOPER)
   OPTION A REMOVAL (LOTS ONLY)..... 3.01 AC (BY LOT OWNER)
   TOTAL REMOVAL..... 4.29 AC
6. THE DEVELOPER RESERVES THE RIGHT TO CHANGE THE ALLOCATION ABOVE AS LONG AS OVERALL OAK CANOPY REMOVAL DO NOT EXCEED ALLOWED REMOVAL FOR THE PROJECT UNDER OPTION "A" (4.29 AC).
7. CANOPY REMOVAL UNDER OPTION "A" (1:1 RATIO) ALLOWS FOR REMOVAL OF THE CANOPY ON INDIVIDUAL RESIDENTIAL LOTS IN AN AMOUNT SPECIFIED IN THE TABLE BELOW.
8. NO CANOPY SHALL BE REMOVED BY INDIVIDUAL LOT OWNERS IN EXCESS OF THAT SPECIFIED IN THIS TABLE BELOW UNDER OPTION "A". THE DEVELOPER RESERVES A RIGHT TO CHANGE THAT ALLOCATIONS AS LONG AS OVERALL OAK CANOPY REMOVAL DO NOT EXCEED ALLOWED REMOVAL FOR THE PROJECT UNDER OPTION "A" OF OP POLICY 7.4.4.4.
9. THE ARBORIST MAY REQUIRE THE REMOVAL OF ADDITIONAL TREES IF HE WARRANTS THEM TO BE A HAZARD WITHIN OR OUTSIDE OF THE CONSTRUCTION LIMITS AND/OR BUILDING SITES. THESE TREES ARE NOT SUBJECT TO REPLACEMENT STANDARDS PER INTERIM GUIDELINES APPROVED FOR POLICY 7.4.4.4. IF THE ARBORIST FINDS THEM DEAD, DISEASED OR DYING.
10. TREE PROTECTION FENCING SHALL BE PLACED AFTER COMPLETION OF TREE REMOVAL OPERATIONS AND PRIOR TO CLEARING AND GRUBBING.
11. OPTION B IS NOT AVAILABLE AT THE TIME OF PREPARATION OF THIS MAP. IN AN EVENT PAYMENT OF FEE IN LIEU OF CANOPY REPLACEMENT BECOMES AVAILABLE, THE APPLICANT RESERVES THE RIGHT TO CHANGE HIS MITIGATION OPTION IN COMPLIANCE WITH ADOPTED ZONING ORDINANCE.

OAK WOODLAND CONSERVATION EASEMENT
APN: 120-166-29



NOTES

1. OAK WOODLAND CANOPY REMOVED PER OPTION A = 4.29 AC
2. CONSERVATION EASEMENT AREA = 5.7 AC
3. OAK WOODLAND CANOPY WITHIN EASEMENT AREA = 4.75 AC (AS OF MARCH 2012).
4. SURPLUS CANOPY AVAILABLE FOR FUTURE MITIGATION = 0.46 AC

LEGEND

- TREE CANOPY TO BE REMOVED FOR ROAD INFRASTRUCTURE
- EXISTING WETLANDS
- DAYLIGHT LINE
- RW
- LOT LINE
- PROPERTY LINE
- DEAD/DISEASED & NON-OAK TREES EXCLUDED FROM CANOPY ANALYSES AND MITIGATION

CTA Engineering · Surveying
3233 Mercer Circle
Rancho Cordova, CA 95742
(916) 638-0919
(916) 638-2479 Fax

OPTION "A" LOT CANOPY REMOVAL

LOT NUMBER	AREA (SF)	LOT NUMBER	AREA (SF)
462	2000	484	4100
463	0	485	0
464	4100	486	0
465	4100	487	4100
466	4100	488	4100
467	4100	489	4100
468	0	490	0
469	4100	491	4100
470	0	492	4100
471	2000	493	4100
472	4100	494	4100
473	1500	495	4100
474	4100	496	3000
475	4100	497	800
476	4100	498	2000
477	4100	499	2000
478	4100	500	3500
479	0	501	0
480	4100	502	4100
481	4100	503	4100
482	4100	504	4100
483	4100	505	2500
		TOTAL ACRES	3.01

DEVELOPER RESERVES A RIGHT TO CHANGE INDIVIDUAL LOT CANOPY REMOVAL ALLOCATION BETWEEN THE LOTS. AMENDMENTS WILL BE PROVIDED TO PLANNG AND BUILDING DEPARTMENTS.

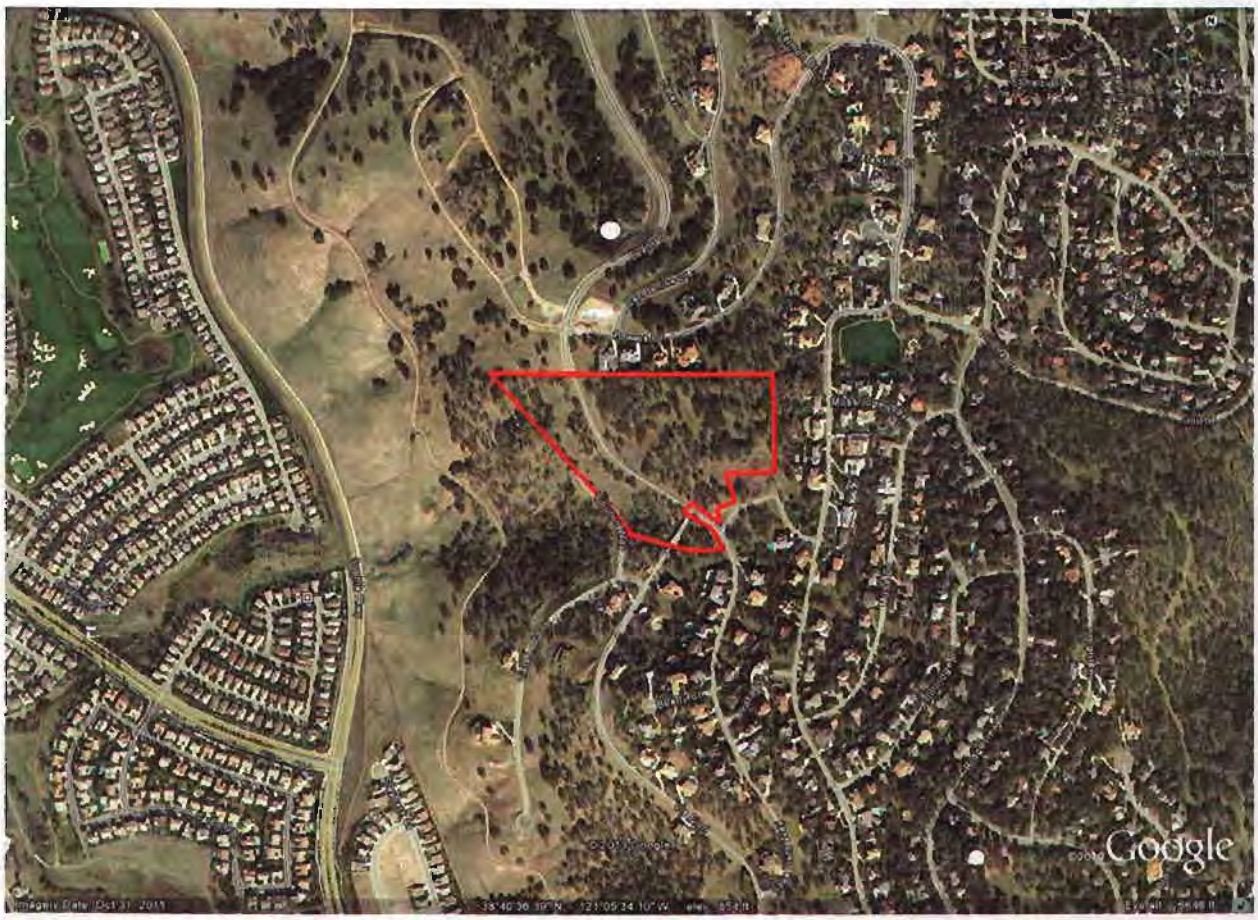
RIDGEVIEW WEST, LLC 120-650-31
JOHN & KIMBERLY STIVER 120-650-32
JUDY & MICHAEL KENNEDY 120-650-33
ROBERT BIRGITTA ABEJO 120-650-34
RIDGEVIEW WEST, LLC 120-650-28
ADDIEGO FAMILY TRUST 120-650-27
RIDGEVIEW WEST, LLC 120-065-01
PACIFIC STATES DEVELOPMENT 120-411-04
GART & TRACEY KERS 120-580-(
ELOD, CYNTHIA & MARY NIETO 120-412-08

M:\05-065-001\PLANNING\EXHIBITS\MAPS\05-065-001-TPP.dwg, 4/15/2013 10:39:35 AM, cecilorelli

EXHIBIT M– EXHIBIT I

RIDGEVIEW VILLAGE UNIT 9 PROJECT

GREENHOUSE GAS EMISSIONS



PREPARED BY

PMC

EXHIBIT M– EXHBIT J

JANUARY 2013

1.0 INTRODUCTION

1.1 Project Location 1
1.2 Project Description 1

2.0 CLIMATE CHANGE

2.1 Climate Change Setting 2
2.2 Greenhouse Gas Laws and Regulations 4
2.3 Climate Change Impacts and Mitigation Measures 12

3.0 REFERENCES

References 16

TABLES

Table 1 Greenhouse Gases 3
Table 2 Global Warming Potential for Greenhouse Gases 4
Table 3 Estimated Project Greenhouse Gas Emissions – Project Operation (Metric Tons per Year) 13

APPENDICES

Appendix A: CalEEMod Output Files

This report documents the results of a greenhouse gas (GHG) impact analysis completed for the proposed Ridgeview Village Unit 9 project (project). The purpose of this impact analysis is to identify potential environmental impacts associated with GHG emissions as required by the California Environmental Quality Act (CEQA). The GHG impact analysis was prepared with consideration of the *El Dorado County Board of Supervisors Environmental Vision for El Dorado County Resolution No. 29-2008* as well as GHG impact significance thresholds developed by the San Luis Obispo Air Pollution Control District (SLOAPCD)[1].

1.1 PROJECT LOCATION

The proposed project site is located approximately two miles north of Interstate 50 and 0.6 mile west of El Dorado Hills Boulevard off of Powers Drive and Beatty Drive in the El Dorado Hills community. Lying approximately two miles north of the proposed project site is Folsom Lake. The project site is located within unincorporated El Dorado County.

The project site is approximately 23 acres and is loosely bound by Tiburon Way to the west, Julie Ann Road to the south, existing residential development with Powers Drive beyond to the east, and existing residential development to the north.

1.2 PROJECT DESCRIPTION

The project proposes to develop a residential development of 44 single-family residential dwelling units on approximately 23 acres. The minimum lot area would be 12,889 square feet.

[1] Use of SLOAPCD greenhouse gas thresholds is considered appropriate by the El Dorado County Air Quality Management District, the emission control officer with jurisdiction of El Dorado County and thus the project site (Baughman 2012).

2.1 CLIMATE CHANGE SETTING

Since the early 1990s, scientific consensus holds that the world's population is releasing GHGs faster than the earth's natural systems can absorb them. These gases are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of greenhouse gases beyond natural levels. The overabundance of greenhouse gases in the atmosphere has led to a warming of the earth and has the potential to severely impact the earth's climate system.

While often used interchangeably, there is a difference between the terms "climate change" and "global warming." According to the National Academy of Sciences, climate change refers to any significant, measurable change of climate lasting for an extended period of time that can be caused by both natural factors and human activities. Global warming, on the other hand, is an average increase in the temperature of the atmosphere caused by increased greenhouse gas emissions. The use of the term climate change is becoming more prevalent because it encompasses all changes to the climate, not just temperature.

To fully understand global climate change, it is important to recognize the naturally occurring greenhouse effect and to define the greenhouse gases that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are CO_2, CH_4, N_2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Table 1 provides descriptions of the primary greenhouse gases attributed to global climate change, including a description of their physical properties, primary sources, and contribution to the greenhouse effect.

TABLE 1
GREENHOUSE GASES

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
Methane (CH_4)	Methane is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years.[2]
Nitrous oxide (N_2O)	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]
Hydrofluorocarbons (HFCs)	Hydrofluorocarbons are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years).[4]
Perfluorocarbons (PFCs)	Perfluorocarbons are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F1_4). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for CF_4 and C_2F_6 are 50,000 and 10,000 years, respectively.[4,5]

Sulfur Hexafluoride (SF_6)	Sulfur hexafluoride is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide. Significant leaks occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years.[4]

Sources: [1]EPA 2011a, [2]EPA 2011b, [3]EPA 2010a, [4]EPA 2010b, [5]EFCTC 2003

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Gases with high global warming potential, such as HFCs, PFCs, and SF_6, are the most heat-absorbent. Methane traps over 21 times more heat per molecule than CO_2, and N_2O absorbs 310 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weights each gas by its global warming potential (GWP). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. **Table 2** shows the GWPs for different greenhouse gases for a 100-year time horizon.

TABLE 2
GLOBAL WARMING POTENTIAL FOR GREENHOUSE GASES

Greenhouse Gas	Global Warming Potential
Carbon Dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous oxide (N_2O)	310
Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs)	6,500
Sulfur Hexafluoride (SF_6)	23,900

Source: California Climate Action Registry 2009

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California is a significant emitter of CO_2 in the world and produced 477 million gross metric tons of carbon dioxide equivalent in 2008 (CARB 2010a). Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2008, accounting for 36.4 percent of total GHG emissions in the state (CARB 2010a). This category was followed by the electric power sector (including both in-state and out-of-state sources) (24.3 percent) and the industrial sector (19.3 percent) (CARB 2010a).

2.2 GREENHOUSE GAS LAWS AND REGULATIONS

The adoption of recent legislation has provided a clear mandate that climate change must be included in an environmental review for a project subject to CEQA. Several GHG emission-related laws and regulations are provided as follows.

FEDERAL REGULATION AND THE CLEAN AIR ACT

In the past, the US Environmental Protection Agency (EPA) has not regulated GHGs under the Clean Air Act (CAA) because it asserted that the act did not authorize the EPA to issue

mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. However, the U.S. Supreme Court held that the EPA must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, twelve states and cities, including California, together with several environmental organizations, sued to require the EPA to regulate GHGs as pollutants under the Clean Air Act (127 S. Ct. 1438 [2007]). The U.S. Supreme Court held that the EPA was authorized by the Clean Air Act to regulate CO_2 emissions from new motor vehicles. The Court did not mandate that the EPA enact regulations to reduce GHG emissions, but found that the only instances in which the EPA could avoid taking action were if it found that GHG emissions do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHG emissions contribute to climate change.

On December 7, 2009, the EPA issued an "endangerment finding" under the Clean Air Act, concluding that GHG emissions threaten the public health and welfare of current and future generations and that motor vehicles contribute to GHG pollution (EPA 2009). These findings provide the basis for adopting new national regulations to mandate GHG emission reductions under the federal Clean Air Act. The EPA's endangerment finding paves the way for federal regulation of GHG emissions.

It was expected that Congress would enact GHG legislation, primarily for a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate were controversial and it may be some time before Congress adopts major climate change legislation. Under the Consolidated Appropriations Act of 2008 (HR 2764), Congress has established mandatory GHG reporting requirements for some emitters of GHGs. In addition, on September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires annual reporting to the EPA of GHG emissions from large sources and suppliers of GHGs, including facilities that emit 25,000 metric tons or more a year of GHGs.

The following discussion summarizes the EPA's recent regulatory activities with respect to various types of GHG sources.

EPA and National Highway Traffic Safety Administration Joint Rulemaking for Vehicle Standards

In response to the Massachusetts v. EPA ruling discussed above, the Bush Administration issued an Executive Order on May 14, 2007, directing the EPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008.

On October 10, 2008, the National Highway Traffic Safety Administration (NHTSA) released a final environmental impact statement analyzing proposed interim standards for passenger cars and light trucks in model years 2011 through 2015. The NHTSA issued a final rule for model year 2011 on March 30, 2009 (NHSTA 2009).

On May 7, 2010, the EPA and the NHTSA issued a final rule regulating fuel efficiency and GHG pollution from motor vehicles for cars and light-duty trucks for model years 2012–2016 (EPA 2010c). On May 21, 2010, President Obama issued a memorandum to the Secretaries of Transportation and Energy, and Administrators of the EPA and the NHTSA calling for the establishment of additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA issued a

Supplemental Notice of Intent announcing plans to propose stringent, coordinated federal greenhouse gas and fuel economy standards for model year 2017-2025 light-duty vehicles. The agencies proposed standards projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. California has announced its support of this national program. The final rule was adopted in October 2012, and NHSTA intends to set standards for model years 2022-2025 in a future rulemaking.

Heavy-duty Engines and Vehicles Fuel Efficiency Standards

In addition to the regulations applicable to cars and light-duty trucks, on August 9, 2011, the EPA and the NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks, which applies to vehicles from model year 2014–2018. Both EPA and NHTSA have adopted standards for CO_2 emissions and fuel consumption, respectively, tailored to each of three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this program will reduce GHG emissions and fuel consumption for affected vehicles by 6 percent to 23 percent.

Energy Independence and Security Act

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. Among other key measures, the Act would do the following, which would aid in the reduction of national GHG emissions, both mobile and non-mobile:

1) Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.

2) Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

3) While superseded by NHTSA and EPA actions described above, EISA also set miles per gallon targets for cars and light trucks and directed the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

Voluntary Programs

The EPA administers a variety of voluntary programs and partnerships with GHG emitters in which the EPA partners with industries that produce and utilize synthetic gases to reduce emissions of particularly potent GHG emissions. For example, the EPA's National Clean Diesel Campaign (NCDC) promotes diesel emission reduction strategies. The NCDC works to reduce the pollution emitted from diesel engines across the country through the implementation of varied control strategies by working with manufacturers, fleet operators, air quality professionals, environmental and community organizations, and state and local officials to reduce diesel emissions. NCDC activities include: developing new emissions standards for locomotive and marine diesel

engines; and promoting the reduction of emissions for existing diesel engines, including use of cleaner fuels, retrofitting and repairing existing fleets, idling reduction among others. The EPA also administers the State and Local Climate and Energy Program which provides technical assistance, analytical tools, and outreach support to state, local, and tribal governments.

Other applicable regulations and policies

In addition to the federal regulations and programs described above, there are still more policies and programs to address climate change. A database compiled by the International Energy Agency lists more than 300 policies and measures addressing climate change in the United States.

STATE REGULATION

California has adopted various administrative initiatives and also enacted a variety of legislation relating to climate change, much of which sets aggressive goals for GHG emissions reductions within the state. However, none of this legislation provides definitive direction regarding the treatment of climate change in the environmental review documents prepared under California Environmental Quality Act (CEQA). In particular, the amendments to the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or thresholds of significance, and do not specify greenhouse gas reduction mitigation measures. Instead, the CEQA amendments continue to rely on lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below. In addition, no state agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating any significant effects in CEQA documents. Thus, lead agencies exercise their discretion determining how to analyze GHG.

The discussion below provides a brief overview of California Air Resources Board (CARB) and Office of Planning and Research (OPR) documents and of the primary legislation that relates to climate change that may affect the emissions associated with the proposed project. It begins with an overview of the primary regulatory acts that have driven GHG regulation and analysis in California.

Executive Order S-3-05 (Statewide GHG Targets)

California Executive Order S-03-05 (June 1, 2005) mandates a reduction of GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Although the 2020 target has been incorporated into legislation (AB 32), the 2050 target remains only a goal of the Executive Order.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

The California Global Warming Solutions Act of 2006 (AB 32) 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) was signed into law in September 2006 after considerable study and expert testimony before the Legislature. The law instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The Act directed CARB to set a GHG emission limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. Based on CARB's calculation of 1990 baseline emissions levels, California must reduce GHG emissions by approximately 29 percent below "business-as-usual" predictions of year 2020 GHG emissions to achieve this goal.[2]

The bill required CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. CARB accomplished the key milestones set forth in AB 32 including the following:

- forecasts have been revised, that % below BAU has become a bit of a moving target. May be better to say 15% below 2008 levels (when the scoping plan was developed)

- June 30, 2007. Identification of discrete early action GHG emissions reduction measures. On June 21, 2007, CARB satisfied this requirement by approving three early action measures. These were later supplemented by adding six other discrete early action measures.

- January 1, 2008. Identification of the 1990 baseline GHG emissions level and approval of a statewide limit equivalent to that level and adoption of reporting and verification requirements concerning GHG emissions. On December 6, 2007, CARB approved a statewide limit on GHG emissions levels for the year 2020 consistent with the determined 1990 baseline.

- January 1, 2009. Adoption of a scoping plan for achieving GHG emission reductions. On December 11, 2008, CARB adopted Climate Change Scoping Plan: A Framework for Change (Scoping Plan), discussed in more detail below.

- January 1, 2010. Adoption and enforcement of regulations to implement the "discrete" actions. Several early action measures have been adopted and became effective on January 1, 2010.

- January 1, 2011. Adoption of GHG emissions limits and reduction measures by regulation. On October 28, 2010, CARB released its proposed cap-and-trade regulations, which would cover sources of approximately 85 percent of California's GHG emissions (CARB 2010b). CARB's Board ordered CARB's Executive Director to prepare a final regulatory package for cap-and-trade on December 16, 2010.

- January 1, 2012. GHG emissions limits and reduction measures adopted in 2011 become enforceable.

AB 32 Scoping Plan

As noted above, on December 11, 2008, CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emission level would require a reduction of GHG emissions of approximately 29 percent below

[2] Emissions forecasts have since been revised and the percent below "business-as-usual" necessary to achieve AB 32 goals is now considered to be closer to 15 percent.

what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business as usual"). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations will occur through the end of year 2013. The key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, heavy-duty truck measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation (CARB 2008).

In 2009, a coalition of special interest groups brought a challenge to the Scoping Plan alleging that it violated AB 32 and that the environmental review document (called a "Functional Equivalent Document") violated CEQA by failing to appropriately analyze alternatives to the proposed cap-and-trade program. On May 20, 2011, the San Francisco Superior Court entered a final judgment ordering that CARB take no further action with respect to cap and trade rulemaking until it complies with CEQA. While CARB disagrees with the trial court finding and appealed the decision on May 23, 2011, in order to remove any doubt about the matter and in keeping with CARB's interest in public participation and informed decision-making, CARB revisited the alternatives. The revised analysis includes the five alternatives included in the original environmental analysis: a "no project" alternative (that is, taking no action at all); a plan relying on a cap-and-trade program for the sectors included in a cap; a plan relying more on source-specific regulatory requirements with no cap-and-trade component; a plan relying on a carbon fee or tax; and, a plan relying on a variety of proposed strategies and measures. The public hearing to consider approval of the AB 32 Scoping Plan Functional Equivalent Document and the AB 32 Scoping Plan was held on August 24, 2011. On this date the Scoping Plan was re-approved by the Board.

In August 2012, CARB released revised estimates of the expected 2020 emission reductions. The revised analysis relies on emissions projections updated in light of current economic forecasts which account for the economic downturn since 2008 as well as reduction measures already approved and put in place. This reduced the projected 2020 emissions from 596 million metric tons (MMT) CO_2e to 545 $MMTCO_2e$. The reduction in projected 2020 emissions means that the revised Business As Usual (BAU) reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now only 21 percent.

Assembly Bill 1493

Assembly Bill 1493 ("the Pavley Standard" or AB 1493) (Health and Safety Code Sections 42823 and 43018.5) required CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks of model year 2009 through 2016. The bill also required the California Climate Action Registry to develop and adopt protocols for the reporting and certification of GHG emissions reductions from mobile sources for use by CARB in granting emission reduction credits. The bill authorizes CARB to grant emission reduction credits for reductions of GHG emissions prior to the date of enforcement of regulations, using model year 2000 as the baseline for reduction.

In 2004, CARB applied to the EPA for a waiver under the federal Clean Air Act to authorize implementation of these regulations. The waiver request was formally denied by the EPA in December 2007 after California filed suit to prompt federal action. In January 2008, the State Attorney General filed a new lawsuit against the EPA for denying California's request for a waiver to regulate and limit GHG emissions from these vehicles. In January 2009, President Barack Obama issued a directive to the EPA to reconsider California's request for a waiver. On June 30, 2009, the EPA granted the waiver to California for its GHG emission standards for motor vehicles. As part of this waiver, the EPA specified the provision that CARB may not hold a manufacturer liable or responsible for any noncompliance caused by emission debits generated by a manufacturer for the 2009 model year. CARB has adopted a new approach to passenger vehicles – cars and light trucks -- by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. These standards will apply to all passenger and light-duty trucks used by customers, employees of, and deliveries to, the proposed project.

Low Carbon Fuel Standard

Executive Order S-01-07 (January 18, 2007) requires a 10 percent or greater reduction in the average fuel carbon intensity (CI) for transportation fuels in California regulated by CARB. CARB identified the Low Carbon Fuel Standard (LCFS) as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009. In 2009, CARB approved for adoption of the LCFS regulation, which became fully effective in April 2010 and is codified at Title 17, California Code of Regulations, Sections 95480-95490. The LCFS will reduce GHG emissions by reducing the CI of transportation fuels used in California by at least 10 percent by 2020. CI is a measure of the GHG emissions associated with the various production, distribution, and use steps in the "lifecycle" of a transportation fuel.

On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. One of the district court's rulings preliminarily enjoined CARB from enforcing the regulation. In January 2012, CARB appealed that decision to the Ninth Circuit Court of Appeals, and then moved to stay the injunction pending resolution of the appeal. On April 23, 2012, the Ninth Circuit granted the CARB's motion for a stay of the injunction while it continues to consider CARB's appeal of the lower court's decision.

Clean Cars

In January 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot and GHG emissions with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

Renewable Portfolio Standards (Senate Bill 1078, Senate Bill 107 and Senate Bill X1-2)

Established in 2002 under SB 1078, and accelerated in 2006 under SB 107 and again in 2011 under SBX1-2, California's Renewable Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. The 33 percent standard is consistent with the RPS goal established in the Scoping Plan. As interim measures, the RPS requires 20 percent of retail sales to be sourced from renewable energy by 2013, and 25 percent by 2016. Initially, the RPS provisions applied to investor-owned utilities, community choice aggregators, and electric service providers. SBX1-2 added, for the first time, publicly owned utilities to the entities subject to RPS. The expected growth in RPS to meet the standards in effect in 2008 is not reflected in the BAU calculation in the AB 32 Scoping Plan, discussed below. In other words, the Scoping Plan's 2020 BAU does not take credit for implementation of RPS that occurred after its adoption.

Senate Bill 375

SB 375 (codified at Government Code and Public Resources Code[3]) signed in September 2008, provides for a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 will be implemented over the next several years and includes provisions for streamlined CEQA review for some infill projects such as transit oriented development. SB 375 also requires Metropolitan Planning Organizations (MPOs) to incorporate a "sustainable communities strategy" (SCS) in their regional transportation plans (RTPs) that will achieve GHG emission reduction targets by reducing vehicle miles traveled (VMT) from light-duty vehicles through the development of more compact, complete, and efficient communities.

SB 375 is similar to the Regional Blueprint Planning Program, established by the California Department of Transportation, which provides discretionary grants to fund regional transportation and land use plans voluntarily developed by MPOs working in cooperation with Councils of Governments. The Scoping Plan relies on the requirements of SB 375 to implement the carbon emissions reductions anticipated from land use decisions.

California Building Energy Efficiency Standards

Energy Conservation Standards for new residential and commercial buildings were originally adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6 of the California Code of Regulations [CCR, 2008]). In general, Title 24 requires the design of building shells and building components

[3] Senate Bill 375 is codified at Government Code Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588, 14522.1, 14522.2, and 65080.01 as well as Public Resources Code Sections 21061.3, 21159.28, and Chapter 4.2.

to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24) was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). Part 11 establishes voluntary standards on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. Some of these standards have become mandatory in the 2010 edition of the Part 11 Code. Current mandatory standards include:

- 20 percent mandatory reduction in indoor water use, with voluntary goal standards for 30, 35 and 40 percent reductions;
- Separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects;
- Diversion of 50 percent of construction waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects;
- Mandatory inspections of energy systems (i.e. heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies;
- Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particle board.

The California Energy Commission has opened a public process and rulemaking proceeding the adoption of changes to the 2013 Building Energy Efficiency Standards contained in the CCR, Title 24, Part 6 (also known as the California Energy Code), and associated administrative regulations in Part 1 (collectively referred to here as the Standards). The proposed amended standards will be adopted in 2014. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential construction. The standards, which take effect on January 1, 2014, will offer builders better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses.

2.3 CLIMATE CHANGE IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the application of the following State CEQA Guidelines Appendix G thresholds of significance:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Thresholds of significance illustrate the extent of an impact and are a basis from which to apply mitigation measures. Significance thresholds for greenhouse gas emissions resulting from land use development projects have not been established in El Dorado County (the El Dorado County Air Quality Management District (EDCAQMD) has not yet established significance thresholds for GHG emissions from project operations). In April 2012, the San Luis Obispo County Air Pollution

Control District (SLOAPCD) published its GHG threshold. Utilization of SLOAPCD's GHG threshold was considered reasonable and appropriate by EDCAQMD staff (Baughman 2012)).

As previously stated, the project proposes to construct a residential development of 44 single-family residential dwelling units. This analysis identifies and quantifies the GHG emissions of the proposed project and compares them to the SLOAPCD recommended threshold of 1,150 metric tons of CO_2e annually. The project would be considered to have a significant impact if the projected emissions generated by the proposed project would surpass 1,150 metric tons of CO_2e annually. If mitigation can be applied to lessen the emissions such that the project meets its share of emission reductions needed to address the cumulative impact, the project would be considered less than significant. This GHG impact analysis also considers the goals of *El Dorado County Board of Supervisors Environmental Vision for El Dorado County Resolution No. 29-2008.*

METHODOLOGY

The resultant GHG emissions of the proposed project were calculated by PMC using the California Emissions Estimator Model (CalEEMod), version 2011.1.1, computer program (see **Appendix A**). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for the use of government agencies, land use planners, and environmental professionals. This model is the most current emissions model approved for use in California by various other air districts.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contributes substantially to the phenomenon of global climate change and its associated environmental impacts and as such is addressed only as a cumulative impact.

GHG emissions associated with the project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term regional emissions associated with project-related new vehicular trips and indirect source emissions, such as electricity usage for lighting. In accordance with the SLOAPCD threshold determination, projected GHGs from site preparation (i.e., tree removal, grubbing) and construction activities have be quantified and amortized over the life of the project (30 years). The amortized site preparation and construction emissions are added to the annual average operational emissions. The project operational GHG emissions resulting from the proposed project are identified in **Table 3**.

TABLE 3
ESTIMATED PROJECT GREENHOUSE GAS EMISSIONS – PROJECT OPERATION (METRIC TONS PER YEAR)

Emissions Source	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)	CO_2e
Proposed Project – 44 Residential Units				

Emissions Source	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)	CO_2e
Construction Amortized over 30 Years[1]	107	0.00	0	107
Area Source (landscaping, hearth)	103	0.04	0	105
Energy	149	0.01	0	150
Mobile	507	0.03	0	508
Waste	6	0.38	0	14
Water	6	0.09	0	9
Total	**878**	**0.55**	**0**	**893**

Source: CalEEMod version 2011.1.1. Diesel-fueled construction equipment load factors reduced 33% to account for off-road emission overestimation (CARB 2010c). [1] *Emissions generated from site preparation include the one-time release of stored carbon dioxide from removed trees and initially disturbed soil. See* ***Appendix A*** *for emission model outputs.*

As shown in **Table 3**, the proposed project is estimated to result in 893 metric tons of CO_2e per year. Therefore, the proposed project would not surpass the project threshold of 1,150 metric tons of CO_2e annually and this impact is less than cumulatively considerable and thus less than significant.

Impact 2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The proposed project is also subject to compliance with the Global Warming Solutions Act (AB 32). As identified under Impact 1, the resultant emissions projected to be generated from the proposed project would not surpass SLOAPCD GHG significance thresholds, which were prepared with the purpose of complying with the requirements of AB 32. Therefore, the proposed project would not conflict with AB 32.

In addition, El Dorado County does not have local policies or ordinances with the purpose of reducing GHG emissions with the exception of El Dorado County Board of Supervisors Environmental Vision for El Dorado County, Resolution No. 29-2008, which sets forth broad goals to address positive environmental changes. Some of the primary goals of Resolution No. 29-2008 are to promote carpooling, reduce vehicle miles traveled, and promote recycling and utilization of recycled products. There are no aspects of the proposed project that would inhibit these goals.

The proposed project would not be considered to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG emissions and therefore represents a less than significant impact.

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Traffic Impact & Operations Analysis

Ridgeview Village Unit #9
El Dorado Hills, California

REVISED
July 28, 2006

Prepared for:

El Dorado County, CA

Prepared by:

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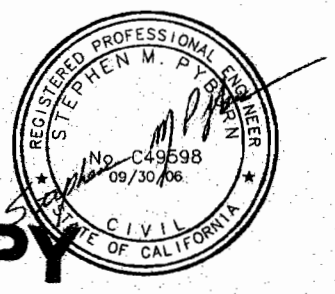


TM 08-1477

EXECUTIVE SUMMARY

This report documents the results of a traffic impact analysis completed for the proposed Ridgeview Village Unit #9 residential development to be located west of El Dorado Hills Boulevard on Beatty Drive in El Dorado Hills (the "proposed project" or "project"). The purpose of this impact analysis is to identify potential environmental impacts to transportation facilities as required by the California Environmental Quality Act (CEQA). This report also documents the results of a traffic operations analysis for the proposed project, assessing the general traffic operations resulting from the addition of the proposed project to the existing street network. This study was performed in accordance with the El Dorado County Department of Transportation's *Traffic Impact Study Protocols and Procedures* and follows the direction offered at the project's January 11, 2006 Initial DOT Project Review Meeting.

The proposed project consists of approximately 23 acres that will be developed with 48 single family (detached) homes. The site is located west of El Dorado Hills Boulevard off of Powers Drive and Beatty Drive. More generally, the site is located northwest of the intersection of El Dorado Hills Boulevard and Wilson Boulevard. Primary access to the site will be provided from Powers Drive via Olson Lane and Wilson Boulevard.

The following intersections, listed with existing traffic control, are included in this traffic impact analysis:

- El Dorado Hills Boulevard at Olson Lane (Signal Control)
- El Dorado Hills Boulevard at Wilson Boulevard (Signal Control)

The LOS analyses were conducted for the study intersections for both AM and PM peak hours for the following scenarios:

A. Existing Conditions
B. Existing plus Project Conditions
C. Existing Plus Approved Projects (2011) Conditions
D. Existing Plus Approved Projects (2011) Plus Project Conditions

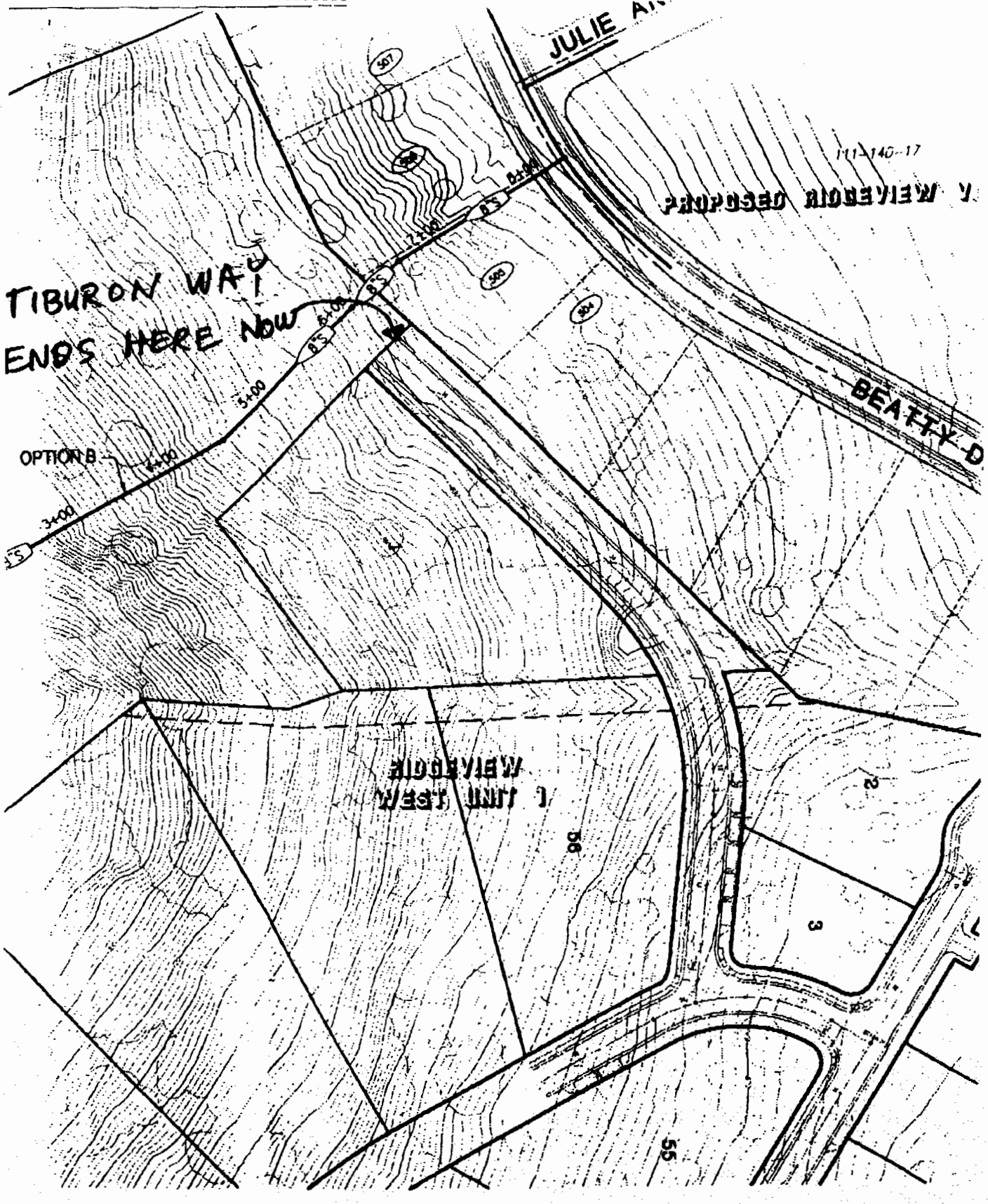
Significant findings of this study include:

- The proposed project is expected to generate 460 daily trips, including 36 AM peak hour trips and 49 PM peak hour trips.
- The proposed project is consistent with the zoning density and the 2004 General Plan land use designation for the site, and is smaller than the GPEIR forecasted growth for the traffic analysis zone.
- The addition of the proposed project to the existing network does not result in substandard operations at the study intersections. As such, the impact at the study intersections is ***less than significant.***
- The addition of the proposed project to the existing plus approved projects (year 2011) network does not result in substandard operations at the study intersections. As such, the impact at the study intersections is ***less than significant.***
- The project is ***not anticipated to create any significant environmental impacts.***
- The traffic operations analysis determined that there is an abundance of available capacity along the local roadways connecting the proposed project to El Dorado Hills Boulevard. As such, the proposed project is not anticipated to noticeably decrease the available capacity or alter the operating characteristics of these roadways.

Amendment A

This Amendment is to correct the requirement specified on page 6 of the September, 2006 Wildfire Fire Safe Plan that specified lockable pedestrian gates on lots 502, 505 and 507 would be required. This requirement shall not be necessary. Tiburon Way currently runs behind lots 502-505. The road is to be continued in the future. The remaining distance of roadway to the end of Unit 9 is approximately 515 feet. Emergency access is available from the end of Tiburon Way and down the property line of lot 509.

An additional point of clarification for Item A on page 7; There will be no Home Owners Association associated with this Unit. The Fire Department will need to work through the CSD if any open space issues occur.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RIDGEVIEW
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INTRODUCTION

This report documents the results of a traffic impact analysis completed for the proposed Ridgeview Village Unit #9 residential development to be located west of El Dorado Hills Boulevard on Beatty Drive in El Dorado Hills (the "proposed project" or "project"). The purpose of this impact analysis is to identify potential environmental impacts to transportation facilities as required by the California Environmental Quality Act (CEQA). This report also documents the results of a traffic operations analysis for the proposed project, assessing the general traffic operations resulting from the addition of the proposed project to the existing street network. This study was performed in accordance with the El Dorado County Department of Transportation's *Traffic Impact Study Protocols and Procedures* and follows the direction offered at the project's January 11, 2006 Initial DOT Project Review Meeting.

The remaining sections of this report document the proposed project, trip generation and distribution for the proposed project, analysis methodologies, impacts and mitigation, and general study conclusions.

PROJECT DESCRIPTION

The proposed project consists of approximately 23 acres that will be developed with 48 single family (detached) homes. The site is located west of El Dorado Hills Boulevard off of Powers Drive and Beatty Drive. More generally, the site is located northwest of the intersection of El Dorado Hills Boulevard and Wilson Boulevard. Primary access to the site will be provided from Powers Drive via Olson Lane and Wilson Boulevard.

The following intersections, listed with existing traffic control, are included in this traffic impact analysis:

- El Dorado Hills Boulevard at Olson Lane (Signal Control)
- El Dorado Hills Boulevard at Wilson Boulevard (Signal Control)

As directed by the County[1], the El Dorado Hills Boulevard intersections with the US 50 interchange ramps are omitted from the impact analysis. It was determined that the interchange intersections are included in on-going improvement studies along US 50. The roadways and intersections connecting the proposed project to El Dorado Hills Boulevard are included in the analysis of general traffic operations.

Figure 1 and Figure 2 illustrate the project location, study intersections, existing traffic control, and existing lane configurations. A site plan for the proposed project is shown in Figure 3.

PROJECT AREA ROADWAYS

The following are descriptions of the primary roadways in the vicinity of the project.

El Dorado Hills Boulevard is a north-south arterial roadway that serves as a primary connection between western El Dorado County and US 50. Through the project area, El Dorado Hills Boulevard carries approximately 18,800[2] vehicles per day with two travel lanes in each direction. El Dorado Hills Boulevard becomes Salmon Falls Road north of Green Valley Road and becomes Latrobe Road south of US 50.

Olson Lane is a two-lane, east-west local roadway that provides a connection for numerous residential parcels to El Dorado Hills Boulevard. Olson Lane connects Moonstone Circle with El Dorado Hills Boulevard. Olson Lane also intersects with Gillett Drive which provides further connection to additional residential developments west of El Dorado Hills Boulevard.

[1] Meeting with El Dorado County Department of Transportation, January 11, 2006.
[2] El Dorado County Department of Transportation, http://www.co.el-dorado.ca.us/DOT/trafficcounts.asp.

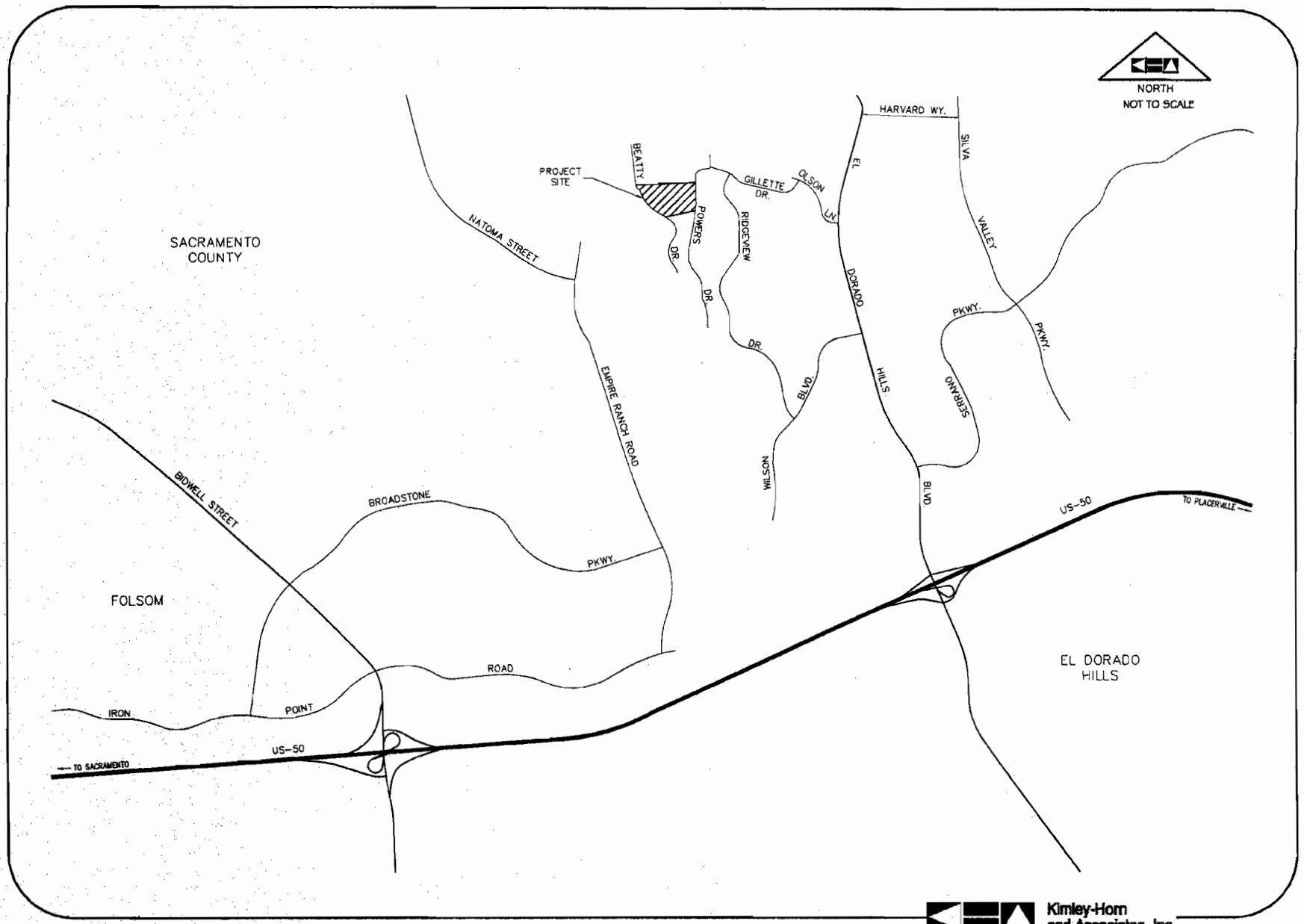


FIGURE 1

PROPOSED PROJECT VICINITY MAP

RIDGEVIEW VILLAGE UNIT #9
EL DORADO HILLS, CA

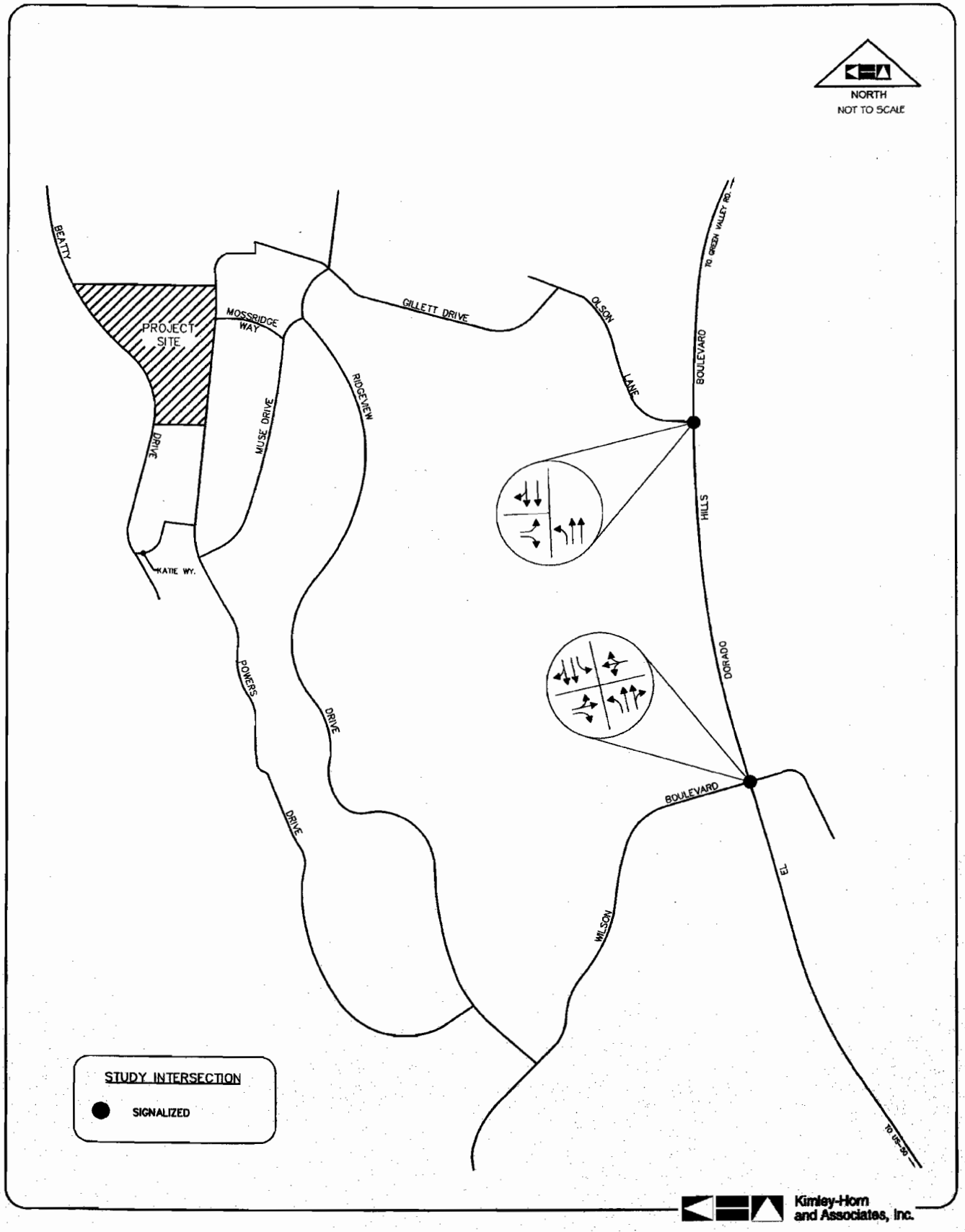


FIGURE 2

PROPOSED PROJECT LOCATION AND STUDY INTERSECTIONS

RIDGEVIEW VILLAGE UNIT #9
EL DORADO HILLS, CA

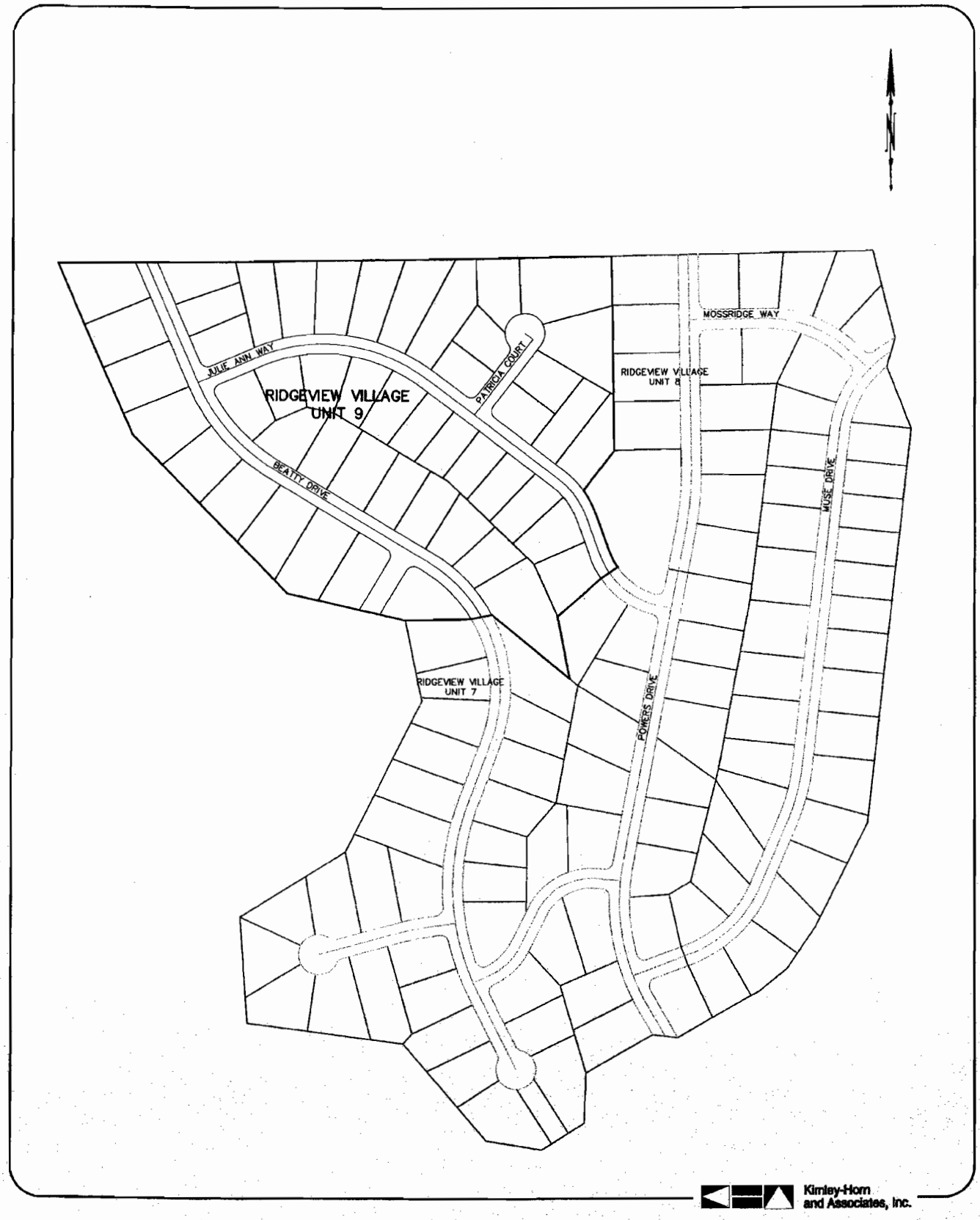


FIGURE 3

PROPOSED PROJECT SITE PLAN

RIDGEVIEW VILLAGE UNIT #9
EL DORADO HILLS, CA

Wilson Boulevard is an east-west local roadway that also provides a connection for residential parcels to El Dorado Hills Boulevard. Wilson Boulevard currently serves approximately 5,260[3] vehicles per day. Between El Dorado Hills Boulevard and Ridgeview Drive, Wilson Boulevard has two travel lanes in each direction.

Powers Drive is a north-south local roadway that provides access to numerous other local roadways and residential parcels generally located west of El Dorado Hills Boulevard, between Olson Lane and Wilson Boulevard.

Beatty Drive is a north-south local roadway that provides access to residential parcels. Beatty Drive provides primary access to the proposed project site.

ASSESSMENT OF PROPOSED PROJECT

Proposed Project Trip Generation

The number of trips generated by the proposed project was derived using data included in the *Trip Generation Manual, 7th Edition* published by the Institute of Transportation Engineers (ITE). The trip generation for this project is shown in Table 1.

Table 1 – Proposed Project Trip Generation

ITE Land Use (Code)	Units	Total Daily Trips	AM Peak Hour					PM Peak Hour				
			Trips	IN		OUT		Trips	IN		OUT	
				%	Trips	%	Trips		%	Trips	%	Trips
Single-Family Detached Housing (210)	48	460	36	26%	10	73%	26	49	64%	32	36%	17

As shown in Table 1, the proposed project is estimated to generate 460 total daily trips with 36 trips occurring during the AM peak and 49 occurring during the PM peak.

Proposed Project Trip Distribution

The distribution of project traffic was developed based on existing traffic patterns in the study area and characteristics of the proposed project. These patterns were derived by examining the existing peak hour turning movement counts at the study intersections. The project trip distribution percentages are illustrated in Figure 4. The resulting project AM and PM peak-hour traffic volumes at the study area intersections are illustrated in Figure 5.

[3] El Dorado County Department of Transportation, http://www.co.el-dorado.ca.us/DOT/trafficcounts.asp.

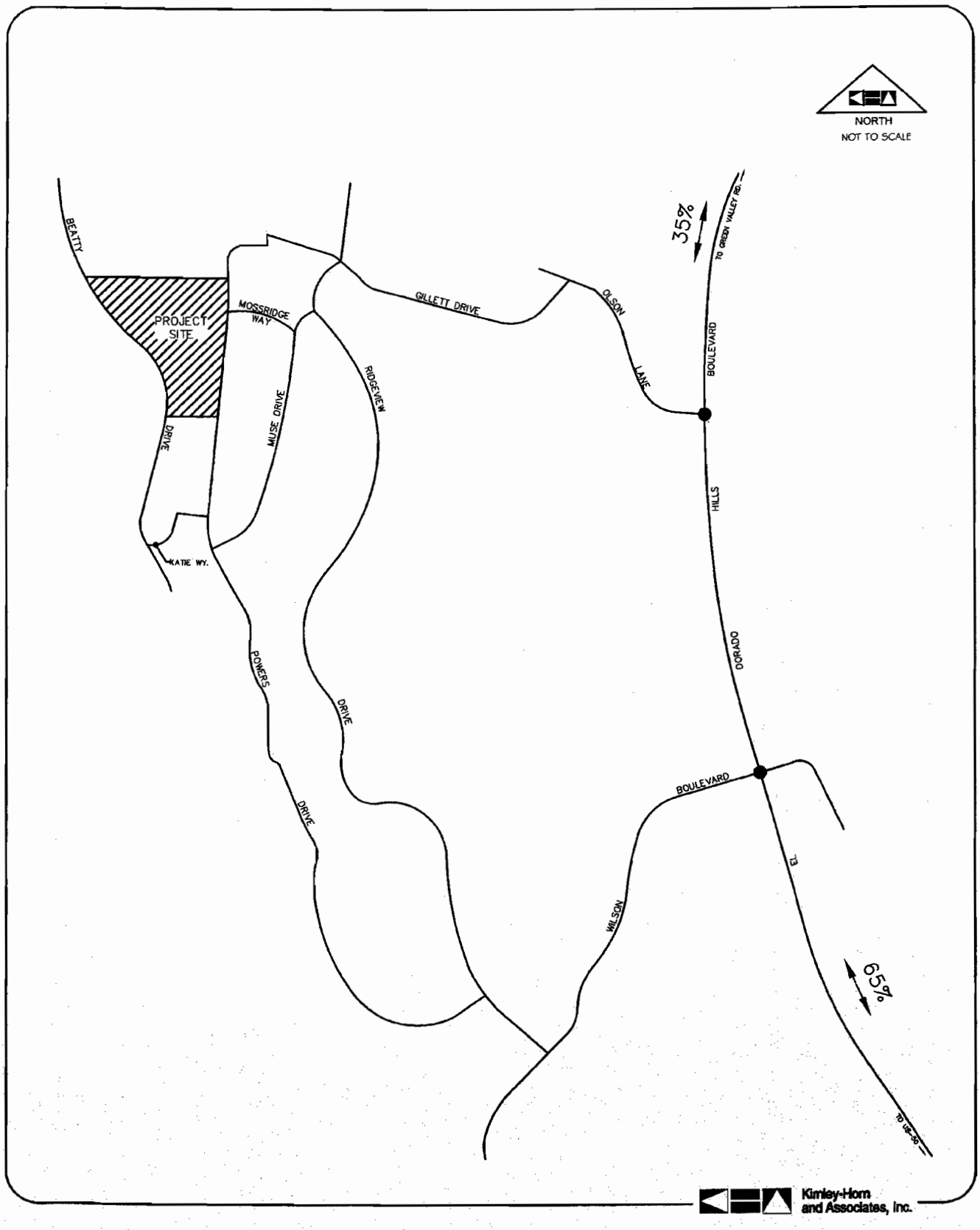


FIGURE 4

PROPOSED PROJECT TRIP DISTRIBUTION

RIDGEVIEW VILLAGE UNIT #9
EL DORADO HILLS, CA

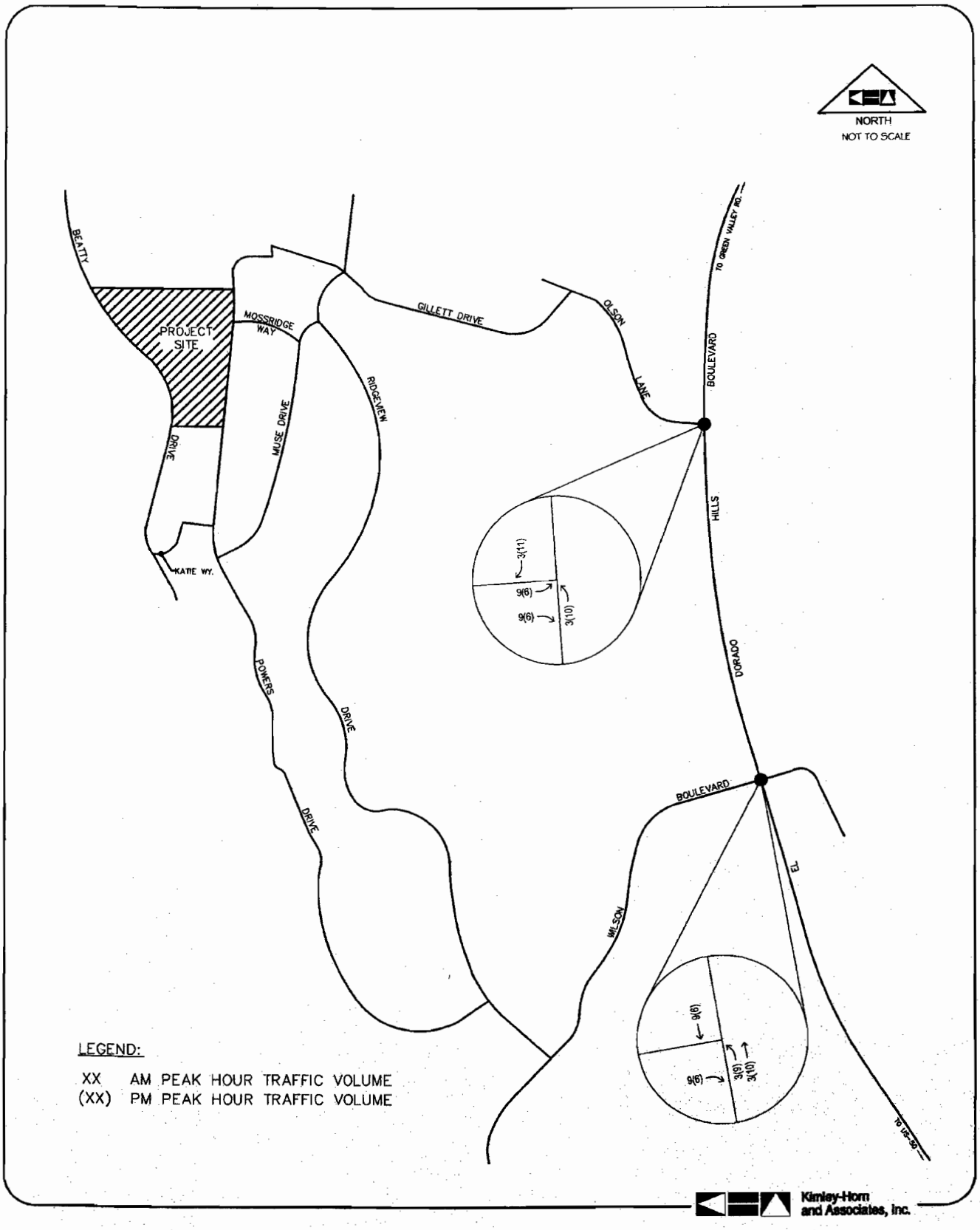


FIGURE 5

PROPOSED PROJECT TRIP ASSIGNMENT

RIDGEVIEW VILLAGE UNIT #9
EL DORADO HILLS, CA

TRAFFIC IMPACT ANALYSIS

Analysis of significant environmental impacts at intersections is based on the concept of Level of Service (LOS). The LOS of an intersection is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. Intersection LOS for this study was determined using methods defined in the *Highway Capacity Manual, 2000* (HCM) and appropriate traffic analysis software.

The HCM defines signal LOS as a function of average control delay for the intersection as a whole. Table 2 presents signalized intersection LOS definitions as defined in the HCM.

Table 2 – Signalized Intersection Level of Service Criteria

Control Delay (seconds/vehicle)	Level of Service (LOS)
≤ 10	A
>10 – 20	B
>20 – 35	C
>35 – 55	D
>55 – 80	E
> 80	F
Source: Highway Capacity Manual, 2000	

Consistency with General Plan Land Use Designation
According to the County's *Protocols*:

> "[A] Each traffic impact study must provide a review of a proposed project's consistency with the land use designations and zoning densities of the 2004 County General Plan to determine if the project is consistent with such designation(s) as applicable within the proposed project area…[B] If a proposed project is of a magnitude that is clearly within the amount of development which was anticipated in the traffic study conducted for the General Plan, then the General Plan's traffic analysis will serve as the basis for the cumulative traffic analysis of the project."

The proposed project (2.1 DU/ac) is consistent with the zoning density (1-5 DU/ac) and the 2004 General Plan land use designation (High Density Residential, HDR) for the site[4]. Therefore, the proposed project satisfies the first criterion [A] for determining if a new cumulative 2025 analysis is required in addition to the analysis already completed for the County's General Plan. Regarding the second criterion, [B] the proposed project is located within Traffic Analysis Zone (TAZ) 327. Table 3 shows the 1998 and forecasted 2025 land uses and number of housing units which were used in the 2004 General Plan Environmental Impact Report (GPEIR) analysis for this TAZ.

Table 3 – Traffic Analysis Zone #327 Land Uses and Dwelling Units

1998 Land Use (# Housing Units)	2025 Land Use (# Housing Units)
Single Family (784)	Single Family (1,942)
Source: Dowling Associates, Inc.	

[4] *2004 General Plan Land Use Diagram*, El Dorado County Planning Department.

The proposed project, which consists of 48 units, is smaller than the GPEIR forecasted growth for this zone. Therefore, the size of the project is within the amount of development which was anticipated in the traffic study conducted for the General Plan.

Based on these two criteria, cumulative plus project analyses are not required to update the GPEIR analysis for 2025. As such, the LOS analysis was conducted for the study intersections for both AM and PM peak hours for the following scenarios:

A. Existing Conditions
B. Existing plus Project Conditions
C. Existing Plus Approved Projects (2011) Conditions
D. Existing Plus Approved Projects (2011) Plus Project Conditions

The following is a discussion of the analyses for these four scenarios.

EXISTING CONDITIONS

Analysis of existing traffic conditions at the study intersections was based on peak-hour traffic counts conducted in March 2004, March 2006, and January 2006[5]. The existing peak hour turn movement volumes are presented in Figure 6 and detailed traffic count information is provided in Appendix A. Table 4 presents the existing peak-hour intersection operating conditions for the study intersections.

Table 4 – Existing Levels of Service

Intersection (Traffic Control)	AM Peak Hour		PM Peak Hour	
	Delay (seconds)	LOS	Delay (Seconds)	LOS
El Dorado Hills Boulevard @ Olson Lane (Signal)	10.9	B	7.9	A
El Dorado Hills Boulevard @ Wilson Boulevard (Signal)	24.7	C	21.2	C

As indicated in Table 4, the study intersections currently operate from LOS A to LOS C. Analysis worksheets for the existing conditions scenario are provided in Appendix B.

EXISTING PLUS PROPOSED PROJECT CONDITIONS

Peak-hour traffic associated with the proposed project was added to the existing traffic volumes and levels of service were determined at the study intersections. Table 5 provides a summary of the intersection analysis and Figure 7 provides the AM and PM peak hour traffic volumes at the study intersections for this analysis scenario.

Table 5 – Existing plus Proposed Project Levels of Service

Intersection (Traffic Control)	AM Peak Hour		PM Peak Hour	
	Delay (seconds)	LOS	Delay (Seconds)	LOS
El Dorado Hills Boulevard @ Olson Lane (Signal)	11.2	B	10.1	B
El Dorado Hills Boulevard @ Wilson Boulevard (Signal)	26.2	C	22.4	C

[5] Per memorandum from Mr. Jim Damkowitch, Dowling Associates, Inc., July 17, 2006.

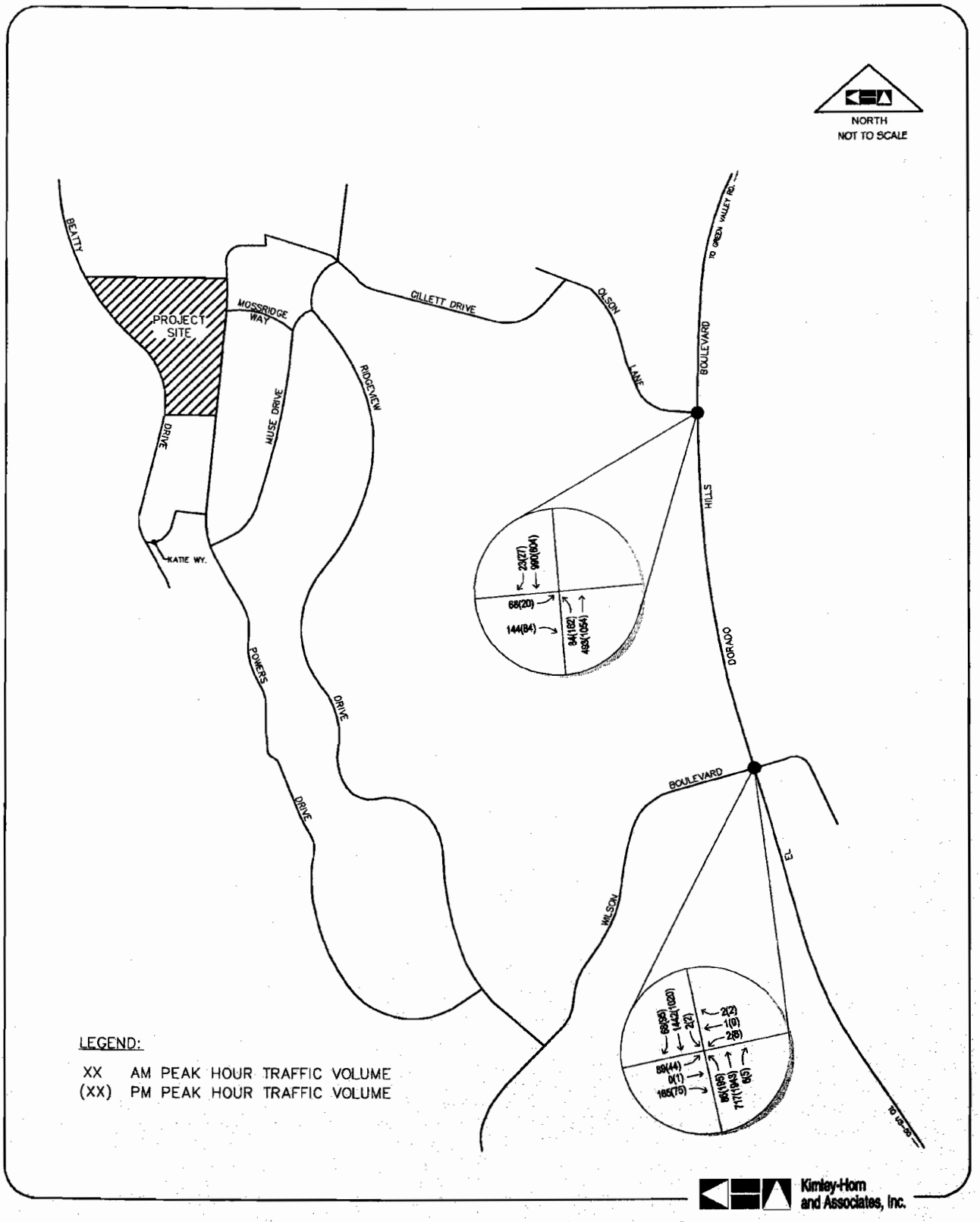


FIGURE 6

EXISTING PEAK HOUR TRAFFIC VOLUMES

RIDGEVIEW VILLAGE UNIT #9
EL DORADO HILLS, CA

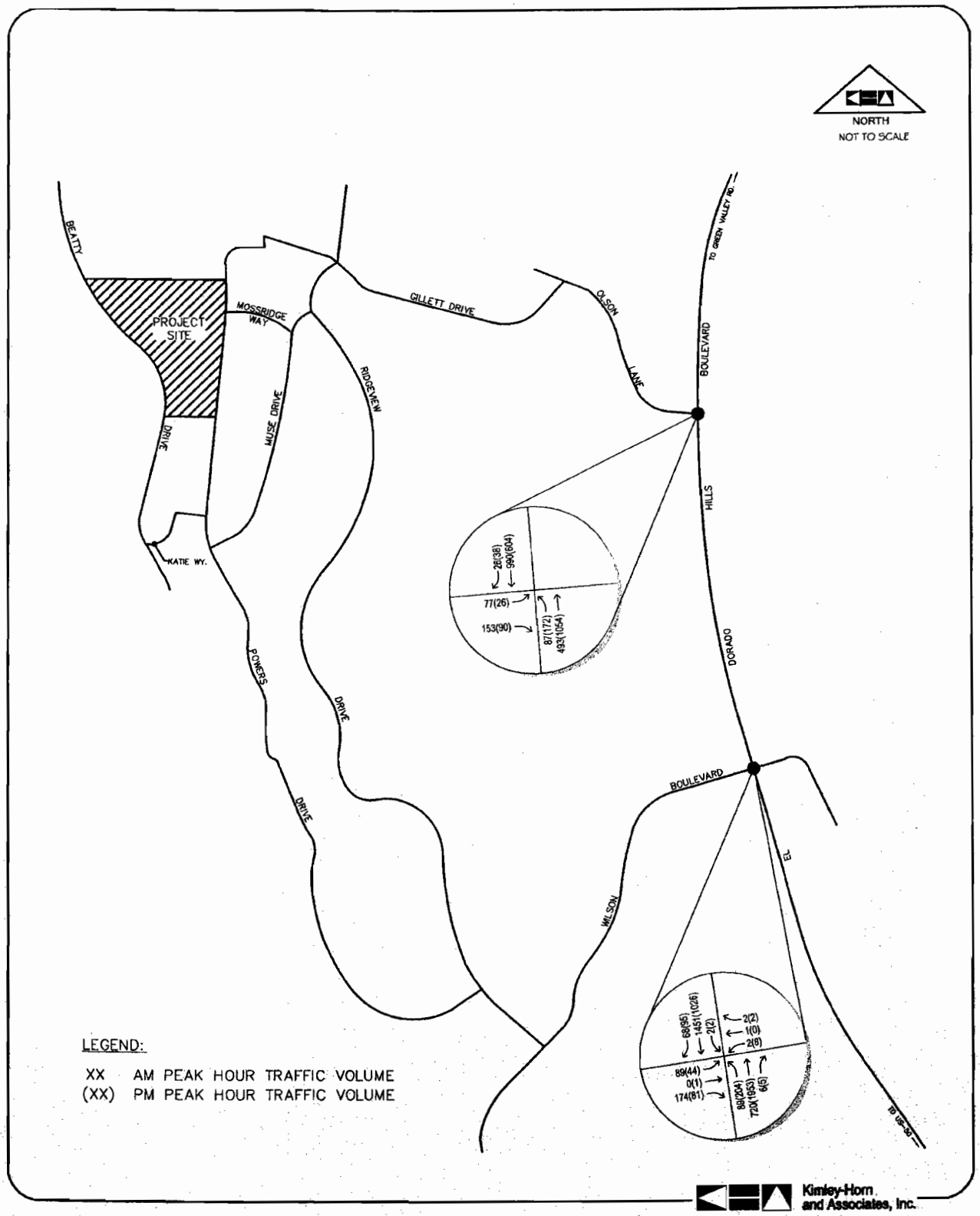


FIGURE 7

EXISTING PLUS PROPOSED PROJECT
PEAK HOUR TRAFFIC VOLUMES

RIDGEVIEW VILLAGE UNIT #9
EL DORADO HILLS, CA

As indicated in Table 5, the study intersections operate at LOS B or LOS C with the addition of project traffic during the AM and PM peak hours. The analysis worksheets for this analysis scenario are provided in Appendix C.

EXISTING PLUS APPROVED PROJECTS (2011) CONDITIONS

Peak hour traffic volume projections for the study area roadway segments were obtained from the County[6] for the years 1998 thru 2015. From this data, annual peak growth rates were determined for each roadway segment direction. The annual rates were then extended to five year growth rates. The five year growth rates were then applied to the study intersections' existing peak hour traffic volumes to obtain forecasted (year 2011) traffic conditions for this analysis scenario.

The levels of service at the study intersections were determined with the year 2011 traffic volumes. Table 6 provides a summary of the intersection analysis and Figure 8 provides the AM and PM traffic volumes for this analysis scenario.

Table 6 – Existing plus Approved Projects (2011) Levels of Service

Intersection (Traffic Control)	AM Peak Hour		PM Peak Hour	
	Delay (Seconds)	LOS	Delay (Seconds)	LOS
El Dorado Hills Boulevard @ Olson Lane (Signal)	11.1	B	7.8	A
El Dorado Hills Boulevard @ Wilson Boulevard (Signal)	24.1	C	23.7	C

As indicated in Table 6, the study intersections operate at from LOS A or LOS C during the AM and PM peak hours. The analysis worksheets for this analysis scenario are provided in Appendix D.

EXISTING PLUS APPROVED PROJECTS (2011) PLUS PROPOSED PROJECT CONDITIONS

Peak-hour traffic associated with the proposed project was added to the existing plus approved projects traffic volumes and levels of service were determined at the study intersections. Table 7 provides a summary of the intersection analysis and Figure 9 provides the AM and PM traffic volumes for this analysis scenario.

Table 7 – Existing plus Approved Projects (2011) plus Proposed Project Levels of Service

Intersection (Traffic Control)	AM Peak Hour		PM Peak Hour	
	Delay (Seconds)	LOS	Delay (Seconds)	LOS
El Dorado Hills Boulevard @ Olson Lane (Signal)	11.3	B	8.1	A
El Dorado Hills Boulevard @ Wilson Boulevard (Signal)	25.7	C	25.2	C

[6] Per email from Mr. Chuck Collins, El Dorado County Department of Transportation, February 23, 2006.

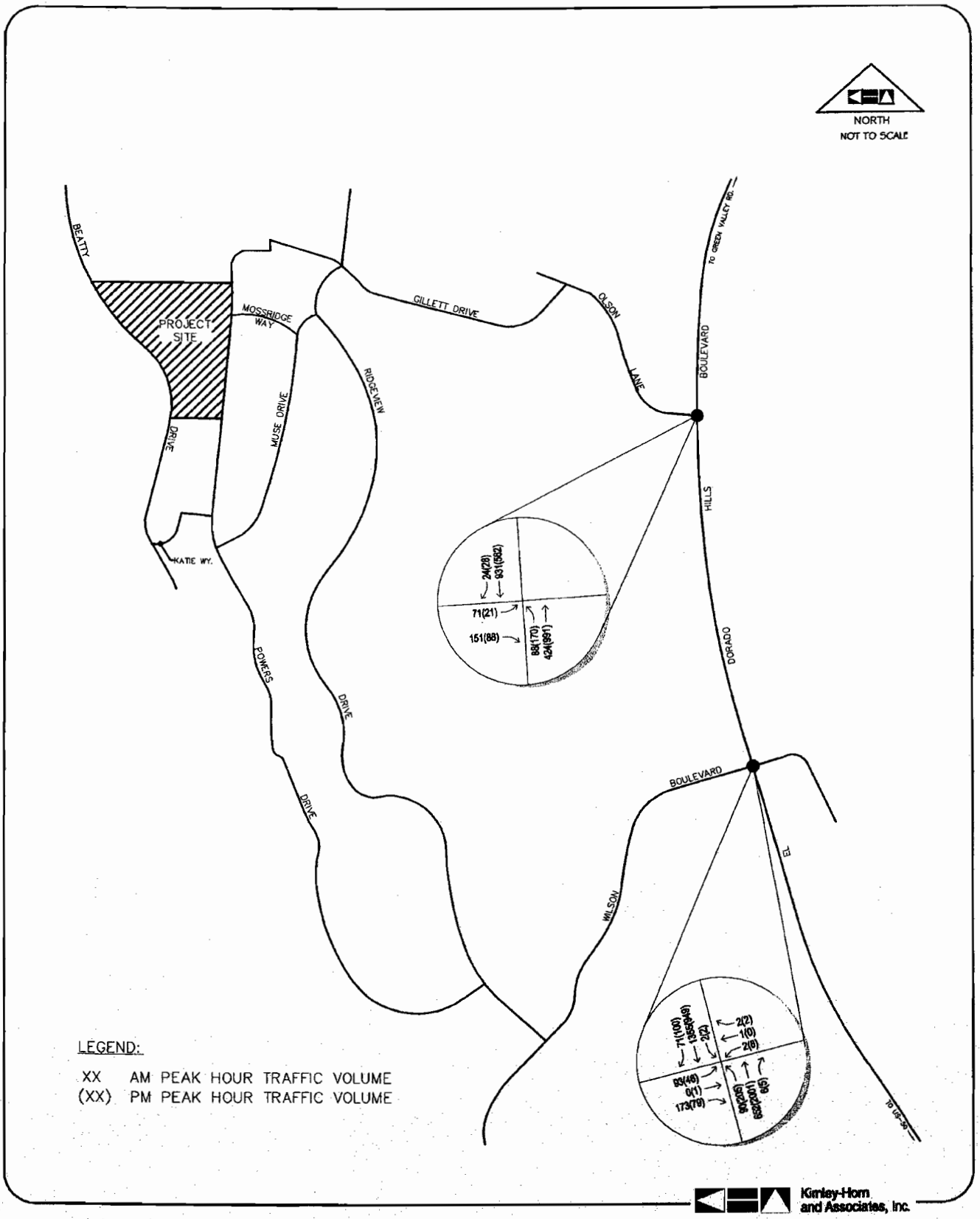


FIGURE 8

EXISTING PLUS APPROVED PROJECTS (2011)
PEAK HOUR TRAFFIC VOLUMES

RIDGEVIEW VILLAGE UNIT #9
EL DORADO HILLS, CA

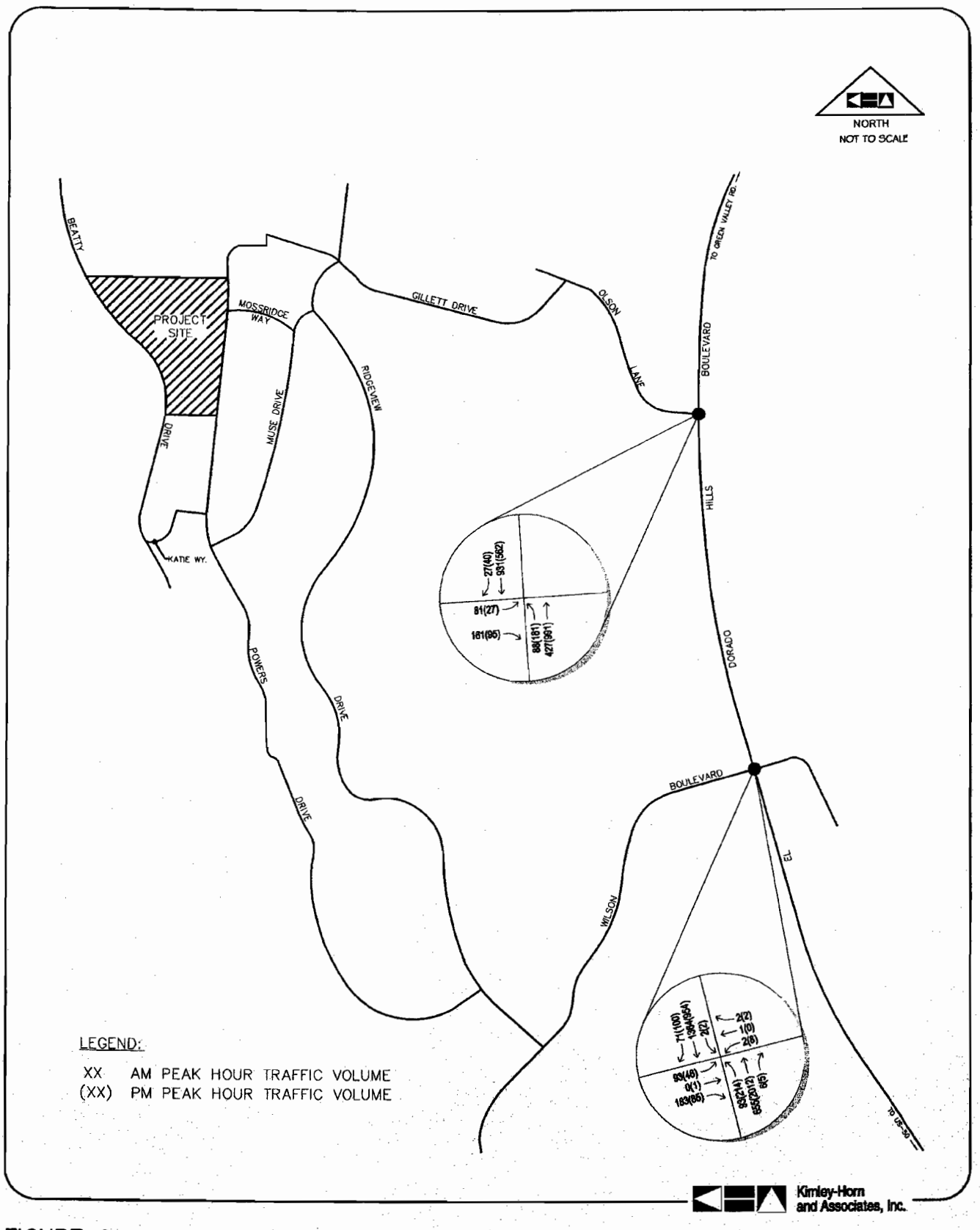


FIGURE 9

EXISTING PLUS APPROVED PROJECTS (2011) PLUS PROPOSED PROJECT PEAK HOUR TRAFFIC VOLUMES

RIDGEVIEW VILLAGE UNIT #9
EL DORADO HILLS, CA

As indicated in Table 7, the study intersections operate from LOS A to LOS C during the AM and PM peak hours. The analysis worksheets for this analysis scenario are provided in Appendix E.

IMPACTS AND MITIGATION

Standards of Significance
Project impacts were determined by comparing conditions with the proposed project to those without the project. Impacts for intersections are created when traffic from the proposed project forces the LOS to fall below a specific threshold. The County's standards[7] specify the following:

> "Level of Service (LOS) for County-maintained roads and State highways within the unincorporated areas of the County *shall not be worse than LOS E in the Community Regions.*" (Policy TC-Xd) The proposed project is within the El Dorado Hills Community Region.
>
> "If a project causes the peak hour level of service or volume/capacity ratio on a County road or State highway that would otherwise meet the County standards (without the project) to exceed the (given) values, then the impact shall be considered significant."

Impacts
The study intersections are governed by El Dorado County's LOS criteria. As indicated in Table 5 and Table 7, the proposed project does not cause intersection levels of service to decrease below the previously defined operational threshold (LOS E). As a result, the impact at the study intersections are ***less than significant.***

Mitigation
No mitigation is required.

OTHER CONSIDERATIONS

Site Plan Review, Access, and On-site Circulation
The site plan for the proposed project was reviewed for general access and on-site circulation. According to the Tentative Map dated May 1999, primary access to the site will be provided from Powers Drive via Olson Lane and Wilson Boulevard. Julie Ann Way and Beatty Drive are existing roadways that will serve as the primary interior roadways. Beatty Drive will ultimately connect to development areas located north and west of the project site. The proposed project site has adequate access from both Powers Drive and Ridgeview Drive. The interior roadways are anticipated to provide adequate on-site circulation within the development.

Further, as required by the County's standards[5], the following is a discussion of the proposed project's impacts related to the following issues and General Plan goals:

Emergency Vehicle Access
It is assumed that streets within the project site will be constructed to County standards. In addition, the project will not result in any undue traffic congestions. As a result, the proposed project is not anticipated to adversely affect emergency vehicle access at the project site or study intersections. Furthermore, because Powers Drive and Ridgeview Drive have multiple connections to El Dorado Hills Boulevard, there is adequate access to the proposed project site. As such, emergency vehicle access would be maintained.

[7] El Dorado County Department of Transportation, *Traffic Impact Study Protocols and Procedures*, November 2005.

Deliveries of Goods and Services
It is assumed that streets within the project site will be constructed to County standards. The proposed project is not anticipated to adversely effect the delivery of goods and services in the vicinity of the project site or at the study intersections. The deliveries of goods and services would be maintained.

Access to Public Transit Services
General Plan Circulation Element Goal TC-2 provides direction to the County to take specific actions related to promoting a safe and efficient transit system. Consistent with Goal TC-2, the proposed project is not anticipated to adversely affect these actions. There are currently no public transit services located in the immediate vicinity of the proposed project.

Transportation System Management
Consistent with the General Plan Circulation Element Goal TC-3, the proposed project is not anticipated to significantly increase the quantity of motor vehicle emissions and the amount of investment required in new or expanded facilities. As presented in Table 1, the proposed project generates 36 AM and 49 PM peak hour trips, relatively minor resultant volumes when compared to the densities of other residential development projects. It is anticipated that the project's environmental document will further discuss impacts to air quality.

The following is a discussion of the key efforts of Goal TC-3:

- Support Standards and Regulations
  The proposed project does not propose to change or prohibit County policies.

- Increase Capacity of Existing Roadways
  The proposed project will not significantly affect roadway capacity. Further, the proposed project is not located where capacity increases are warranted.

- Encourage Employees to Use Alternative Modes of Transportation
  The proposed project does not include employees.

- Synchronize Traffic Signals
  The proposed project will not result in new traffic signals. As such, synchronization is not needed.

Non-Motorized Transportation
Consistent with the General Plan Circulation Element Goal TC-4, the proposed project does not deter from a safe, continuous, and easily accessible non-motorized transportation system. The project is anticipated to provide non-motorized transportation facilities, connecting with other such facilities in the area. As such, the project will maintain or improve accessibility for non-motorized transportation.

TRAFFIC OPERATIONS ANALYSIS

As requested by the El Dorado County Department of Transportation[8], a traffic operations analysis was performed for the roadways connecting the proposed project to El Dorado Hills Boulevard. The following is a discussion regarding traffic operations along these roadways.

Powers Drive, Ridgeview Drive, and Gillett Drive are low speed, two-lane, local roadways that carry relatively low traffic volumes. Geometric conditions along the roadways contribute to the low speeds as numerous horizontal curves and narrow pavement widths were noted.

[8] Per direction offered at Initial Project Review Meeting, January 11, 2006.

These roadways are estimated to have a capacity of approximately 7,000 vehicles per day for LOS C. Above this threshold, the introduction of a two-way left-turn lane (TWLTL) should be considered. As such, there is an abundance of available capacity along Powers Drive, Ridgeview Drive, and Gillett Drive. The proposed project's traffic (460 daily trips) will be split among various routes and is not anticipated to noticeably decrease the available capacity or alter the operating characteristics along these roadways.

Olson Lane via Gillette Drive provide the primary connection to north El Dorado Hills Boulevard for the proposed project. The Gillette Drive connection from Ridgeview Drive to Olson Lane serves an important role in the circulation of traffic through this area. These roadways generally have adequate horizontal and vertical geometry and are adequately sized for typical traffic conditions.

Olson Lane's current traffic volume is approximately 3,200 vehicles per day with Gillette Drive serving a smaller volume. These roadways are estimated to have a capacity of approximately 7,000 vehicles per day for LOS C. Above this threshold, the introduction of a two-way left-turn lane (TWLTL) should be considered. As such, there is an abundance of available capacity along Olson Lane and Gillette Drive. The proposed project's traffic (460 daily trips) will be split among various routes and is not anticipated to noticeably decrease the available capacity or alter the operating characteristics along these roadways.

Wilson Boulevard via Ridgeview Drive and Powers Drive provide the primary connection to south El Dorado Hills Boulevard for the proposed project. These roadways generally have adequate horizontal and vertical geometry and are adequately sized for typical traffic conditions.

Wilson Boulevard's current traffic volume is approximately 5,260 vehicles per day. This roadway is estimated to have a capacity of approximately 7,000 vehicles per day for LOS C. Above this threshold, the introduction of a two-way left-turn lane (TWLTL) should be considered. As such, there is an abundance of available capacity along Wilson Boulevard. The proposed project (460 daily trips) is not anticipated to noticeably decrease the available capacity or alter the operating characteristics along this roadway.

CONCLUSIONS

Based upon the analysis documented in this report, the following conclusions are offered:

- The proposed project is expected to generate 460 daily trips, including 36 AM peak hour trips and 49 PM peak hour trips.
- The proposed project is consistent with the zoning density and the 2004 General Plan land use designation for the site, and is smaller than the GPEIR forecasted growth for the traffic analysis zone.
- The addition of the proposed project to the existing network does not result in substandard operations at the study intersections. As such, the impact at the study intersections is ***less than significant***.
- The addition of the proposed project to the existing plus approved projects (year 2011) network does not result in substandard operations at the study intersections. As such, the impact at the study intersections is ***less than significant***.
- The project is ***not anticipated to create any significant environmental impacts***.
- The traffic operations analysis determined that there is an abundance of available capacity along the local roadways connecting the proposed project to El Dorado Hills Boulevard. As such, the proposed project is not anticipated to noticeably decrease the available capacity or alter the operating characteristics of these roadways.

Appendix A:

Traffic Data

Existing Traffic Data:

El Dorado Hills Blvd / Olson Lane

Date	Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1/18/2006	AM	84	493	0	0	990	23	68	0	144	0	0	0
3/9/2004	*PM*	*166*	*1080*	*0*	*0*	*621*	*28*	*21*	*0*	*86*	*0*	*0*	*0*
Factored	PM	162	1054	0	0	604	27	20	0	84	0	0	0

El Dorado Hills Blvd. / Wilson Blvd.

Count	Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
3/9/2006	AM	86	717	6	2	1442	68	89	0	165	2	1	2
3/9/2006	PM	195	1943	5	2	1020	95	44	1	75	8	0	2

MULTITRANS
WALNUT CREEK, CALIFORNIA
(925) 930-0500

Jurisdiction: EL DORADO COUNTY
Intersection: ELDORADO HILLS/OLSON
North/South Street:ELDORADO HILLS BLVD.
East/West Street: OLSON LANE

File Name : SITE 15AM
Site Code : 00000015
Start Date : 1/20/2006
Page No : 1

Groups Printed- Vehicles

	ELDORADO HILLS BLVD. Southbound				Westbound				ELDORADO HILLS BLVD. Northbound				OLSON LANE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
06:30 AM	3	130	0	133	0	0	0	0	0	58	10	68	38	0	2	40	241
06:45 AM	9	124	0	133	0	0	0	0	0	84	9	93	23	0	11	34	260
Total	12	254	0	266	0	0	0	0	0	142	19	161	61	0	13	74	501
07:00 AM	4	240	0	244	0	0	0	0	0	136	13	149	32	0	26	58	451
07:15 AM	4	220	0	224	0	0	0	0	0	124	13	137	30	0	24	54	415
07:30 AM	8	301	0	309	0	0	0	0	0	112	38	150	41	0	9	50	509
07:45 AM	7	229	0	236	0	0	0	0	0	121	20	141	41	0	9	50	427
Total	23	990	0	1013	0	0	0	0	0	493	84	577	144	0	68	212	1802
08:00 AM	8	199	0	207	0	0	0	0	0	116	15	131	16	0	16	32	370
08:15 AM	15	156	0	171	0	0	0	0	0	121	22	143	28	0	7	35	349
08:30 AM	3	196	0	199	0	0	0	0	0	109	16	125	35	0	2	37	361
08:45 AM	10	181	0	191	0	0	0	0	0	119	22	141	25	0	4	29	361
Total	36	732	0	768	0	0	0	0	0	465	75	540	104	0	29	133	1441
09:00 AM	6	176	0	182	0	0	0	0	0	67	8	75	23	0	7	30	287
09:15 AM	7	131	3	141	0	0	0	0	0	90	14	104	24	0	1	25	270
Grand Total	84	2283	3	2370	0	0	0	0	0	1257	200	1457	356	0	118	474	4301
Apprch %	3.5	96.3	0.1		0.0	0.0	0.0		0.0	86.3	13.7		75.1	0.0	24.9		
Total %	2.0	53.1	0.1	55.1	0.0	0.0	0.0	0.0	0.0	29.2	4.7	33.9	8.3	0.0	2.7	11.0	

	ELDORADO HILLS BLVD. Southbound				Westbound				ELDORADO HILLS BLVD. Northbound				OLSON LANE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 06:30 AM to 09:15 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	23	990	0	1013	0	0	0	0	0	493	84	577	144	0	68	212	1802
Percent	2.3	97.7	0.0		0.0	0.0	0.0		0.0	85.4	14.6		67.9	0.0	32.1		
07:30 Volume	8	301	0	309	0	0	0	0	0	112	38	150	41	0	9	50	509
Peak Factor																	0.885
High Int.	07:30 AM				8:15:00 AM				07:30 AM				07:00 AM				
Volume	8	301	0	309	0	0	0	0	0	112	38	150	32	0	26	58	
Peak Factor				0.820								0.962				0.914	

Appendix B:

Analysis Worksheets for Existing Conditions

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	12	12	14
Grade (%)	-2%			0%	0%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1812	1711	3539	3527	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1787	1812	1711	3539	3527	
Volume (vph)	68	144	84	493	990	23
Peak-hour factor, PHF	0.91	0.91	0.96	0.96	0.82	0.82
Adj. Flow (vph)	75	158	88	514	1207	28
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	75	158	88	514	1235	0
Turn Type		Prot	Prot			
Protected Phases	4	4	5	2	6	
Permitted Phases						
Actuated Green, G (s)	9.9	9.9	4.7	42.2	33.5	
Effective Green, g (s)	9.9	9.9	4.7	42.2	33.5	
Actuated g/C Ratio	0.16	0.16	0.08	0.70	0.56	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	294	298	134	2485	1966	
v/s Ratio Prot	0.04	c0.09	c0.05	0.15	c0.35	
v/s Ratio Perm						
v/c Ratio	0.26	0.53	0.66	0.21	0.63	
Uniform Delay, d1	21.9	23.0	26.9	3.1	9.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	1.8	11.0	0.0	0.6	
Delay (s)	22.3	24.8	37.9	3.2	9.7	
Level of Service	C	C	D	A	A	
Approach Delay (s)	24.0			8.2	9.7	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1796	1607		1728		1770	3535		1770	3515	
Flt Permitted		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1796	1607		1728		1770	3535		1770	3515	
Volume (vph)	89	0	165	2	1	2	86	717	6	2	1442	68
Peak-hour factor, PHF	0.88	0.88	0.88	0.45	0.45	0.45	0.78	0.78	0.78	0.88	0.88	0.88
Adj. Flow (vph)	101	0	188	4	2	4	110	919	8	2	1639	77
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	101	188	0	10	0	110	927	0	2	1716	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		12.7	12.7		1.2		4.1	41.7		0.7	38.3	
Effective Green, g (s)		12.7	12.7		1.2		4.1	41.7		0.7	38.3	
Actuated g/C Ratio		0.18	0.18		0.02		0.06	0.58		0.01	0.53	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		315	282		29		100	2039		17	1862	
v/s Ratio Prot		0.06	c0.12		c0.01		c0.06	c0.26		0.00	c0.49	
v/s Ratio Perm												
v/c Ratio		0.32	0.67		0.34		1.10	0.45		0.12	0.92	
Uniform Delay, d1		26.0	27.8		35.2		34.1	8.8		35.5	15.6	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	5.8		7.0		119.5	0.2		3.1	8.1	
Delay (s)		26.6	33.7		42.2		153.6	8.9		38.6	23.7	
Level of Service		C	C		D		F	A		D	C	
Approach Delay (s)		31.2			42.2			24.3			23.7	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	24.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	72.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	12	12	14
Grade (%)	-2%			0%	0%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1812	1711	3539	3516	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1787	1812	1711	3539	3516	
Volume (vph)	20	84	162	1054	604	27
Peak-hour factor, PHF	0.77	0.77	0.87	0.87	0.88	0.88
Adj. Flow (vph)	26	109	186	1211	686	31
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	26	109	186	1211	717	0
Turn Type		Prot	Prot			
Protected Phases	4	4	5	2	6	
Permitted Phases						
Actuated Green, G (s)	5.5	5.5	7.5	35.7	24.2	
Effective Green, g (s)	5.5	5.5	7.5	35.7	24.2	
Actuated g/C Ratio	0.11	0.11	0.15	0.73	0.49	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	200	203	261	2568	1729	
v/s Ratio Prot	0.01	c0.06	c0.11	c0.34	0.20	
v/s Ratio Perm						
v/c Ratio	0.13	0.54	0.71	0.47	0.41	
Uniform Delay, d1	19.7	20.6	19.8	2.8	8.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	2.7	8.9	0.1	0.2	
Delay (s)	20.0	23.4	28.7	3.0	8.1	
Level of Service	B	C	C	A	A	
Approach Delay (s)	22.7			6.4	8.1	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	49.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1802	1607		1743		1770	3538		1770	3494	
Flt Permitted		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1802	1607		1743		1770	3538		1770	3494	
Volume (vph)	44	1	75	8	0	2	195	1943	5	2	1020	95
Peak-hour factor, PHF	0.78	0.78	0.78	0.50	0.50	0.50	0.96	0.96	0.96	0.82	0.82	0.82
Adj. Flow (vph)	56	1	96	16	0	4	203	2024	5	2	1244	116
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	57	96	0	20	0	203	2029	0	2	1360	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		8.1	8.1		1.3		11.6	42.2		0.7	31.3	
Effective Green, g (s)		8.1	8.1		1.3		11.6	42.2		0.7	31.3	
Actuated g/C Ratio		0.12	0.12		0.02		0.17	0.62		0.01	0.46	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		214	191		33		301	2186		18	1601	
v/s Ratio Prot		0.03	c0.06		c0.01		c0.11	c0.57		0.00	0.39	
v/s Ratio Perm												
v/c Ratio		0.27	0.50		0.61		0.67	0.93		0.11	0.85	
Uniform Delay, d1		27.4	28.2		33.2		26.6	11.7		33.5	16.4	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7	2.1		27.6		5.9	7.5		2.7	4.4	
Delay (s)		28.1	30.3		60.8		32.4	19.2		36.2	20.8	
Level of Service		C	C		E		C	B		D	C	
Approach Delay (s)		29.5			60.8			20.4			20.9	
Approach LOS		C			E			C			C	

Intersection Summary

HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	68.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Appendix C:

Analysis Worksheets for
Existing plus Proposed Project Conditions

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	12	12	14
Grade (%)	-2%			0%	0%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1812	1711	3539	3526	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1787	1812	1711	3539	3526	
Volume (vph)	77	153	87	493	990	26
Peak-hour factor, PHF	0.91	0.91	0.96	0.96	0.82	0.82
Adj. Flow (vph)	85	168	91	514	1207	32
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	85	168	91	514	1239	0
Turn Type		Prot	Prot			
Protected Phases	4	4	5	2	6	
Permitted Phases						
Actuated Green, G (s)	9.8	9.8	4.5	40.7	32.2	
Effective Green, g (s)	9.8	9.8	4.5	40.7	32.2	
Actuated g/C Ratio	0.17	0.17	0.08	0.70	0.55	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	299	304	132	2462	1941	
v/s Ratio Prot	0.05	c0.09	c0.05	0.15	c0.35	
v/s Ratio Perm						
v/c Ratio	0.28	0.55	0.69	0.21	0.64	
Uniform Delay, d1	21.3	22.3	26.3	3.2	9.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	2.2	14.0	0.0	0.7	
Delay (s)	21.8	24.5	40.3	3.2	9.8	
Level of Service	C	C	D	A	A	
Approach Delay (s)	23.6			8.8	9.8	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	58.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1796	1607		1728		1770	3535		1770	3516	
Flt Permitted		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1796	1607		1728		1770	3535		1770	3516	
Volume (vph)	89	0	174	2	1	2	89	720	6	2	1451	68
Peak-hour factor, PHF	0.88	0.88	0.88	0.45	0.45	0.45	0.78	0.78	0.78	0.88	0.88	0.88
Adj. Flow (vph)	101	0	198	4	2	4	114	923	8	2	1649	77
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	101	198	0	10	0	114	931	0	2	1726	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		12.9	12.9		1.2		4.1	41.2		0.7	37.8	
Effective Green, g (s)		12.9	12.9		1.2		4.1	41.2		0.7	37.8	
Actuated g/C Ratio		0.18	0.18		0.02		0.06	0.57		0.01	0.52	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		322	288		29		101	2023		17	1846	
v/s Ratio Prot		0.06	c0.12		c0.01		c0.06	c0.26		0.00	c0.49	
v/s Ratio Perm												
v/c Ratio		0.31	0.69		0.34		1.13	0.46		0.12	0.93	
Uniform Delay, d1		25.7	27.7		35.0		34.0	8.9		35.3	16.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	6.7		7.0		128.4	0.2		3.1	9.4	
Delay (s)		26.3	34.3		42.0		162.4	9.1		38.4	25.4	
Level of Service		C	C		D		F	A		D	C	
Approach Delay (s)		31.6			42.0			25.8			25.4	
Approach LOS		C			D			C			C	

Intersection Summary

HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	12	12	14
Grade (%)	-2%			0%	0%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1812	1711	3539	3508	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1787	1812	1711	3539	3508	
Volume (vph)	26	90	172	1054	604	38
Peak-hour factor, PHF	0.77	0.77	0.87	0.87	0.88	0.88
Adj. Flow (vph)	34	117	198	1211	686	43
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	34	117	198	1211	729	0
Turn Type		Prot	Prot			
Protected Phases	4	4	5	2	6	
Permitted Phases						
Actuated Green, G (s)	5.4	5.4	6.3	35.1	24.8	
Effective Green, g (s)	5.4	5.4	6.3	35.1	24.8	
Actuated g/C Ratio	0.11	0.11	0.13	0.72	0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	199	202	222	2561	1794	
v/s Ratio Prot	0.02	c0.06	c0.12	c0.34	0.21	
v/s Ratio Perm						
v/c Ratio	0.17	0.58	0.89	0.47	0.41	
Uniform Delay, d1	19.5	20.5	20.8	2.8	7.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	4.0	32.9	0.1	0.2	
Delay (s)	19.9	24.5	53.7	3.0	7.5	
Level of Service	B	C	D	A	A	
Approach Delay (s)	23.4			10.1	7.5	
Approach LOS	C			B	A	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	48.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1802	1607		1743		1770	3538		1770	3494	
Flt Permitted		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1802	1607		1743		1770	3538		1770	3494	
Volume (vph)	44	1	81	8	0	2	204	1953	5	2	1026	95
Peak-hour factor, PHF	0.78	0.78	0.78	0.50	0.50	0.50	0.96	0.96	0.96	0.82	0.82	0.82
Adj. Flow (vph)	56	1	104	16	0	4	212	2034	5	2	1251	116
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	57	104	0	20	0	212	2039	0	2	1367	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		8.3	8.3		1.4		12.0	42.2		0.7	30.9	
Effective Green, g (s)		8.3	8.3		1.4		12.0	42.2		0.7	30.9	
Actuated g/C Ratio		0.12	0.12		0.02		0.17	0.62		0.01	0.45	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		218	194		36		310	2176		18	1574	
v/s Ratio Prot		0.03	c0.06		c0.01		c0.12	c0.58		0.00	0.39	
v/s Ratio Perm												
v/c Ratio		0.26	0.54		0.56		0.68	0.94		0.11	0.87	
Uniform Delay, d1		27.4	28.3		33.3		26.5	12.0		33.6	17.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	2.8		17.3		6.1	8.4		2.7	5.4	
Delay (s)		28.0	31.2		50.6		32.6	20.4		36.4	22.4	
Level of Service		C	C		D		C	C		D	C	
Approach Delay (s)		30.1			50.6			21.6			22.4	
Approach LOS		C			D			C			C	

Intersection Summary

HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	68.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Appendix D:

Analysis Worksheets for
Existing plus Approved Projects (2011) Conditions

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	12	12	14
Grade (%)	-2%			0%	0%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1812	1711	3539	3526	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1787	1812	1711	3539	3526	
Volume (vph)	68	144	84	493	990	23
Peak-hour factor, PHF	0.91	0.91	0.96	0.96	0.82	0.82
Growth Factor (vph)	105%	105%	105%	86%	94%	105%
Adj. Flow (vph)	78	166	92	442	1135	29
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	78	166	92	442	1164	0
Turn Type		Prot	Prot			
Protected Phases	4	4	5	2	6	
Permitted Phases						
Actuated Green, G (s)	9.6	9.6	4.5	39.7	31.2	
Effective Green, g (s)	9.6	9.6	4.5	39.7	31.2	
Actuated g/C Ratio	0.17	0.17	0.08	0.69	0.54	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	299	304	134	2452	1920	
v/s Ratio Prot	0.04	c0.09	c0.05	0.12	c0.33	
v/s Ratio Perm						
v/c Ratio	0.26	0.55	0.69	0.18	0.61	
Uniform Delay, d1	20.8	21.9	25.7	3.1	8.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	2.0	13.6	0.0	0.5	
Delay (s)	21.2	23.9	39.3	3.1	9.4	
Level of Service	C	C	D	A	A	
Approach Delay (s)	23.0			9.4	9.4	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1796	1607		1728		1770	3534		1770	3513	
Flt Permitted		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1796	1607		1728		1770	3534		1770	3513	
Volume (vph)	89	0	165	2	1	2	86	717	6	2	1442	68
Peak-hour factor, PHF	0.88	0.88	0.88	0.45	0.45	0.45	0.78	0.78	0.78	0.88	0.88	0.88
Growth Factor (vph)	105%	100%	105%	100%	100%	100%	105%	91%	105%	100%	94%	105%
Adj. Flow (vph)	106	0	197	4	2	4	116	836	8	2	1540	81
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	106	197	0	10	0	116	844	0	2	1621	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		12.9	12.9		1.2		4.1	41.2		0.7	37.8	
Effective Green, g (s)		12.9	12.9		1.2		4.1	41.2		0.7	37.8	
Actuated g/C Ratio		0.18	0.18		0.02		0.06	0.57		0.01	0.52	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		322	288		29		101	2022		17	1844	
v/s Ratio Prot		0.06	c0.12		c0.01		c0.07	c0.24		0.00	c0.46	
v/s Ratio Perm												
v/c Ratio		0.33	0.68		0.34		1.15	0.42		0.12	0.88	
Uniform Delay, d1		25.8	27.6		35.0		34.0	8.7		35.3	15.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	6.6		7.0		135.0	0.1		3.1	5.1	
Delay (s)		26.4	34.2		42.0		169.0	8.8		38.4	20.2	
Level of Service		C	C		D		F	A		D	C	
Approach Delay (s)		31.5			42.0			28.2			20.2	
Approach LOS		C			D			C			C	

Intersection Summary

HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	12	12	14
Grade (%)	-2%			0%	0%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1812	1711	3539	3514	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1787	1812	1711	3539	3514	
Volume (vph)	20	84	162	1054	604	27
Peak-hour factor, PHF	0.77	0.77	0.87	0.87	0.88	0.88
Growth Factor (vph)	105%	105%	105%	94%	93%	105%
Adj. Flow (vph)	27	115	196	1139	638	32
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	27	115	196	1139	670	0
Turn Type		Prot	Prot			
Protected Phases	4	4	5	2	6	
Permitted Phases						
Actuated Green, G (s)	5.6	5.6	8.7	32.0	19.3	
Effective Green, g (s)	5.6	5.6	8.7	32.0	19.3	
Actuated g/C Ratio	0.12	0.12	0.19	0.70	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	219	223	326	2484	1487	
v/s Ratio Prot	0.02	c0.06	c0.11	c0.32	0.19	
v/s Ratio Perm						
v/c Ratio	0.12	0.52	0.60	0.46	0.45	
Uniform Delay, d1	17.8	18.7	16.9	3.0	9.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	2.0	3.1	0.1	0.2	
Delay (s)	18.1	20.7	20.0	3.1	9.6	
Level of Service	B	C	B	A	A	
Approach Delay (s)	20.2			5.6	9.6	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	45.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1802	1607		1743		1770	3538		1770	3489	
Flt Permitted		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1802	1607		1743		1770	3538		1770	3489	
Volume (vph)	44	1	75	8	0	2	195	1943	5	2	1020	95
Peak-hour factor, PHF	0.78	0.78	0.78	0.50	0.50	0.50	0.96	0.96	0.96	0.82	0.82	0.82
Growth Factor (vph)	105%	100%	105%	100%	100%	100%	105%	103%	100%	100%	93%	105%
Adj. Flow (vph)	59	1	101	16	0	4	213	2085	5	2	1157	122
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	60	101	0	20	0	213	2090	0	2	1279	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		8.2	8.2		1.3		11.9	41.4		0.7	30.2	
Effective Green, g (s)		8.2	8.2		1.3		11.9	41.4		0.7	30.2	
Actuated g/C Ratio		0.12	0.12		0.02		0.18	0.61		0.01	0.45	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		219	195		34		312	2167		18	1559	
v/s Ratio Prot		0.03	c0.06		c0.01		c0.12	c0.59		0.00	0.37	
v/s Ratio Perm												
v/c Ratio		0.27	0.52		0.59		0.68	0.96		0.11	0.82	
Uniform Delay, d1		27.0	27.8		32.9		26.1	12.4		33.1	16.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7	2.3		23.4		6.0	12.0		2.7	3.6	
Delay (s)		27.7	30.2		56.3		32.1	24.4		35.9	19.9	
Level of Service		C	C		E		C	C		D	B	
Approach Delay (s)		29.2			56.3			25.2			20.0	
Approach LOS		C			E			C			B	

Intersection Summary

HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	67.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Appendix E:

Analysis Worksheets for
Existing plus Approved Projects (2011) plus Proposed Project Conditions

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	12	12	14
Grade (%)	-2%			0%	0%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1812	1711	3539	3524	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1787	1812	1711	3539	3524	
Volume (vph)	77	153	84	496	990	26
Peak-hour factor, PHF	0.91	0.91	0.96	0.96	0.82	0.82
Growth Factor (vph)	105%	105%	105%	86%	94%	105%
Adj. Flow (vph)	89	177	92	444	1135	33
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	89	177	92	444	1168	0
Turn Type		Prot	Prot			
Protected Phases	4	4	5	2	6	
Permitted Phases						
Actuated Green, G (s)	9.6	9.6	4.4	38.6	30.2	
Effective Green, g (s)	9.6	9.6	4.4	38.6	30.2	
Actuated g/C Ratio	0.17	0.17	0.08	0.69	0.54	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	305	310	134	2431	1894	
v/s Ratio Prot	0.05	c0.10	c0.05	0.13	c0.33	
v/s Ratio Perm						
v/c Ratio	0.29	0.57	0.69	0.18	0.62	
Uniform Delay, d1	20.3	21.4	25.2	3.2	9.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	2.5	13.6	0.0	0.6	
Delay (s)	20.9	23.9	38.9	3.2	9.6	
Level of Service	C	C	D	A	A	
Approach Delay (s)	22.9			9.3	9.6	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1796	1607		1728		1770	3534		1770	3513	
Flt Permitted		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1796	1607		1728		1770	3534		1770	3513	
Volume (vph)	89	0	174	2	1	2	89	720	6	2	1451	68
Peak-hour factor, PHF	0.88	0.88	0.88	0.45	0.45	0.45	0.78	0.78	0.78	0.88	0.88	0.88
Growth Factor (vph)	105%	100%	105%	100%	100%	100%	105%	91%	105%	100%	94%	105%
Adj. Flow (vph)	106	0	208	4	2	4	120	840	8	2	1550	81
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	106	208	0	10	0	120	848	0	2	1631	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		13.1	13.1		1.2		4.1	40.6		0.7	37.2	
Effective Green, g (s)		13.1	13.1		1.2		4.1	40.6		0.7	37.2	
Actuated g/C Ratio		0.18	0.18		0.02		0.06	0.57		0.01	0.52	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		329	294		29		101	2004		17	1825	
v/s Ratio Prot		0.06	c0.13		c0.01		c0.07	c0.24		0.00	c0.46	
v/s Ratio Perm												
v/c Ratio		0.32	0.71		0.34		1.19	0.42		0.12	0.89	
Uniform Delay, d1		25.4	27.5		34.8		33.8	8.8		35.1	15.4	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	7.6		7.0		148.7	0.1		3.1	6.1	
Delay (s)		26.0	35.0		41.8		182.5	9.0		38.2	21.5	
Level of Service		C	D		D		F	A		D	C	
Approach Delay (s)		32.0			41.8			30.5			21.5	
Approach LOS		C			D			C			C	

Intersection Summary

HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	12	12	14
Grade (%)	-2%			0%	0%	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1812	1711	3539	3504	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1787	1812	1711	3539	3504	
Volume (vph)	26	90	172	1054	604	38
Peak-hour factor, PHF	0.77	0.77	0.87	0.87	0.88	0.88
Growth Factor (vph)	105%	105%	105%	94%	93%	105%
Adj. Flow (vph)	35	123	208	1139	638	45
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	35	123	208	1139	683	0
Turn Type		Prot	Prot			
Protected Phases	4	4	5	2	6	
Permitted Phases						
Actuated Green, G (s)	5.5	5.5	8.6	30.8	18.2	
Effective Green, g (s)	5.5	5.5	8.6	30.8	18.2	
Actuated g/C Ratio	0.12	0.12	0.19	0.70	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	222	225	332	2461	1440	
v/s Ratio Prot	0.02	c0.07	c0.12	c0.32	0.19	
v/s Ratio Perm						
v/c Ratio	0.16	0.55	0.63	0.46	0.47	
Uniform Delay, d1	17.3	18.2	16.4	3.0	9.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	2.7	3.7	0.1	0.2	
Delay (s)	17.7	20.9	20.0	3.2	9.8	
Level of Service	B	C	C	A	A	
Approach Delay (s)	20.2			5.8	9.8	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	44.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1802	1607		1743		1770	3538		1770	3489	
Flt Permitted		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1802	1607		1743		1770	3538		1770	3489	
Volume (vph)	44	1	81	8	0	2	204	1953	5	2	1026	95
Peak-hour factor, PHF	0.78	0.78	0.78	0.50	0.50	0.50	0.96	0.96	0.96	0.82	0.82	0.82
Growth Factor (vph)	105%	100%	105%	100%	100%	100%	105%	103%	100%	100%	93%	105%
Adj. Flow (vph)	59	1	109	16	0	4	223	2095	5	2	1164	122
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	60	109	0	20	0	223	2100	0	2	1286	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		8.4	8.4		1.3		12.3	41.3		0.7	29.7	
Effective Green, g (s)		8.4	8.4		1.3		12.3	41.3		0.7	29.7	
Actuated g/C Ratio		0.12	0.12		0.02		0.18	0.61		0.01	0.44	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		224	199		33		322	2158		18	1531	
v/s Ratio Prot		0.03	c0.07		c0.01		c0.13	c0.59		0.00	0.37	
v/s Ratio Perm												
v/c Ratio		0.27	0.55		0.61		0.69	0.97		0.11	0.84	
Uniform Delay, d1		26.9	27.9		32.9		25.9	12.7		33.2	16.9	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	3.1		27.6		6.3	13.6		2.7	4.2	
Delay (s)		27.5	30.9		60.5		32.2	26.2		35.9	21.1	
Level of Service		C	C		E		C	C		D	C	
Approach Delay (s)		29.7			60.5			26.8			21.2	
Approach LOS		C			E			C			C	

Intersection Summary

HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	67.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

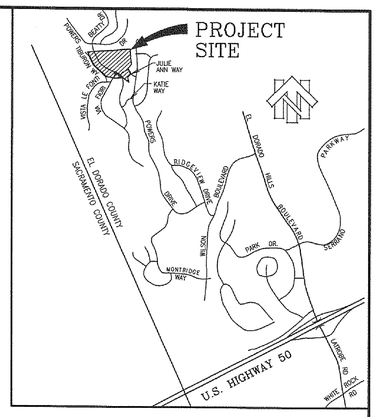
TENTATIVE MAP

RIDGEVIEW VILLAGE UNIT 9

SECTION 34, T.10 N., R.8 E., M.D.M.

COUNTY OF EL DORADO | JULY, 2013 | STATE OF CALIFORNIA

SCALE:1" = 60'



VICINITY MAP
NOT TO SCALE

OWNER OF RECORD

PACIFIC STATES DEVELOPMENT
991 GOVERNOR DRIVE, STE. 103
EL DORADO HILLS CA 95762

APPLICANT

PACIFIC STATES DEVELOPMENT
991 GOVERNOR DRIVE, STE. 103
EL DORADO HILLS CA 95762

ENGINEER

CTA Engineering · Surveying
3233 Monier Circle
Rancho Cordova, CA 95742
(916) 638-0919
(916) 638-2479 Fax

MAP SCALE

1" = 60'

CONTOUR INTERVAL

CONTOUR INTERVAL = 1 FOOT

SOURCE OF TOPOGRAPHY

(AERIAL PHOTOGRAPHY/TOPOGRAPHIC SURVEY)

SECTION, TOWNSHIP & RANGE

SECTIONS 34, T.10N., R.8E., M.D.M.

ASSESSOR'S PARCEL NUMBER

A.P.N. 120-010-01

PROPOSED ZONING

R1

TOTAL AREA

22.4 ACRES

TOTAL NO. of LOTS

44 SINGLE FAMILY LOTS

MINIMUM LOT AREA

12,889 SQUARE FEET

WATER SUPPLY and SEWAGE DISPOSAL

WATER – EL DORADO IRRIGATION DISTRICT
SEWER – EL DORADO IRRIGATION DISTRICT

PROPOSED STRUCTURAL FIRE PROTECTION

EL DORADO HILLS COUNTY WATER DISTRICT

PHASING PLAN NOTICE

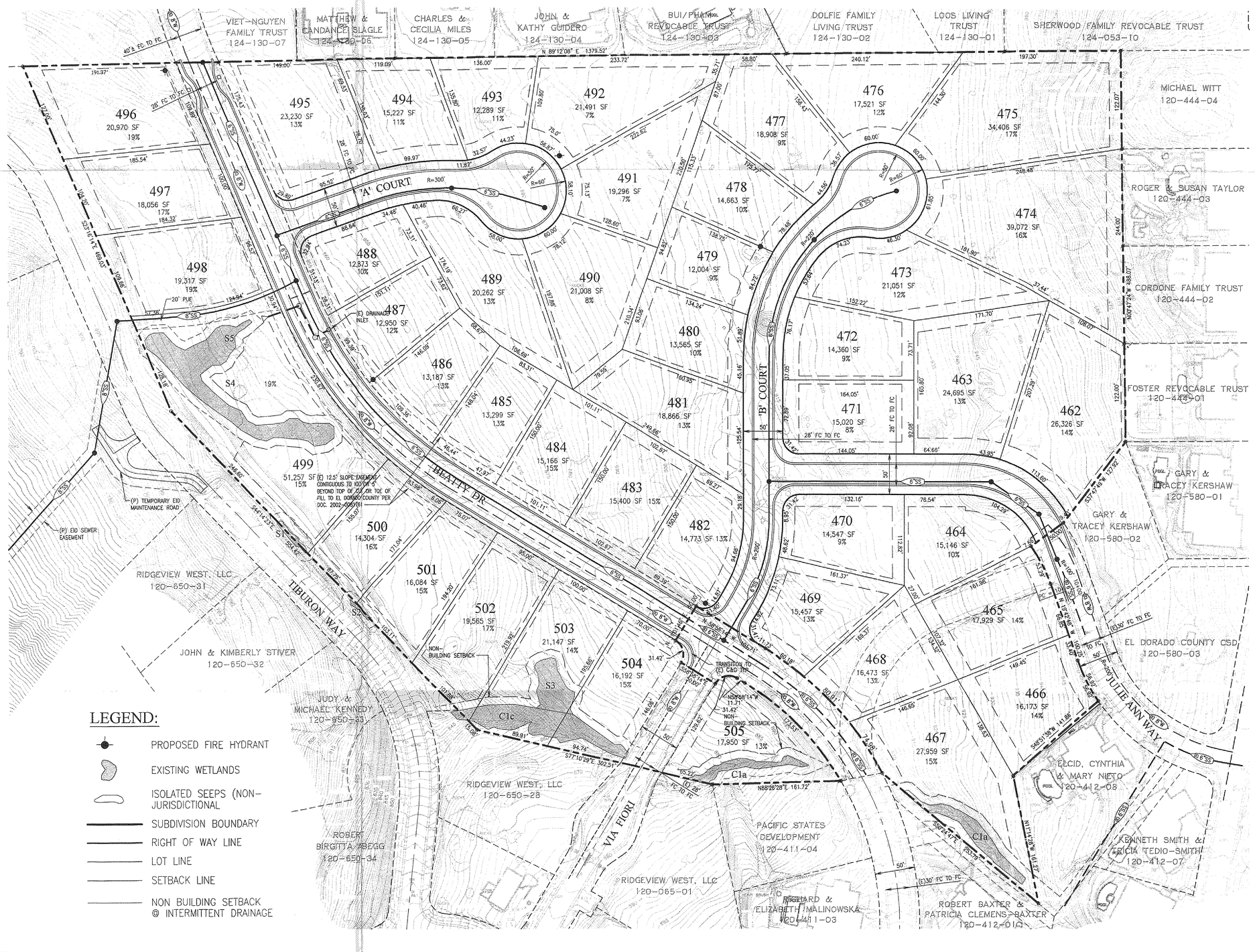
THE SUBDIVIDER MAY FILE MULTIPLE FINAL MAPS FOR THIS PROJECT. THE SUBDIVIDER SHALL NOT BE REQUIRED TO DEFINE THE NUMBER OR CONFIGURATION OF THE PROPOSED MULTIPLE FINAL MAPS. (PER THE SUBDIVISION MAP ACT, SECTION 66456.1)

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THE LAND DEVELOPMENT KNOWN AS "RIDGEVIEW VILLAGE UNIT 9" HAS BEEN DESIGNED IN ACCORDANCE WITH THE SPECIFICATIONS AND GUIDELINES ESTABLISHED BY THE COUNTY OF EL DORADO.

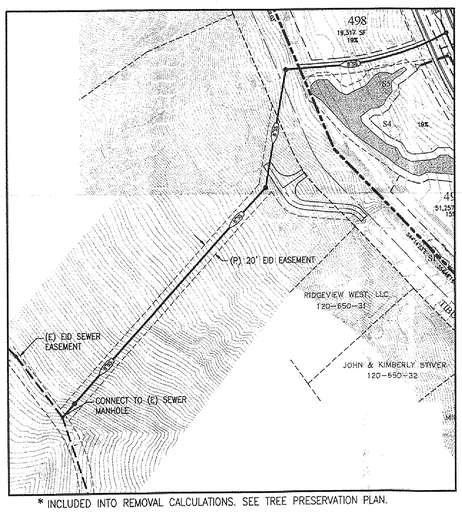
REGISTERED PROFESSIONAL ENGINEER
OLGA SCIORELLI
71204
Exp 6-30-15
CIVIL
STATE OF CALIFORNIA

OLGA SCIORELLI P.E. 71204 — DATE 7/8/13



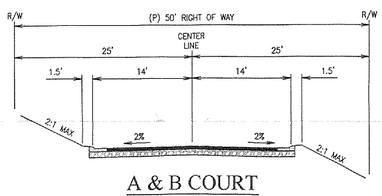
LEGEND:

- PROPOSED FIRE HYDRANT
- EXISTING WETLANDS
- ISOLATED SEEPS (NON-JURISDICTIONAL
- SUBDIVISION BOUNDARY
- RIGHT OF WAY LINE
- LOT LINE
- SETBACK LINE
- NON BUILDING SETBACK @ INTERMITTENT DRAINAGE

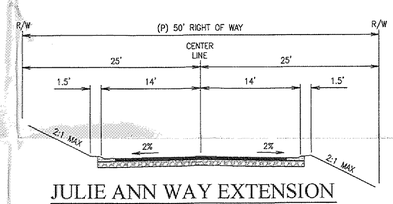


* INCLUDED INTO REMOVAL CALCULATIONS. SEE TREE PRESERVATION PLAN.

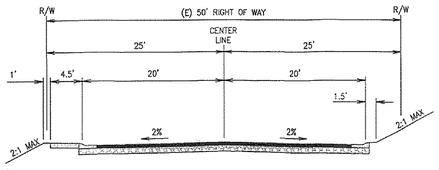
OFFSITE SEWER EXHIBIT
SCALE: 1"=100'



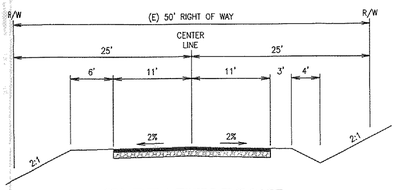
A & B COURT
SCALE: 1"=10'



JULIE ANN WAY EXTENSION
SCALE: 1"=10'



BEATTY DRIVE IMPROVEMENTS
SCALE: 1"=10'



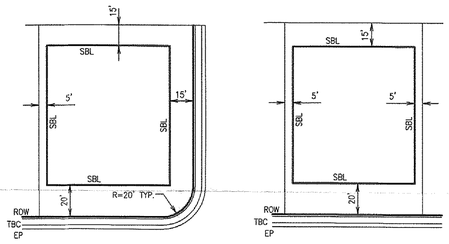
(E) BEATTY DRIVE
SCALE: 1"=10'

GROSS AND NET* LOT AREAS

Lot No.	Gross Area (S.F.)	Net Area (S.F.)
505	17,950	6,580
504	16,192	8,202
503	21,147	9,269
502	19,565	14,449
501	16,084	11,549
500	14,304	9,911
499	51,257	19,875
498	19,317	12,703
497	18,056	13,474
496	20,970	16,491
495	23,230	15,177
494	15,227	10,156
493	12,289	7,804
492	21,491	14,844
491	19,296	13,605
490	21,008	15,259
489	20,262	13,593
488	12,873	7,579
487	12,950	8,736
486	13,187	8,544
485	13,299	9,602
484	15,166	9,902
483	15,400	10,657

Lot No.	Gross Area (S.F.)	Net Area (S.F.)
482	14,773	9,023
481	18,866	13,521
480	13,565	9,114
479	12,004	7,872
478	14,663	10,134
477	18,908	13,775
476	17,521	11,529
475	34,406	14,101
474	39,072	18,305
473	21,051	14,195
472	14,360	12,460
471	15,020	9,202
470	14,547	9,397
469	15,457	8,611
468	16,473	12,565
467	27,959	15,562
466	16,173	9,948
465	17,929	11,378
464	15,146	12,341
463	24,695	21,762
462	26,326	19,886

* NET AREA OF THE LOT EXCLUDES NON-BUILDABLE AREAS SUCH AS BUILDING SETBACKS, EASEMENTS, AND SLOPES ABOVE 30%.



TYPICAL BUILDING SETBACKS
ONE-FAMILY RESIDENTIAL (R1)

APPROVED
EL DORADO COUNTY
PLANNING COMMISSION
DATE July 11, 2013
BY Rosa Trentadue
EXECUTIVE SECRETARY
TM08-1477

PLANNING COMMISSION: _____
APPROVAL/DENIAL DATE: _____
BOARD OF SUPERVISORS: _____
APPROVAL/DENIAL DATE: _____

ATTACHMENT 7

RIDGEVIEW VILLAGE UNIT 9 PHASE 0

PROPOSED PHASING PLAN

EL DORADO HILLS, CALIFORNIA

SCALE: 1"=100' FEBRUARY, 2018

0 30' 60' 120'

SCALE: 1" = 60'

LEGEND:

- SUBDIVISION BOUNDARY
- LOT LINE
- PHASE LINE

PHASE	LOT COUNT
1	23
2	21

VIET-NGUYEN FAMILY TRUST 124-130-07

MATTHEW & CANDANCE SLAGLE 124-130-06

CHARLES & CECILIA MILES 124-130-05

GUY & JEAN GUILFOY 124-130-04

BUI/PHAM REVOCABLE TRUST 124-130-03

LOWREY FAMILY LIVING TRUST 124-130-02

ERICKSON LIVING TRUST 124-130-01

SHERWOOD FAMILY REVOCABLE TRUST 124-053-10

MICHAEL WITT 120-444-04

ROGER TAYLOR 120-444-03

CORDONE FAMILY TRUST 120-444-02

VINCENT & ELIZABETH SMITH 120-444-01

GARY & TRACEY KERSHAW 120-580-01

GARY & TRACEY KERSHAW 120-580-02

EL DORADO COUNTY CSD 120-580-03

CAPLIS FAMILY REV TRUST 120-412-08

GRAU AC/DELOMBAERDE S FAM TR 120-41

ROBERT BAXTER & PATRICIA CLEMENS-BAXTER 120-412-01

YUAN DING & HAIYAN FU 120-411-03

DARBY & JESSICA LANNOM 120-411-04

RIDGEVIEW WEST, LLC 120-065-01

ERIC SCHNETZ & SHELLY CAMPBELL 120-650-27

ERIC SCHNETZ 120-650-28

SHARON SHASHAHANI 120-650-36

FRED SAMIMI 120-650-37

JONES & UNION LLC 120-650-32

ZIAD & DEBORAH ALAYWAN 120-650-31

RIDGEVIEW WEST, LLC 120-610-01

RIDGEVIEW WEST, LLC 120-610-18

A COURT

B COURT

JULIE ANN WAY

BEATTY DRIVE

TIBURON WAY

VIA FIORI

VISTA L

EASEMENT FOR ROAD, UTILITIES, CUTS AND SLOPES TO A.K.T. PROMONITORY PER DOC. 2001-0079550

I.O.D. FOR ROAD AND PUBLIC UTILITIES TO EL DORADO COUNTY PER DOC. 2002-0081761

12.5' SLOPE EASEMENT CONTIGUOUS TO I.O.D. OR 5' BEYOND TOP OF CUT OR TOE OF FILL TO EL DORADO COUNTY PER DOC. 2002-0081761

I.O.D. FOR ROAD AND PUBLIC UTILITIES TO EL DORADO COUNTY PER DOC. 1999-0077861

I.O.D. ACCEPTED BY EL DORADO COUNTY PER DOC. 2004-0030615

40' I.O.D. FOR TEMPORARY ROAD TO EL DORADO COUNTY PER DOC. 1999-0073173

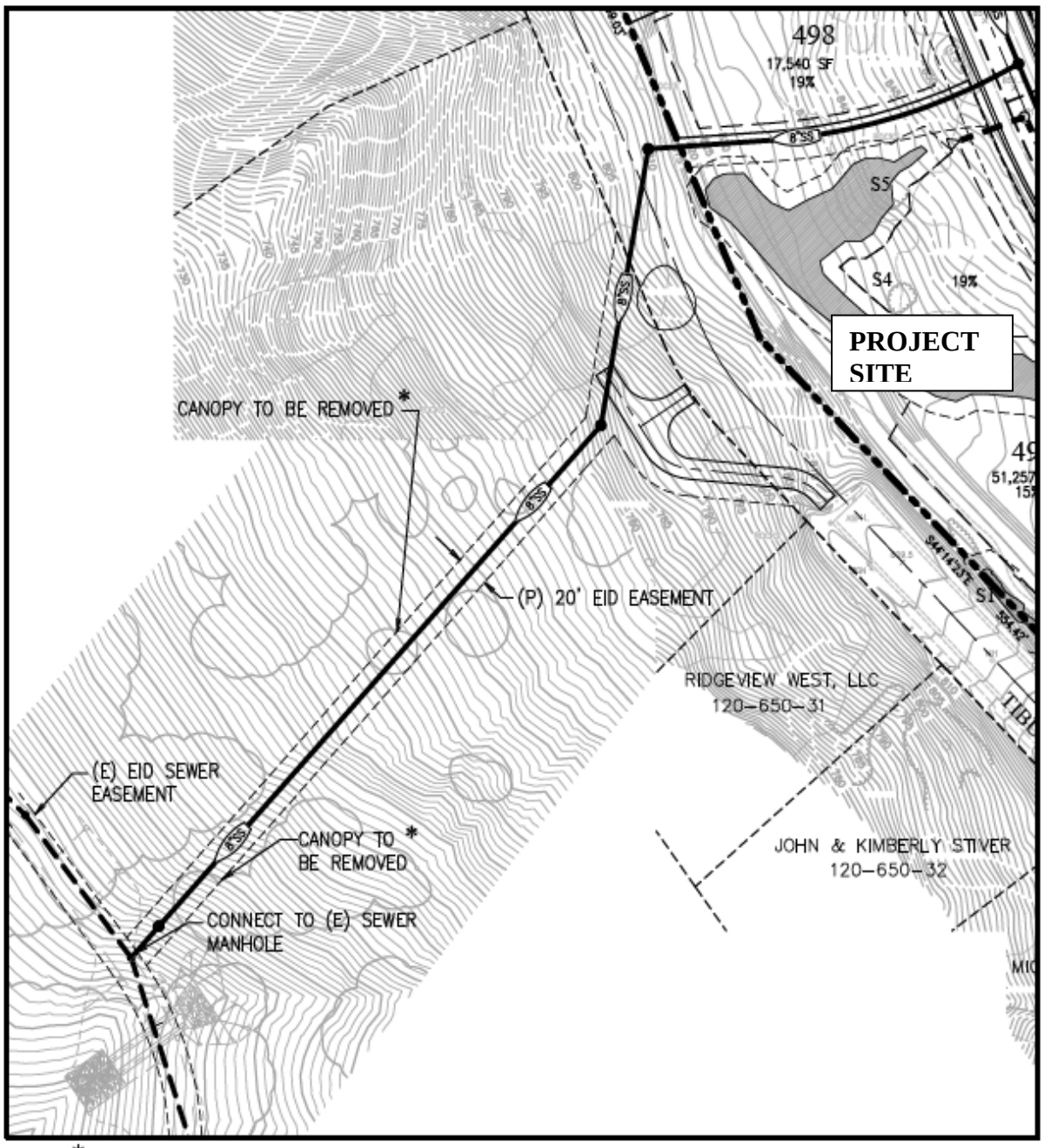
10' P.U.E. PER H-117

cta Engineering & Surveying

Civil Engineering ■ Land Surveying ■ Land Planning

3233 Monier Circle, Rancho Cordova, CA 95742

T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net



* INCLUDED INTO REMOVAL CALCULATIONS. SEE TREE PRESERVATION PLAN.

OFFSITE SEWER EXHIBIT

SCALE: 1"=100'

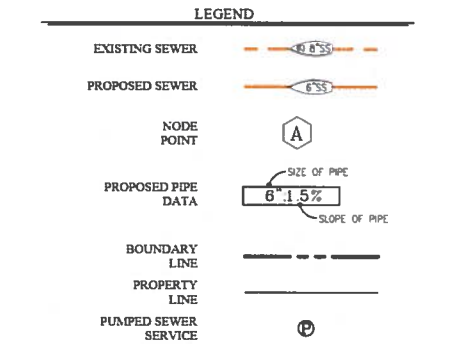
ATTACHMENT 9:Approved Off-Site Sewer Line for Ridgeview Village Unit No.9 (TM08-1477)

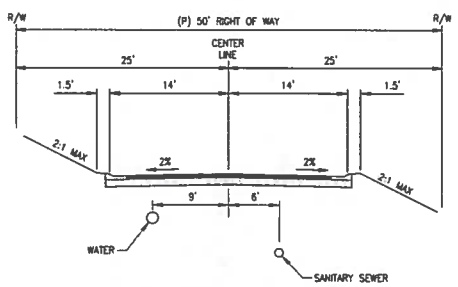
FIGURE B-1

RIDGEVIEW VILLAGE UNIT 9

EL DORADO COUNTY, CALIFORNIA

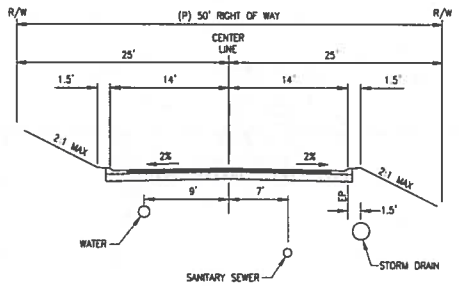
SCALE: 1"=60' JULY, 2017





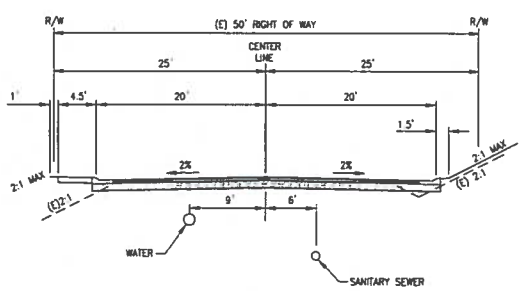
A & B COURT

SCALE: 1"=10'



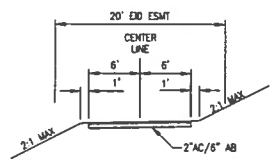
JULIE ANN WAY EXTENSION

SCALE: 1"=10'



BEATTY DRIVE IMPROVEMENTS

SCALE: 1"=10'



ACCESS ROAD

SCALE: 1"=10'

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RIDGEVIEW UNIT 9

OFFSITE SEWER THROUGH VILLADORO HOA LOT B

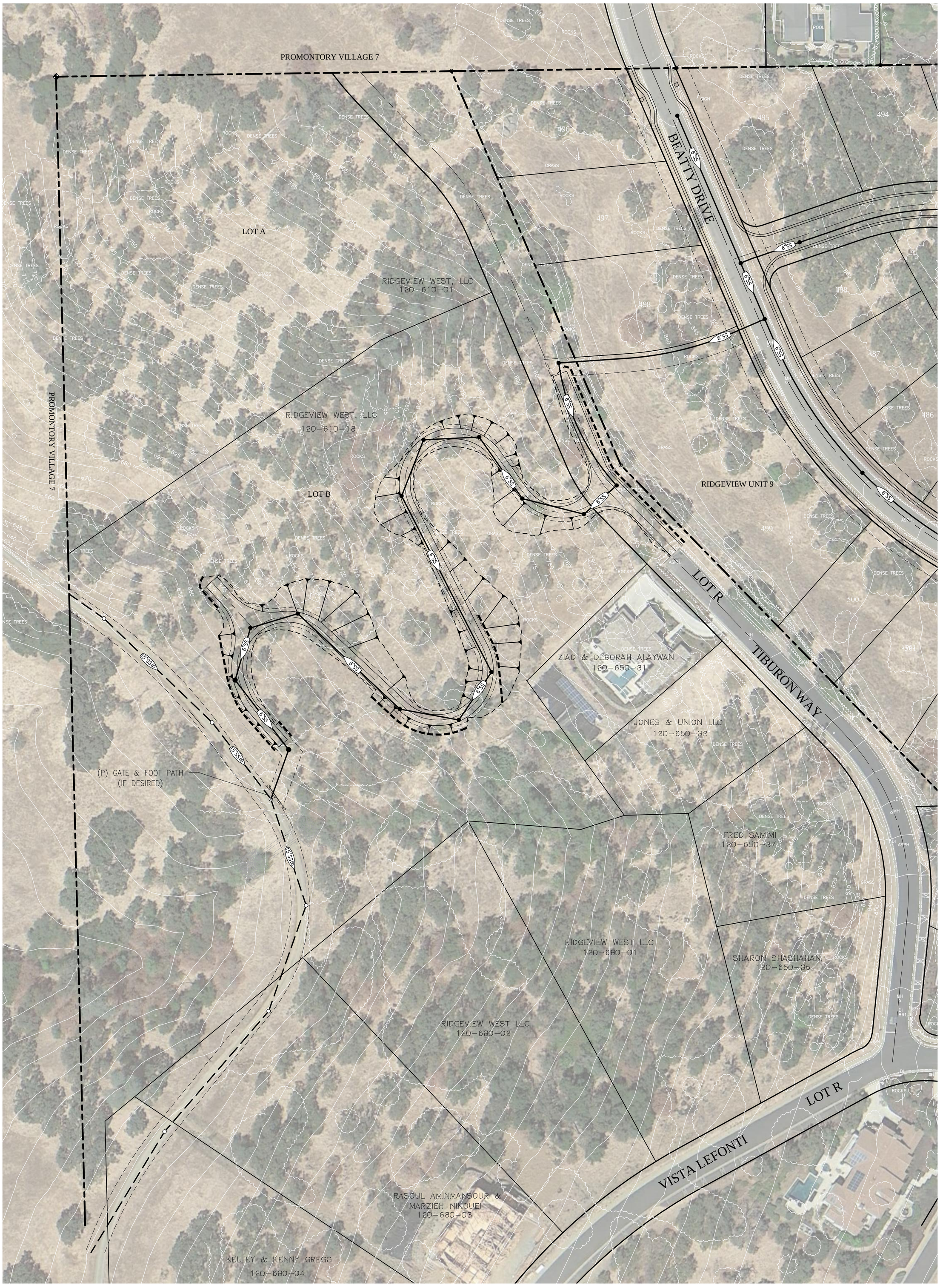
EL DORADO HILLS, CALIFORNIA

SCALE: 1"=50' OCTOBER, 2017

N

0 25' 50' 100'

SCALE: 1" = 50'



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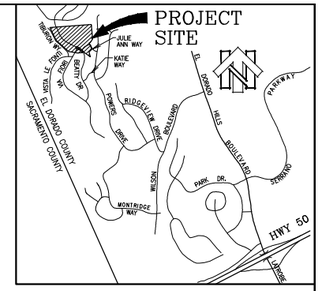
TREE PRESERVATION PLAN

RIDGEVIEW VILLAGE UNIT 9

SECTION 34, T.10 N., R.8 E., M.D.M.

COUNTY OF EL DORADO APRIL 2013 STATE OF CALIFORNIA

SCALE:1" = 60'



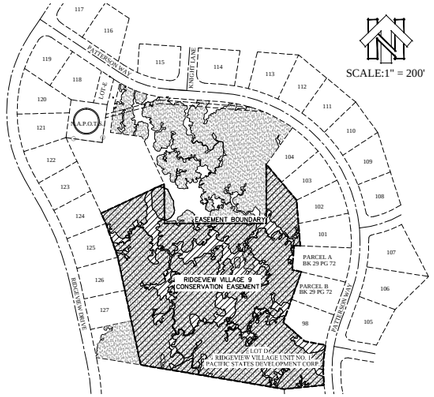
VICINITY MAP
NOT TO SCALE

NOTES

1. TOTAL SITE AREA = 22.4 AC
   TOTAL SITE CANOPY = 14.37 AC, (64.4% OF PROJECT SITE)
   TREES EXCLUDED FROM CALCULATION = 0.08 AC
   ALLOWABLE REMOVAL UNDER OPTION "A" = 30% (EXISTING CANOPY) =4.29 AC
   TOTAL REMOVAL PER PLAN =4.29 AC
   14.198 AC EXCLUDE DEAD, DISEASED AND NON-OAK CANOPY AREA
   TOTAL HEALTHY OAK CANOPY LOSS = 4.29 AC.
   MITIGATION AREA REQUIRED = 4.29 AC.
2. THE PROJECT PROPONENT SHALL COMPLY WITH THE PROVISIONS OF POLICY 7.4.4.4 BY MEETING THE RETENTION REQUIREMENTS AND 1:1 REPLACEMENT RATIO OF OPTION A, PROVIDING ON - OR OFF-SITE MITIGATION AS ESTABLISHED IN GP POLICY 7.4.4.4. AND ITS INTERIM GUIDELINES.
3. GRANTING OF ANY REQUIRED EASEMENTS SHALL BE REQUIRED AS A CONDITION OF APPROVAL OF ALL DISCRETIONARY PERMITS FOR WHICH THESE PROVISIONS APPLY, AND SHALL BE COMPLETED PRIOR TO ISSUANCE OF A GRADING OR BUILDING PERMIT, FILING OF A PARCEL OR FINAL MAP, OR OTHERWISE COMMENCING WITH THE PROJECT.
4. THE MITIGATION MAY BE PHASED TO REFLECT THE TIMING OF THE TREE CANOPY REMOVAL SUCH AS REMOVAL ASSOCIATED WITH STREET AND INFRASTRUCTURE GRADING AND GRADING ASSOCIATED WITH CONSTRUCTION OF SINGLE FAMILY DWELLINGS AND ACCESSORY STRUCTURES.
5. THE PROJECT IMPACTS WILL RESULT IN THE FOLLOWING MITIGATION ALLOCATION:
   OPTION A REMOVAL (ROADS & GRADING)..... 1.28 (BY DEVELOPER)
   OPTION A REMOVAL (LOTS ONLY) ..... 3.01 AC (BY LOT OWNER)
   TOTAL REMOVAL ..... 4.29 AC
6. THE DEVELOPER RESERVES THE RIGHT TO CHANGE THE ALLOCATION ABOVE AS LONG AS OVERALL OAK CANOPY REMOVAL DO NOT EXCEED ALLOWED REMOVAL FOR THE PROJECT UNDER OPTION "A" (4.29 AC).
7. CANOPY REMOVAL UNDER OPTION "A" (1:1 RATIO) ALLOWS FOR REMOVAL OF THE CANOPY ON INDIVIDUAL RESIDENTIAL LOTS IN AN AMOUNT SPECIFIED IN THE TABLE BELOW.
8. NO CANOPY SHALL BE REMOVED BY INDIVIDUAL LOT OWNERS IN EXCESS OF THAT SPECIFIED IN THE TABLE BELOW UNDER OPTION "A". THE DEVELOPER RESERVE A RIGHT TO CHANGE THAT ALLOCATIONS AS LONG AS OVERALL OAK CANOPY REMOVAL DO NOT EXCEED ALLOWED REMOVAL FOR THE PROJECT UNDER OPTION "A" OF GP POLICY 7.4.4.4.
9. THE ARBORIST MAY REQUIRE THE REMOVAL OF ADDITIONAL TREES IF HE WARRANTS THEM TO BE A HAZARD WITHIN OR OUTSIDE OF THE CONSTRUCTION LIMITS AND/OR BUILDING SITES. THESE TREES ARE NOT SUBJECT TO REPLACEMENT STANDARDS PER INTERIM GUIDELINES APPROVED FOR POLICY 7.4.4.4. IF THE ARBORIST FINDS THEM DEAD, DISEASED OR DYING.
10. TREE PROTECTION FENCING SHALL BE PLACED AFTER COMPLETION OF TREE REMOVAL OPERATIONS AND PRIOR TO CLEARING AND GRUBBING.
11. OPTION B IS NOT AVAILABLE AT THE TIME OF PREPARATION OF THIS MAP. IN AN EVENT PAYMENT OF FEE IN LIEU OF CANOPY REPLACEMENT BECOMES AVAILABLE, THE APPLICANT RESERVES THE RIGHT TO CHANGE HIS MITIGATION OPTION IN COMPLIANCE WITH ADOPTED ZONING ORDINANCE.

OAK WOODLAND CONSERVATION EASEMENT

APN: 120-166-29



NOTES

1. OAK WOODLAND CANOPY REMOVED PER OPTION A = 4.29 AC
2. CONSERVATION EASEMENT AREA = 5.7 AC
   OAK WOODLAND CANOPY WITHIN EASEMENT AREA = 4.75 AC (AS OF MARCH 2012).
3. SURPLUS CANOPY AVAILABLE FOR FUTURE MITIGATION = 0.46 AC

LEGEND

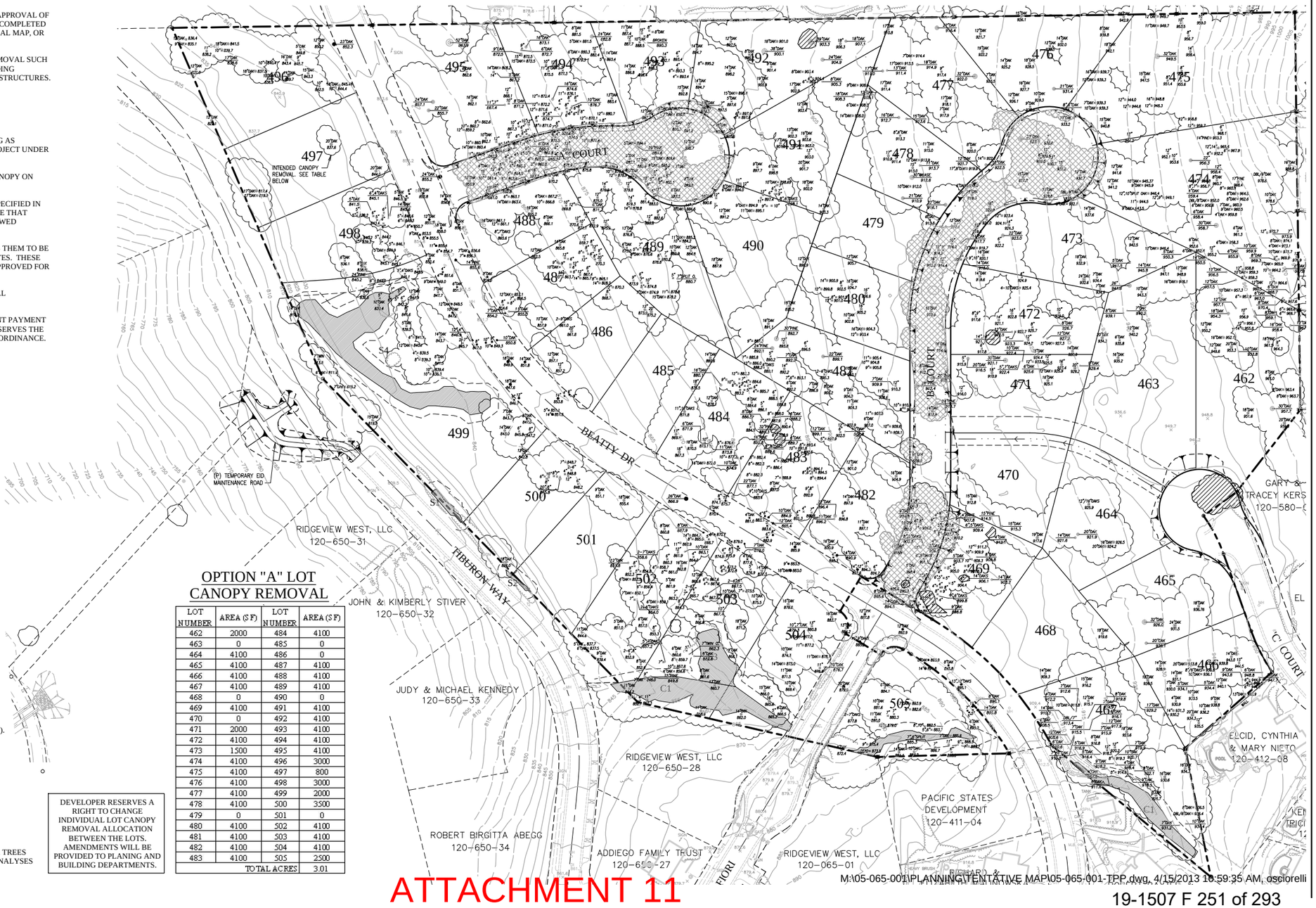
- TREE CANOPY TO BE REMOVED FOR ROAD INFRASTRUCTURE
- EXISTING WETLANDS
- DAYLIGHT LINE
- RW
- LOT LINE
- PROPERTY LINE
- DEAD/DESEASED & NON-OAK TREES EXCLUDED FROM CANOPY ANALYSES AND MITIGATION

CTA Engineering •Surveying
3233 Monier Circle
Rancho Cordova, CA 95742
(916) 638-0919
(916) 638-2479 Fax

OPTION "A" LOT CANOPY REMOVAL

LOT NUMBER	AREA (SF)	LOT NUMBER	AREA (SF)
462	2000	484	4100
463	0	485	0
464	4100	486	0
465	4100	487	4100
466	4100	488	4100
467	4100	489	4100
468	0	490	0
469	4100	491	4100
470	0	492	4100
471	2000	493	4100
472	4100	494	4100
473	1500	495	4100
474	4100	496	3000
475	4100	497	800
476	4100	498	3000
477	4100	499	2000
478	4100	500	3500
479	0	501	0
480	4100	502	4100
481	4100	503	4100
482	4100	504	4100
483	4100	505	2500
		TOTAL ACRES	3.01

DEVELOPER RESERVES A RIGHT TO CHANGE INDIVIDUAL LOT CANOPY REMOVAL ALLOCATION BETWEEN THE LOTS. AMENDMENTS WILL BE PROVIDED TO PLANING AND BUILDING DEPARTMENTS.



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ATTACHMENT 11

California Tree and Landscape Consulting, Inc.

Arborist Report

February 28, 2018

Pacific States Development
991 Governor Drive, Suite 103
El Dorado Hills, CA 95762

Attention: Tom Cassera, CTA Engineering and Surveying
William J. Fisher, President

Work location
Ridgeview Village Unit 9
El Dorado Hills, CA 95762

Arborist Report for Oak Woodland Resources

Prepared by:
Gordon Mann, Consulting Arborist

ATTACHMENT 12

!2661 Torrey Pines Drive, Auburn, CA 95602

530-957-0128

TM 08-1477-R

Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

Assignment

The subject site is an approximately 22.4 acre open site surrounded by developed homes, and an approximately 1.2 acre offsite sanitary sewer/access road. The site is divided into two parts, the home development, and the access road for the offsite sewer connection. The client contacted our office and requested we provide the information required to satisfy the County of El Dorado's Oak Woodland Resources, determining the oak woodland area, identifying all trees in the woodland area 24 inches in diameter and greater, all Heritage Trees 36 inches in diameter and greater, and any individual oak trees 6 inches and greater located outside of the woodland designation for mitigation for tree removal based on the County ORMP Oak Resources requirements and Ordinance No. 5061. This report is the result of onsite inspections performed on December 7, 2017, January 10, 14, 16, and 18, 2018, and the use of aerial imagery. The proposed Oak Conservation Easement was re-inspected on February 28, 2018.

This report is based on the current proposal under the new County ORMP ordinance and mitigation requirements. Nothing significantly has changed with the site, and the proposed mitigation is intended to meet the County Requirements for Oak Resource Conservation.

Assignment limits

All the trees were observed while standing on the ground. Data collected is limited to a visual ground inspection. The aerial image was provided by CTA Engineering and Surveying. Ground inspections and measurements were used to insure the accuracy of the inspection data.

Current Existing Tree Status (general)

The site is northeast orientation above Beatty Drive, and a slight slope facing southwest for the home sites, and a steeper slope below Beatty Drive past Tiburon Way, and facing southwest for the sewer connection. The development is required to comply with the El Dorado County ORMP Oak Resources requirements and Ordinance No. 5061.

The site is mostly Blue Oaks, *Quercus douglasii*, and some Interior Live Oak, *Quercus wislizenii.* There were a total of 39 trees found to be 24 inches in diameter and greater on both areas of the project. There were 27 trees found to be 24 inches diameter and greater on the housing portion of the project, with 3 trees found to be Heritage Trees, 36 inches in diameter and greater. Of the 3 Heritage Trees, 2 were found to be in Poor condition and would not require mitigation, and 1 is dead and would not require mitigation.

There were 12 trees 24 inches and greater found in the sewer connection portion of the project, and no trees 36 inches in diameter or greater.

The entire 22.4 acre housing portion of the project area, less existing asphalt streets Via Fiori, 0.16 acre, Beatty, 1.11 acre, and the Connector, 0.47 acre, equaling 1.74 acres of roads. The area found to be Oak Woodland is 20.66 acres. There are 3.64 acres of undisturbed area proposed in Phase 1, and 3.77 acres of undisturbed area proposed in Phase 2 for a total of 7.41 acres of undisturbed area. The total Oak woodland being impacted is determined to be 20.66 acres. Subtracting 7.41 undisturbed acres equals 13.25 acres of impacted oak woodland required for mitigation.

The mitigation ratio is determined by the amount of existing Oak Woodland canopy being impacted. A total of 13.25 acres of the 20.66 acres equals 64% of the Oak Woodland being impacted. The mitigation ratio for El Dorado County ORMP is:

Percent of Oak Woodland Impact	Oak Woodland Mitigation Ratio
0-50%	1:1
50.1 – 75%	1.5:1
75.1-100%	2:1

The proposed oak woodland impact falls into the impact range of 50.1 - 75%. The percent woodland removal/impact requires a 1.5:1 mitigation ratio. 1.5 ratio X 13.25 impacted acres = 19.875 total acres required for Oak Mitigation.

The client is proposing a 9-acre offsite conservation easement. The remaining 10.875 acres will require mitigation at the cost of $8,285.00 per acre, for a total mitigation fee of $90,099.38. If the Oak Conservation Easement is not used, the total mitigation fee would be $164,664.40.

The final mitigation calculation is the impact to Heritage trees. Three trees 36 inches and greater are considered Heritage Trees and were found in the housing portion of the project. One Heritage Tree, #917, is 39 inches diameter, and in poor condition. The tree is growing in an area outside of a housing lot and not proposed for disturbance. It would not require mitigation if removed. Another Heritage Tree, #909, is 37 inches in diameter, and in poor condition. The tree is growing in an area

outside of a housing lot and not proposed for disturbance. It would not require mitigation if removed. Both trees #909 and #917 could be pruned with reducing the size and leverage of branches, and removal of decayed branches, and managed as a smaller tree. A third Heritage Tree, #164 using the old tag number is dead. Tree #164 is dead and should be removed or reduced and managed for a habitat tree. Development is proposed in this area. Mitigation not required for this tree.

The proposed 9-acre Oak Conservation Easement is a sloped parcel adjacent to the rear yards of single family homes and Ridgeview Park. The site is an Oak Woodland with a mix of oak species, buckeye, and pine. During the recent visit, the amount of natural oak tree regeneration was limited.

Technical Recommendations

It is recommended that all tree care follow specifications written in accordance with ANSI A-300 standards. Pruning of the trees should be performed in the outer edge of the canopy to reduce leverage and end weights and allow the center of the canopies to grow and fill in with foliage. It is also recommended that when root pruning, the smallest size roots as possible be pruned, cuts be performed with handsaws, loppers, or chainsaws appropriate for the size of the root being cut. The roots should be exposed by excavating prior to cutting. Roots should be pruned prior to root removal within the tree protection area to limit the damage and tearing of roots back towards the tree. Root pruning should be overseen by a qualified arborist.

Tree planting should follow the specifications included in Appendix A.

General Tree Care and Maintenance

The appendix information is given so that an onsite landscape manager can properly take care of the retained trees, and newly planted trees. Established native oak trees do not like to have the base of the trunk or their roots and the surrounding soil disturbed or tampered with. Applying or having unintentional landscape water in the root zone can cause catastrophic and negative affects to most species of native oak trees. Newly planted oak trees do need their root balls watered until established and then may need supplemental watering during extended periods of dry or hot weather. It is, therefore, recommended that the landscape be designed using drought tolerant plants that will require little to no watering after establishment. Irrigation should be delivered using an on-surface drip type system that does not require trenching around the oak trees to install. The plants should be spaced at least 6 feet away from the trunk of native oak trees, and the drainage from irrigation should be managed so water does not flow to the trunks of the oak trees. Trees that are growing in high use areas should be inspected by a qualified arborist for tree risk on a routine basis, the frequency depending on site use and tree condition.

Observations

The site was inspected on December 7, 2017, January 10, 14, 16, and 18, 2018. All trees were inspected for diameter, and those trees that were 24 inches diameter or greater were measured with a diameter tape, assessed for condition, the number of stems present, and notes explaining the tree condition were recorded. A total of 39 trees were found to be 24 inches diameter or greater, and 3 of those trees were found to be 36 inches in diameter or greater and considered Heritage Trees. The data is provided on the attached Ridgeview Village Unit 9 Oak Woodland Tree List.

The tree condition rating is a combination of vigor, structure, trunk, branches, trunk flare, live tissue, and defects and decay or pests. It is described in % and range term. The rating scale is:

Range	# Rating	Description
Excellent	81-100	Found to have none to few defects or decay, and high vigor
Good	61-80	Found to have few defects or decay, and above average vigor
Fair	41-60	Found to have mitigatable defects, limited decay, and average vigor
Poor	21-40	Found to have significant defects, decay, and lower vigor
Very poor	120	Found to have significant defects, decay, and low declining vigor
Dead	0	Found to be dead

Plus and minus symbols are included in the rating range to show the position of the % rating in the range.

The oak canopy area was calculated by CTA Engineering and Surveying using aerial imagery calculating the area of the site considered Oak Woodland. The field inspection confirmed the location of the canopy as shown on the aerial image.

DBH is the industry standard for measuring trunk diameter. For trees with straight trunks and normal taper, the measurement is taken at 4.5 feet above grade. When a swollen area, flare from branching, multiple stems, or other abnormal growth is present, the measurement is taken at the most appropriate location for determining the reasonable trunk diameter, and the height of the measurement is listed. The initial measurements were taken with a Biltmore Stick. For all trees close to 24 inches diameter or greater, a second more accurate measurement was taken with a diameter tape.

The proposed development is 22.4 acres, less the 1.74 acres of asphalt roads. The total Oak Woodland was found to be 20.66 acres. There are 3.64 acres of undisturbed area proposed in Phase 1, and 3.77 acres of undisturbed area proposed in Phase 2 for a total of 7.41 acres of undisturbed area. The total Oak woodland being impacted is determined to be 20.66 acres. Subtracting 7.41 undisturbed acres equals 13.25 acres of impacted oak woodland required for mitigation. The canopy shown on the aerial image was confirmed during the field visits to be an accurate representation.

The proposed 9 acre Oak Conservation Easement was re-visited on Wednesday, February 28, 2018. The site is an open space area behind single-family home rear yards, and adjacent to Ridgeview Park. There is one entry into the park from Patterson Way. There were Valley Oak, Interior Live Oak and Blue Oak on the site, along with California Buckeye and Gray Pine. The site has experienced some previous disturbance as there is a 10' water easement and a road leading to a El dorado Hills County Water District water storage tank.

Other testing or examination:

No additional testing or examination was requested at the time of the inspection or found necessary.

Discussion:

The site is an oak woodland area with some existing asphalt streets. The site is bordered on the upper 3 sides by existing home developments. The fourth lower side is the proposed sewer connection area on a steep downward slope below the proposed homes.

The Oak Woodland required for mitigation is 13.25 acres with a mitigation ratio of 1.5. The total Oak Woodland acreage required for mitigation is 19.875 acres. A 9-acre Oak Conservation Easement is proposed towards the required mitigation, and a remaining 10.875 acres is required for mitigation. At a fee rate of $8,285.00 per acres, the total mitigation fee will be $90,099.38. If the 9-acre Oak Conservation Easement is not provided, the total mitigation fee for 19.875 acres will be $164,664.40.

The mitigation proposed will meet the required mitigation based on the El Dorado County ORMP Oak Resources requirements and Ordinance No. 5061.

The proposed 9-acre Oak Conservation Easement had limited oak regeneration, and would benefit from some oak planting in a sequential manner, adding a small amount of new trees over the next six years, by planting 25 to 50 trees per year every other year for three cycles.

Conclusion:

There are 13.25 of the 20.66 acres Oak Woodland area being impacted. The percent woodland removal/impact requires a 1.5:1 mitigation ratio. The 1.5 ratio X 13.25 impacted acres = 19.875 total acres required for Oak Mitigation.

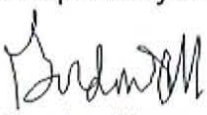
The client is proposing a 9-acre offsite conservation easement. The remaining 10.875 acres will require mitigation at the cost of $8,285.00 per acre, for a total mitigation fee of $90,099.38.

There were no Heritage Trees in fair or good condition impacted by the proposed development, and the total calculated mitigation fee after the 9 acres Oak Conservation Easement is $90,099.38. The mitigation proposed will meet the required mitigation based on the El Dorado County ORMP Oak Resources requirements and Ordinance No. 5061.

Please contact Gordon Mann, of California Tree and Landscape Consulting, Inc., if there are any questions about this report.

Disclaimer: Gordon Mann, has analyzed the situation, applied the proper method(s) utilized within the profession, and performed a reasonableness test to support the project tree related decisions. I, nor the employees or subcontractors of California Tree and Landscape Consulting, Inc., may be held liable for the misuse or misinterpretation of this report. As the author of this report, I do hereby certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge and belief, and that they are made in good faith.

Respectfully submitted,

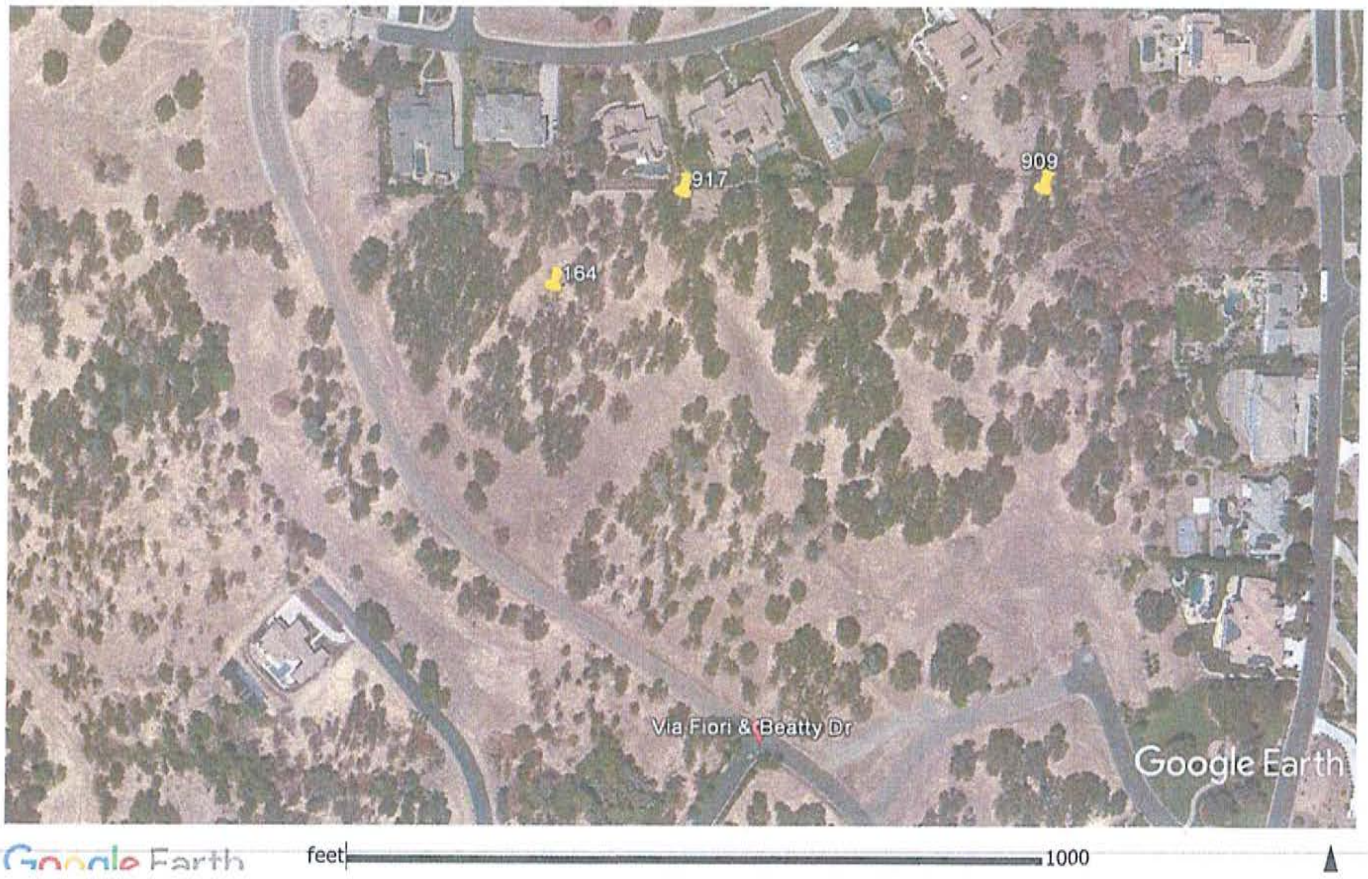


Gordon Mann
ASCA Registered Consulting Arborist #480
ISA Certified Arborist WE- 0151AM
ISA TRAQ Qualified Tree Risk Assessor
California Tree and Landscape Consulting, Inc.
Gordon@caltlc.com
650-740-3461

Attachments:

- Appendix A Tree Planting Specifications
- Appendix B Nursery Stock and Tree Planting
- Appendix C Tree Protection
- Appendix D Avoiding Damage During Construction
- Resume for Gordon Mann
- Ridgeview Village Unit 9 Oak Woodland Tree List
- Ridgeview Unit 9 ORMP Analysis Image

Images



Heritage Trees # 164, 909, & 917

Appendix A
Tree Planting Specifications

Trees shall be free of major injury such as scrapes that remove greater than 20% of the bark circumference, a broken central leader, or constrictions from staking or support. The graft, if present, shall be consistent for the production of the cultivar or species. The trunk flare shall be at grade, not buried by soil, and adventitious roots shall not be growing from above the trunk flare.

The tree shall not be root bound in the container, and the trunk diameter relative to the container sizes, within the limits of American National Standards Institute (ANSI) Z-60 Nursery Standards.

Prior to acceptance, upon delivery, trees may be pulled from the container, so the rootball can be inspected for compliance with the specifications. An agreed upon maximum percent of trees may be checked for compliance. The nursery should provide post delivery care specifications to keep the trees in optimum condition until planting.

Tree Planting

1.0 INSPECT THE TREE

1.1 Carefully remove the soil at the top of the container to locate the trunk flare. Check for girdling roots and damage to the root system and lower trunk.
1.2 Until a relationship is established with the supplying nursery, randomly select an acceptable sample for the delivery. Inspect the root system by taking the rootball out of the container, and remove all the soil from the root system. Inspect the inner roots to verify that the roots were properly pruned when moved from the initial container to the next larger size. Keep the root system moist during the check. If the roots were properly pruned during container transfer, and the roots have been kept moist, the tree can be planted as a bare root tree.
1.3 If the trees are acceptable, each tree shall be removed from the container prior to digging the hole, and the depth of the rootball from the trunk flare to the bottom of the rootball shall be measured. This measurement, less 1" is the depth the pedestal in the center of the planting hole shall be excavated to.

2.0 DIG THE HOLE

2.1 Shave and discard grass and weeds from the planting site.
2.2 The hole should be a minimum 3 times the diameter of the container diameter.
2.2.1 Square containers shall be dug with a circular hole 3 times the container measurement.
2.3 Dig the hole, leaving an undisturbed pedestal in the center that the root ball will be set on.
2.4 The pedestal shall be excavated to the depth measurement determined above

3.0 ROOT BALL PREPARATION

3.1 Loosen and straighten outside and bottom roots prior to placing the rootball on the pedestal. The trunk flare (the point where the trunk meets the roots) should be 1" above ground level.
3.2 Winding and girdling roots shall be pruned to either the point they are perpendicular to the root ball, or a point where they can be straightened and placed perpendicular to the rootball.
3.3 Keep the roots moist during this process so they do not dry out.

4.0 BACKFILL

4.1 Hold the tree so the trunk and central leader are in a straight upright position.
4.2 Backfill soil with the soil you removed around the base of the pedestal and rootball no higher than 2/3, so the tree stands in the upright position
4.3 Tamp the soil to remove air gaps, or fill with water and allow soil to settle and drain. Continue to fill the entire hole with existing soil in layers and tamping, up to finished grade. Backfill soil shall not be placed on top of the rootball.
4.4 Build a berm at the outside edge of the rootball. The berm shall be a minimum 3 inches high and wide.
4.5 Cover the remainder of the backfill soil outside the berm with a set level of mulch (2 to 4 inches deep).

5.0 Staking

5.1 Remove the nursery stake (the thin stake tied to the trunk) that is secured to the tree.
5.2 Install the appropriate number of stakes – for example, two stakes on the windward and leeward side of the tree, set at least 2 feet into the native soil outside the rootball.
5.2.1If the area is exceptionally windy, high traffic, or when specified, install 3 or 4 stakes spaced evenly around the circumference, outside the rootball.
5.3 One tie per stake shall be placed at the lowest point on the trunk where the tree crown stands upright. Ties shall be placed using a "figure 8" crossing pattern wrapped around the trunk and firmly tied or attached to the stake.
5.3.1 Ties shall be loose enough so the tree crown moves up to 3 times the trunk diameter in the wind, and taut enough that the trunk does not rub the stakes during movement.
5.4 The stakes shall be cut off above the tie point so branches do not rub the stake above the tie point.
5.5 Check the stakes and ties periodically, removing them when the tree is able to stand on its own.
5.6 If a leader that should be vertical is drooping, the leader may be temporarily straightened using a bamboo or small diameter wood splint approximately 25% longer than the drooping section of stem, tied to the stem at the top and bottom of the splint to hold the stem vertical. The splint shall be removed prior to girdling or constricting the stem, and may be re-installed as necessary.

6.0 Mulch

6.1 Apply a set depth (2 to 4 inches) of wood chips or other organic mulch over the planting hole excavated soil.
6.2 Mulch may be placed inside the berm and shall be kept at least 4" away from the trunk flare.
6.3 The soil area of the planting hole shall be kept clear of grass and landscape plantings.

7.0 Water/Irrigation

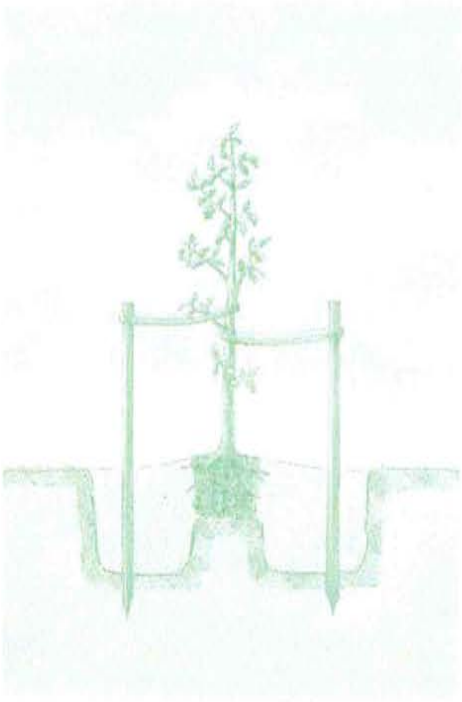
7.1 Apply water using a low pressure application, i.e.: trickle from a hose, soaker hose, or bubbler.
7.2 Use low water volume to apply the water. Add water long enough to saturate the rootball and planting area.
7.2.1 Lawn sprinklers shall not be considered an acceptable method of applying irrigation to newly planted trees.
7.3 The initial watering frequency shall be checked by monitoring the soil moisture. Based on the temperature and humidity, learn how long the soil retains the moisture.
7.4 After the soil is below field capacity, and before it dries out, repeat the watering process, every so determined days.
7.4.1 As the weather and seasons change, the irrigation frequency may change. This will be evaluated by checking soil moisture following water application.
7.4.1.1 For example: you may learn irrigation should be applied twice a week during the fall, except in cool or rainy weather. Irrigation may need to be applied every two days during hot dry summer periods.
7.5 Irrigation shall be continued for the first three years after planting.
7.5.1 Avoiding drying out the rootball and adjacent soil is critcal for tree growth and establishment.

8.0 Protect the trunk

8.1 Avoid damage from mowers and string trimmers to the tender bark of the young tree.
8.2 Maintain a clear area free of vegetation around the trunk in the berm or basin area.
8.3 Keep the set depth of mulch (2 to 4 inches) coverage of the area around the tree.
8.4 Retain temporary low branches along the trunk to shade and feed the trunk.

9.0 Pruning newly planted trees

9.1 Broken and dead branches shall be pruned.
9.2 A central leader shall be identified and retained if present. If co-dominant leaders are present, they shall be pruned to be shorter than the central leader by 20%.
9.3 All low temporary branches on the lower trunk shall be retained, and if needed shortened for clearance.



Detail for #1, #5 and #15 container planting stock

10. **FUTURE CARE**

10.1 During subsequent years, the berm should be enlarged or removed to in order to provide water to the increasing root growth. The watering area should target new root growth and projected root growth.

10.2 Pruning should retain a dominant central leader; and retain low temporary branches until trunk bark hardens or remove before branch diameter becomes too large.

Appendix B

Nursery Stock and Tree Planting

Nursery Stock purchase

Trees purchased for the subject project shall be the Genus, species, and cultivar specified in the purchase documents. Trees shall be grown to be free of bound root systems caused by winding roots or kinked roots from a previous smaller container. As trees are moved to larger containers, circling roots shall be either pruned to a point where they can grow straight, straightened in the new container, or removed. Kinked roots shall be pruned to a point where they will grow straight outward or downward.

The trunk and branches shall be of a structure where a central leader is defined, or the central leader can be easily selected. The competing leaders have a smaller diameter, and can be pruned shorter.

Appendix C

Tree Protection

The edge of the tree canopy outside of the construction area shall be fenced off with construction fencing, either temporary orange fence or chain link fence. The fence shall be placed as far from the trees as possible, targeting outside the dripline. If the fence cannot be placed outside of the dripline, the project arborist shall determine if the distance is acceptable or some other soil protection is necessary. A certified arborist must approve the placement of the tree fence. The fence will be marked with weather appropriate signage clearly stating the area as "Protected! Do not enter! Tree preservation zone." Sign(s) will be placed on every face or direction of fence line.

No storage of supplies or materials, parking, or other construction activity shall occur within the fenced area. If a construction activity is required within the construction area, specific specifications and mitigation shall be written to cover the work, and the fencing may be entered during the necessary construction activity, then the fencing shall be replaced after the activity is completed for the day.

The construction protection shall remain in place until the project is completed, including landscape activities. Landscape activities shall have specifications that protect the trees during the landscape activities.

Any bare soil around protected trees should be covered with a 4-inch layer of mulch consisting of ground-up tree parts.

If the protected trees appear to show signs of yellowing leaves, dead leaves, or other abnormal appearance, contact the project arborist for inspection and mitigation.

Long Term Landscape Maintenance Plan and Specifications

General
This plan and specifications are intended to promote the optimum landscape growth and lifespan. Individual tree planting in specific sites in the parking lot are intended to provide a large shade canopy over time covering 50% or greater of the parking lot. The border and natural screening plantings are overplanted and intended to fill the space initially, and have the weaker trees removed over time, to create the space and site resources necessary for the remaining trees. Trees initially will be planted on approximate 10 foot centers, with the long term spacing to be approximately 20 foot centers. As trees are thinned, they may be transplanted or removed, as best suited to the remaining trees on the site.

These trees shall be pruned to establish a central leader, to provide the best structure by managing size relationships between parent and subordinate trunk and branches, and to encourage growth into a large shade canopy. These trees shall not be topped or rounded over. Trees may have competing leaders headed back to promote the strong central leader necessary to eliminate co-dominant stems and weak branching.

Design Intent
The trees planted around the perimeter and alongside the sidewalk or street are intended to replicate natural areas and to screen the project and adjacent properties. The native oaks shall be more tightly spaced at planting and thinned over time to promote the growth of the final or climax trees on the site. The thinning for spacing shall be performed as the trees get larger and their crowns begin to overlap. When the desired tree crowns are being impacted by an adjacent tree, the adjacent tree should either be pruned or removed, to provide the optimum screening while enhancing the desired tree growth. Pruning shall retain a dominant central leader and for decurrent tree structures, remove competing leaders, and maintain the appropriate size relationships between parent and subordinate trunk and branches.

Pruning Small Trees
Branches are to be pruned by either reduction, thinning, or raising cuts to achieve the appropriate clearance over the area. The smallest diameter branches should be removed, working from the branch tips towards the center, removing none to minimal interior foliage inside the final outward branch cut. Trees shall be cleaned to remove dead branches, weakly attached branches, and branches where significant damage has occurred by rubbing, animals, insects, or critical disease. All pruning cuts shall be made in accordance with American National Standards Institute (ANSI) A300 Part 1 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices for Pruning.

On trees up to six inches in diameter, all dead branches greater than one-half inch diameter shall be removed. All weakly attached branches and potential co-dominant branches shall either be reduced by at least 20% or be removed, as most appropriate for the long term structure of the tree. The weakest or most damaged branch of a pair or group of rubbing branches shall be shortened to avoid rubbing, or removed. All temporary branches along the trunk should be retained and shortened to obtain necessary clearance. When either temporary branches exceed one-inch diameter, or the trunk forms mature bark, the temporary branches should be removed.

Stakes shall be installed as necessary to support a straight growing tree, and reduce crooked growth caused by high wind. The trunk shall be supported at the lowest point to keep the crown supported straight, and the portions of the stake above the tie point cut off to avoid rubbing branches. After the tree becomes firmly rooted, and the stake is no longer necessary to support the tree, the stakes shall be removed.

Depending on the location and site needs, clearance should be performed by pruning the smallest branches inward from the branch tips until the permanent branches are in place. Clearance minimums should be set, for example: 7.5' over sidewalks, 10 feet over parking spaces, and 14.5 feet over truck traffic streets. Clearance pruning shall be carefully performed until the permanent branches are identified. Up to 25% of the total foliage on any tree should be the maximum removed during any planned pruning cycle. Follow-up pruning for structure or clearance on young trees can be performed at any time if pruning small amounts of foliage (up to 10%) and retaining the central leader and branch size relationships.

Pruning Large Trees

Branches are to be pruned by either reduction, thinning, or raising cuts to achieve the appropriate clearance over the area. The smallest diameter branches should be removed, working from the branch tips towards the center, removing none to minimal interior foliage inside the final outward branch cut. Trees shall be cleaned to remove dead branches, weakly attached branches, and branches where significant damage has occurred by rubbing, animals, insects, or critical disease. All pruning cuts shall be made in accordance with American National Standards Institute (ANSI) A300 Part 1 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices for Pruning.

On trees larger than six inches in diameter, all dead branches greater than one-inch diameter shall be removed. Long heavy branches that are either growing flat or bending down shall have approximately 15% of the end weight reduced, accomplished by a combination of pruning the downward growing branches, shortening long tips, and thinning endweights. If any structural issues are observed by the climber working in the tree, they shall notify the property manager immediately to discuss the tree's needs.

Depending on the location and site needs, clearance should be performed by pruning the smallest branches inward from the branch tips until the permanent branches are in place. Clearance minimums should be set, for example: 7.5' over sidewalks, 10 feet over parking spaces, and 14.5 feet over truck traffic streets. Clearance pruning shall be carefully performed until the permanent branches are identified. Up to 25% of the total foliage on any tree should be the maximum removed during any planned pruning cycle.

Any special site issues for utility clearance or conflicts with other objects shall be managed by early pruning to direct growth away from the target lines, overhead lights, flags, or buildings.

Thinning of Dense Planting

Many landscape plantings and natural landscape areas are over-planted by installing a greater number of plants at closer spacing than optimum for the full-sized plants. Over time, plants will grow into each other, the crowns will conflict, and the spacing will need to be corrected. Correct spacing is obtained by removing the least desirable plants to meet the final spacing target, within reasonable tolerances.

If conflicting plants are all healthy, it won't matter which plants are removed to achieve the spacing distances. Spaced thinning should be performed before the foliar crowns are intertwined or overlapping. The thinning may be performed over two or three cycles as the trees grow over time, depending on the density and desired final spacing.

The trees initially will be planted on approximate 10 foot centers, with the long term spacing to be approximately 20 foot centers. The healthiest and best specimens should be retained on site. As trees are thinned, they may be transplanted or removed, as best suits the remaining trees on the site.

Appendix D

Avoiding Tree Damage During Construction

Information from the ISA

As cities and suburbs expand, wooded lands are being developed into commercial and residential sites. Homes are constructed in the midst of trees to take advantage of the aesthetic and environmental value of the wooded lots. Wooded properties can be worth as much as 20 percent more than those without trees, and people value the opportunity to live among trees.

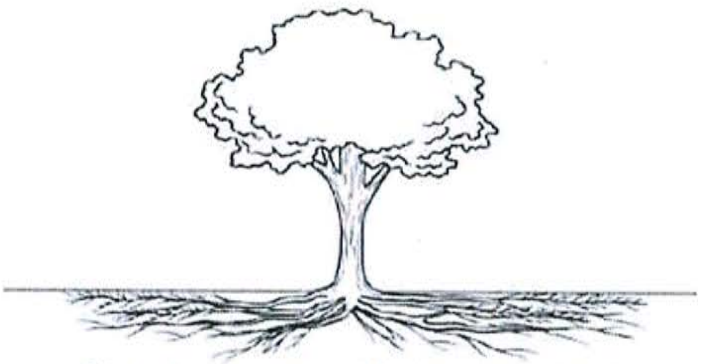
Unfortunately, the processes involved with construction can be deadly to nearby trees. Unless the damage is extreme, the trees may not die immediately but could decline over several years. With this delay in symptom development, you may not associate the loss of the tree with the construction.

It is possible to preserve trees on building sites if the right measures are taken. The most important step is to hire a professional arborist during the planning stage. An arborist can help you decide which trees can be saved and can work with the builder to protect the trees throughout each construction phase.

How Trees Are Damaged During Construction

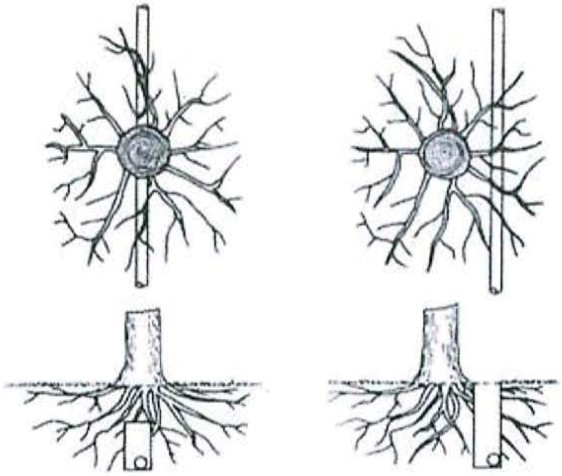
Physical Injury to Trunk and Crown. Construction equipment can injure the aboveground portion of a tree by breaking branches, tearing the bark, and wounding the trunk. These injuries are permanent and, if extensive, can be fatal.

Cutting of Roots. The digging and trenching that are necessary to construct a house and install underground utilities will likely sever a portion of the roots of many trees in the area. It is easy to appreciate the potential for damage if you understand where roots grow. The roots of a tree are found mostly in the upper 6 to 24 inches of the soil. In a mature tree, the roots extend far from the trunk. In fact, roots typically are found growing a distance of one to three times the height of the tree. The amount of damage a tree can suffer from root loss depends, in part, on how close to the tree the cut is made. Severing one major root can cause the loss of 5 to 20 percent of the root system.



The roots of a tree extend far from the trunk and are found mostly in the upper 6 to 12 inches of soil.

Another problem that may result from root loss caused by digging and trenching is that the potential for the trees to fall over is increased. The roots play a critical role in anchoring a tree. If the major support roots are cut on one side of a tree, the tree may fall or blow over.



Less damage is done to tree roots if utilities are tunneled under a tree (right, top and bottom) rather than across the roots (left, top and bottom).

Less damage is done to tree roots if utilities are tunneled under a tree rather than across the roots.

Soil Compaction. An ideal soil for root growth and development is about 50 percent pore space. These pores—the spaces between soil particles—are filled with water and air. The heavy equipment used in construction compacts the soil and can dramatically reduce the amount of pore space. This compaction not only inhibits root growth and penetration but also decreases oxygen in the soil that is essential to the growth and function of the roots, and water infiltration.

Smothering Roots by Adding Soil. Most people are surprised to learn that 90 percent of the fine roots that absorb water and minerals are in the upper 6 to 12 inches of soil. Roots require space, air, and water. Roots grow best where these requirements are met, which is usually near the soil surface. Piling soil over the root system or increasing the grade smothers the roots. It takes only a few inches of added soil to kill a sensitive mature tree.

Exposure to the Elements. Trees in a forest grow as a community, protecting each other from the elements. The trees grow tall, with long, straight trunks and high canopies. Removing neighboring trees or opening the shared canopies of trees during construction exposes the remaining trees to sunlight and wind. The higher levels of sunlight may cause sunscald on the trunks and branches. Also, the remaining trees are more prone to breaking from wind or ice loading.

Getting Advice

Hire a professional arborist in the early planning stage. Many of the trees on your property may be saved if the proper steps are taken. Allow the arborist to meet with you and your building contractor.

Your arborist can assess the trees on your property, determine which are healthy and structurally sound, and suggest measures to preserve and protect them.

One of the first decisions is determining which trees are to be preserved and which should be removed. You must consider the species, size, maturity, location, and condition of each tree. The largest, most mature trees are not always the best choices to preserve. Younger, more vigorous trees usually can survive and adapt to the stresses of construction better. Try to maintain diversity of species and ages. Your arborist can advise you about which trees are more sensitive to compaction, grade changes, and root damage.

Planning

Your arborist and builder should work together in planning the construction. The builder may need to be educated regarding the value of the trees on your property and the importance of saving them. Few builders are aware of the way trees' roots grow and what must be done to protect them.

Sometimes small changes in the placement or design of your house can make a great difference in whether a critical tree will survive. An alternative plan may be more friendly to the root system. For example, bridging over the roots may substitute for a conventional walkway. Because trenching near a tree for utility installation can be damaging, tunneling under the root system may be a good option.

Erecting Barriers

Because our ability to repair construction damage to trees is limited, it is vital that trees be protected from injury. The single most important action you can take is to set up construction fences around all of the trees that are to remain. The fences should be placed as far out from the trunks of the trees as possible. As a general guideline, allow 1 foot of space from the trunk for each inch of trunk diameter. The intent is not merely to protect the aboveground portions of the trees but also the root systems. Remember that the root systems extend much farther than the drip lines of the trees.

Instruct construction personnel to keep the fenced area clear of building materials, waste, excess soil, and equipment. No digging, trenching, or other soil disturbance such as driving vehicles and equipment over the soil should be allowed in the fenced area.

Protective fences should be erected as far out from the trunks as possible in order to protect the root system prior to the commencement of any site work, including grading, demolition, and grubbing.

Limiting Access

If at all possible, it is best to allow only one access route on and off the property. All contractors must be instructed where they are permitted to drive and park their vehicles. The construction access drive should be the route for utility wires; underground water, sewer, or storm drain lines; roadways; or the driveway.

Protective fences should be erected as far out from the trunks as possible in order to protect the root systems.

Specify storage areas for equipment, soil, and construction materials. Limit areas for burning (if permitted), cement wash-out pits, and construction work zones. These areas should be away from protected trees.

Specifications

Specifications are to be put in writing. All of the measures intended to protect your trees must be written into the construction specifications. The written specifications should detail exactly what can and cannot be done to and around the trees. Each subcontractor must be made aware of the barriers, limitations, and specified work zones. It is a good idea to post signs as a reminder.

Fines and penalties for violations should be built into the specifications. Not too surprisingly, subcontractors are much more likely to adhere to the tree preservation clauses if their profit is at stake. The severity of the fines should be proportional to the potential damage to the trees and should increase for multiple infractions.

Maintaining Good Communications

It is important to work together as a team. You may share clear objectives with your arborist and your builder, but one subcontractor can destroy your prudent efforts. Construction damage to trees is often irreversible.

Visit the site at least once a day if possible. Your vigilance will pay off as workers learn to take your wishes seriously. Take photos at every stage of construction. If any infraction of the specifications does occur, it will be important to prove liability.

Final Stages

It is not unusual to go to great lengths to preserve trees during construction, only to have them injured during landscaping. Installing irrigation systems and roto-tilling planting beds are two ways the root systems of trees can be damaged. Remember also that small increases in grade (as little as 2 to 6 inches) that place additional soil over the roots can be devastating to your trees. ANSI A300

Standards Part 5 states that tree protection shall be in place for the landscape phase of the site development. Landscape tree protection may be different than other construction process tree protection, and a conference with the landscape contractor should be held prior to the commencement of the landscape work. Careful planning and communicating with landscape designers and contractors is just as important as avoiding tree damage during construction.

Post-Construction Tree Maintenance

Your trees may require several years to adjust to the injury and environmental changes that occur during construction. The better construction impacts are avoided, the less construction stress the trees will experience. Stressed trees are more prone to health problems such as disease and insect infestations. Talk to your arborist about continued maintenance for your trees. Continue to monitor your trees, and have them periodically evaluated for declining health or safety hazards.

Despite the best intentions and most stringent tree preservation measures, your trees still might be injured from the construction process. Your arborist can suggest remedial treatments to help reduce stress and improve the growing conditions around your trees. In addition, the International Society of Arboriculture offers a companion to this brochure titled "Treatment of Trees Damaged by Construction".

Edited from the ISA's tree protection guidelines

California Tree and Landscape Consulting, Inc.

GORDON MANN

EDUCATION AND QUALIFICATIONS

1977	Bachelor of Science, Forestry, University of Illinois, Champaign.
1982 - 1985	Horticulture Courses, College of San Mateo, San Mateo.
1984	Certified as an Arborist, WE-0151A, by the International Society of Arboriculture (ISA).
2004	Certified as a Municipal Specialist, WE-0151AM, by the ISA.
2011	Registered Consulting Arborist, #480, by the American Society of Consulting Arborists (ASCA).
2003	Graduate of the ASCA Consulting Academy.
2006	Certified as an Urban Forester, #127, by the California Urban Forests Council (CaUFC).
2011	TRACE Tree Risk Assessment Certified, continued as an ISA Qualified Tree Risk Assessor (T.R.A.Q.).

PROFESSIONAL EXPERIENCE

2016 – Present CALIFORNIA TREE AND LANDSCAPE CONSULTING, INC (CalTLC). President and Consulting Arborist.
Auburn. Mr. Mann provides consultation to private and public clients in health and structure analysis, inventories, management planning for the care of trees, tree appraisal, risk assessment and management, and urban forest management plans.

1986 - Present MANN MADE RESOURCES. Owner and Consulting Arborist. Auburn.
Mr. Mann provides consultation in municipal tree and risk management, public administration, and developing and marketing tree conservation products.

2015 – 2017 CITY OF RANCHO CORDOVA, CA. Contract City Arborist.
Mr. Mann serves as the City's first arborist, developing the tree planting and tree maintenance programs, performing tree inspections, updating ordinances, providing public education, and creating a management plan,

1984 – 2007 CITY OF REDWOOD CITY, CA. City Arborist, Arborist, and Public Works Superintendent.
Mr. Mann developed the Tree Preservation and Sidewalk Repair Program, supervised and managed the tree maintenance program, performed inspections and administered the Tree Preservation Ordinance. Additionally, he oversaw the following Public Works programs: Streets, Sidewalk, Traffic Signals and Streetlights, Parking Meters, Signs and Markings, and Trees.

1982 – 1984 CITY OF SAN MATEO, CA. Tree Maintenance Supervisor.
For the City of San Mateo, Mr. Mann provided supervision and management of the tree maintenance program, and inspection and administration of the Heritage Tree Ordinance.

1977 – 1982 VILLAGE OF BROOKFIELD, IL. Village Forester.
Mr. Mann provided inspection of tree contractors, tree inspections, managed the response to Dutch Elm Disease. He developed an in-house urban forestry program with leadworker, supervision, and management duties to complement the contract program.

1979 - Present INTERNATIONAL SOCIETY OF ARBORICULTURE. Member.
- Board of Directors (2015 - Present)

- True Professional of Arboriculture Award (2011); In recognition of material and substantial contribution to the progress of arboriculture and having given unselfishly to support arboriculture.

1982 - Present WESTERN CHAPTER ISA (WCISA). Member.

- Chairman of the Student Committee (2014 - 2017)
- Member of the Certification Committee (2007 - Present)
- Chairman of the Municipal Committee (2009 - 2014) • Award of Merit (2016) In recognition of outstanding meritorious service in advancing the principles, ideals and practices of arboriculture.
- Annual Conference Chair (2012)
- Certification Proctor (2010 – Present)
- President (1992 - 1993)
- Award of Achievement and President's Award (1990)

1985 - Present CALIFORNIA URBAN FORESTS COUNCIL (CaUFC). Member; Board Member (2010 - Present)

1985 - Present SOCIETY OF MUNICIPAL ARBORISTS (SMA). Member. e Legacy Project of the Year (2015) o In recognition of outstanding meritorious service in advancing the principles, ideals and practices of arboriculture.

- Board Member (2005 - 2007)

2001 - Present AMERICAN SOCIETY OF CONSULTING ARBORISTS.
Member. e Board of Directors (2006 - 2013)
• President (2012)

2001 - Present CAL FIRE. Advisory Position.
• Chairman of the California Urban Forestry Advisory Committee (2014 - 2017)

2007 – Present AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI): A300 TREE MAINTENANCE STANDARDS
COMMITTEE. SMA Representative and Alternate.

- Alternative Representative for SMA (2004 - 2007; 2012 - Present)
- Representative for SMA (2007 - 2012)

2007 - Present SACRAMENTO TREE FOUNDATION. Member and Employee.

- Co-chair/member of the Technical Advisory Committee (2012 - Present)
- Urban Forest Services Director (2007 - 2009) e Facilitator of the Regional Ordinance Committee (2007 - 2009)
- 1988 - 1994 TREE CLIMBING COMPETITION.
  - Chairman for Northern California (1988 - 1992)
  - Chairperson for International (1991 - 1994)

PUBLICA TIONS AND LECTURES

Mr. Mann has authored numerous articles in newsletters and magazines such as Western Arborist, Arborist News, City Trees, Tree Care Industry Association, Utility Arborists Association, CityTrees, and Arborists Online, covering a range of topics on Urban Forestry, Tree Care, and Tree Management. He has developed and led the training for several programs with the California Arborist Association. Additionally, Mr. Mann regularly presents at numerous professional association meetings on urban tree management topics.

Assumptions and Limiting Conditions

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Client may not require Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant's prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
9. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. Consultant makes no warranty or guarantee, express or implied that the problems or deficiencies of the plans or property in question may not arise in the future.
10. Loss or alteration of any part of this Agreement invalidates the entire report.

Certificate of Performance

I, Gordon Mann, certify that:

I have personally inspected the trees and site referred to in this report, and have stated my findings accurately. The extent of the inspection is stated in the attached report under Assignment;

I have no current or prospective interest in the vegetation, or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts;

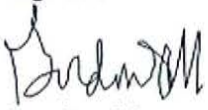
My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices;

No one provided significant professional assistance to me, except as indicated within the report;

My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client, or any other party, nor upon the results of the assignment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the International Society of Arboriculture (ISA) and an ISA Certified Arborist and Municipal Specialist. I am also a Registered Consulting Arborist member in good standing of the American Society of Consulting Arborists. I have been involved in the practice of arboriculture and the care and study of trees for over 39 years.

Signed:



Gordon Mann
Date: February 28, 2018

El Dorado County

OAK/CANOPY SITE ASSESSMENT FORM

Qualified Professional & Contact Information: *(attach qualifications) resume in report*	Gordon Mann, Consulting Arborist & Urban Forester 10566 Combie Rd, PMB 6442, Auburn, CA 95602
Property Owner's Name/APN(s):	Pacific State Development / 120-010-01
Address:	Beatty Drive, El Dorado Hills, CA
General Plan Designation:	HDR
Zoning:	R1
Project Description: *(attach site photos)*	46 Single Family Residential Lots

Would the project, directly or indirectly, have the potential to cause any impact, conflict with, or disturbance to:	**YES**	**NO**
a) Individual landmark or heritage trees (of any species) subject to review under General Plan Policy 7.4.5.2?		✓
c) Oak woodland corridor continuity (General Plan Policy 7.4.4.5)?		✓
d) Sensitive or important oak woodland habitat as defined in the Guidelines?		✓
e) Movement of Wildlife and/or Any Wildlife Migration Corridor?		✓
f) Any Candidate, Listed or Special Status Plant or Animal Species observed or expected to occur on or adjacent to the project site?	✓	
g) Is the affected area of oak canopy within or directly adjacent to an Important Biological Corridor or Ecological Preserve overlay?		✓
h) Does the removal of oak canopy comply with the retention requirements of Policy 7.4.4.4?	✓	
i) Was project subject to prior County approval? (If yes, provide Tentative Map # and environmental documents if available) TM 88-1125	✓	
j) For Discretionary Projects, would the project have the potential to cause a significant environmental impact on biological resources?		✓

I affirm that all of the information contained in this document is true and correct to the best of my knowledge and I acknowledge and agree that any material misinformation in this document can result in the denial or revocation of any permits or County approvals for this project.

Qualified Professional: Gordon S Mann **Date:** 5/31/12

Applicant/Owner: _____ **Date:** _____

Required Attachments: 1) Qualified Professional Qualifications; 2) Site Photos; 3) Required Tree Survey, Preservation, and Replacement Plan *or* Biological Resources Study and Important Habitat Mitigation Program (see Interim Interpretive Guidelines for El Dorado County Policy 7.4.4.4 Option A)

ARBORIST REPORT FOR RIDGEVIEW VILLAGE NO. 9 OAK TREE CANOPY MITIGATION PLAN

Prepared by Gordon Mann, Consulting Arborist and Urban Forester

Mann Made Resources
10566 Combie Road PMB 6442
Auburn, CA 95602
May 31, 2012

TM 08-1477-R

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Mann Made Resources

May 31, 2012

Mr. Bill Fisher
Pacific State Development Corp
991 Governor Drive, Suite 101
El Dorado Hills, CA 95762

SUBJECT: ARBORIST REPORT FOR RIDGEVIEW VILLAGE UNIT #9 OAK TREE CANOPY MITIGATION PLAN

Dear Mr. Fisher,

Thank you for the opportunity to provide Arborist Consulting Services. This report includes the observations and analysis of the Oak tree canopy for the Ridgeview Village Unit 9 project. The site was visited on Thursday, May 24, 2012.

Assignment: Ms. Olga Sciorelli from CTA Engineering and Survey contacted my office on your behalf on Monday, May 14, 2012, requesting assistance with an arborist site review and evaluation of the tree canopy maps to prepare for compliance with the El Dorado County General Plan Policy 7.4.4.4 and its Interim Interpretive Guidelines. A report confirming the findings and complying with the County's interim guidelines was the requested product.

All site information, plans, and history were provided by Ms. Olga Sciorelli of CTA Engineering and Surveying, and Mr. Bill Fisher of Pacific States Development Corp. The Ridgeview Village Unit 9 Tree Preservation Plan dated April 2012 was provided for review and use. A copy of the original tree inventory plan and Ridgeview Village Unit 9 Photo exhibit were provided for more accurate site review.

The assignment required the following activities: visit the site, verify the canopy cover as shown on the Ridgeview Village #9 Tree Preservation Map dated April 2012, identify trees that I found to be dead and non-Oak removed from the canopy, and complete the report. The "Results of Special-Status Plant Surveys on the Ridgeview Unit 9 Property, El Dorado Hills, El Dorado County, California" performed by Miriam Green Associates, and the "Jurisdictional Delineation and Special Status Species Evaluation Ridgeview Unit 9 Property" performed by Gibson & Skordal, LLC were reviewed prior to completing this report.

Observations: The project area is approximately 22.4 acres. The Ridgeview Village No. 9 site and proposed Oak Woodland Conservation Easement were

12661 Torrey Pines Drive, Auburn, CA 95602
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www.mannandtrees.com

visited on Thursday, May 24, 2012 from about 11:30 am through 3:00 pm. The Tree Preservation Map dated April 2012 was made available for use along with an April 2011 Photo Exhibit of Ridgeview Village Unit 9, and a copy of the original tree survey. I visited the entire site and compared the canopy to the canopy image on the map sheets, and identified the trees to be removed from the canopy.

The site extends across Beatty Drive. The areas of focus for the proposed project are the three proposed streets, courts A, B, and C on the north and northeast side of Beatty Drive.

I visually observed the trees on the site from the ground. The trunk diameter at 4.5' above grade was estimated for reference. The trees were observed noting the following conditions:

- Tree species
- Tree crown – amount and location of live foliage
- Tree structure – location and amount of decay in trunk, root crown, and crotches; broken b es; and deficiencies of branch or trunk attachment strength;
- Trunk flare and root crown – absence of buttress roots and decay at base

A total of 18 trees were listed on the attached spreadsheet. 13 trees were Blue Oak, *Quercus douglasii*, two trees were Interior Live Oak, *Quercus wislizenii,* and three trees were Digger Pine, *Pinus sabiniana.*

The remaining trees observed on the property were found to be in a condition consistent with native grown Oak trees and would not present significant risk as cared for with routine maintenance pruning to remove dead and broken branches with reasonable reduction to the foliar crown. These trees were not listed on the survey spreadsheet and were not altered in their appearance on the Tree Preservation Map.

After inspecting the trees on the Ridgeview Village No. 9 site, I visited and photographed the proposed Oak Woodland Conservation Easement site.

On May 30, 2012, at about 10:15 am, I visited the office of CTA Engineering and Surveying and reviewed edits to the Ridgeview Village Unit 9 Tree Preservation Map with Ms. Olga Sciorelli.

Other testing or examination: No other testing or examination was requested at the time of the site inspection, or recommended as a result of the inspection.

Discussion: I observed the trees to determine which trees were growing in the three court areas, and were found to be in fair or better health, structurally sound, and contribute to the existing canopy. Trees that were included in the Oak canopy that were dead or non-oak were listed for removal from the canopy calculations.

Trees in the remaining lot areas were observed to determine if any trees should be removed from the Oak canopy calculations.

I based my assessment of tree condition on a combination of structure and health and listed trees to be removed when I found any of the following criteria:

- The tree crown dieback was greater than 50% dead
- Decay in trunks, main crotches, and branches exceeded 50% of the diameter or > than 33% of the circumference was decayed
- The base of the tree was decayed greater than 50%
- Tree roots were missing from greater than 33% of the circumference of the trunk flare.
- Heavy mistletoe infestation is causing structural or leaf competition concerns in greater than 33% of the crown.
- Combinations of the above

Using the above criteria, the trees are dead; trees would either require excessive pruning to reduce risk of dead or weak branches, or the stability concerns cannot be corrected by typical pruning or cabling mitigation. Trees that could be pruned and still retain a typical smaller foliar crown and moderate or less structural risk were listed for pruning and the crown size reduced accordingly in the canopy displayed on the Tree Preservation Map. Trees that were found to be dead or non-oak were captured so the crown size could be removed from the Oak canopy displayed on the Tree Preservation Map. June map was created from the field data

After the site and office visit, the field data and canopy adjustments were updated on the Ridgeview Village # 9 Tree Preservation Map, June, 2012. The total site is 22.4 acres. The total existing Oak Canopy Cover is 14.198 acres, and 63.4% existing Oak canopy cover. The allowable canopy removal in the County guidelines for this level of canopy cover is up to 30%.

Biological Resources Study and Important Habitat Mitigation Program

Biological Resources Study

2.1.1.1 Summary of Recommendations

The site is primarily populated with Blue Oak, *Quercus douglasii,* and few Interior Live Oak, *Quercus wislizenii.* Other species are found on the site, such as Cottonwood, California Buckeye, and Digger Pine, and non-Oaks were not included in the Oak canopy calculations. The current property use is open space adjacent to other housing, with two paved roads running through the property.

2.1.1.2 Oak Tree Canopy

The County Guidelines require a table showing the Oak Canopy Coverage. There is an existing inventory of trees for the site. The map from that inventory was used in identifying trees on the plan for the canopy analysis.

The total site Oak canopy is approximately 14.198 acres or 63.38% of the project site. The allowable removal under "Option A" of the County development guidelines allows up to 30% of the existing Oak Canopy to be removed, or approximately 4.25 acres. An equal 4.25 acres of mitigation area is required.

The mitigation may be phased such that tree removal associated with street and infrastructure grading, and grading construction of single family dwellings and accessory structures will occur with approved project steps. The project is proposed to result in the following tree mitigation allocation:

Table 1 Ridgeview Village # 9 Oak Canopy Coverage		
Option	Activity	Mitigation Acreage
Option A	Roads and Grading	1.26
Option A	Off-Site Sewer Line	0.07 (performed as on-site)
Option A	Lots Only by lot owner	2.92
Option B	Lots only by lot owner	Varies by lot owner as approved to meet future County guidelines

The total number of trees to be removed is determined to be 87 for Option A Roads and Grading. The number of trees to be removed on lots by homeowners cannot be determined until the owner designs are reviewed and approved.

Dead, dying, and diseased trees identified on the site inspection list were not included in Table canopy cover per the County the guidelines. Those trees are shown on the plans as Dead, Diseased, and Dying Oak Trees and are excluded from canopy cover calculations.

The canopy cover loss shown in Table 1 includes 0.07 acres, for off-site sewer line construction. The 0.07 acres has been added to the on-site Oak tree mitigation plan calculations included in the 4.25 acres for the Ridgeview Village # 9 property, as the applicant does not have the right to complete mitigation and monitoring on the off-site properties where the off-site removals are proposed.

The existing total site canopy cover is 63.38%. The allowable canopy cover elimination in the guidelines is up to 30% for this level of existing canopy cover. The project is being divided into two tree removal phases, Option A, Roads and grading, and Option A, lots for construction of homes. The allowable canopy cover removal for proposed Option A is 4.25 acres. The proposed total canopy cover removal for Option A is 4.25 acres, within the 30% guideline.

The remaining canopy may be removed under GPP 7.4.4.4 Option B, which is not available at the time of preparation of this report.

2.1.1.3 Potential Impact Assessment

The Jurisdictional Delineation and Special Status Species Evaluation prepared by Gibson and Skordal, LLC and the special status Plant Surveys by Miriam Green Associates address the plant and animal species and habitats found on the property. Please refer to their reports for this information.

The percent plant communities and habitats to be removed or modified by this project was calculated by the Oak canopy being eliminated.

The project may have the potential impacts in response to questions a) through p) in section 2.1.1.3:

a) The tree removal and development proposed in Option A affects the oaks on the property, reducing density, canopy, and understory vegetation. There was minimal signs of Oak regeneration present. The oak removal is within the county guidelines for the Oak canopy present.
b) There should be no additional affect on potential oak woodland regeneration in Option A. The current regeneration is already limited.
c) The report from Gibson & Skordal did not observe any of the potential species, although it did state that if future development of the study area will occur during the raptor nesting season, from February to September, a pre-construction nesting survey is recommended to be completed within two weeks of the start of work.
d) There are no identified heritage or archaeological trees on the site.
e) There are no apparent habitat distribution patterns that would be fragmented.
f) The Miriam Green Associates report did not find any sensitive or endangered species.
g) There were no sensitive wildlife or plant species identified by the Miriam Green Associates and Gibson & Skordal surveys.
h) The property to be developed in Option A is not considered a critical buffer between development and important oak resource. The area has other development on adjacent properties.
i) The change in management will not result in increased fire hazard to sensitive or important woodlands.
j) The site construction and roads may increase runoff on the site. There is a previous roadway present on the property that is being removed when Court C is constructed. The approved stormwater mitigation should not result in any downstream sedimentation, erosion, or decrease in water quality.
k) The impact to the oak woodland does not affect sensitive or important botanical plants according to the Miriam Green Associates report. The property is under private control and there should be no impacts to recreation activities. There may be some viewshed impacts for properties that can view the property once developed, similar to other developments in the area.
l) There are no sensitive oak habitats being affected per the county's 2004 General Plan Land Use Diagram.
m) The site does not contain sensitive Oak stands according to the guideline definition.
n) There is no fragmentation of sensitive oak woodland habitat according to the guideline definition
o) The oak woodland corridors are already fractured and interrupted surrounding this site.
p) There is not a Biological Corridor Overlay or Ecological Preserve present.

Mitigation Plan

The existing Oak canopy cover on the site is 63.38% and falls within in the 60 to 79 percent existing canopy cover range for mitigation requirements. The required retention of canopy is 70% canopy cover based on Policy 7.4.4.4, Option A. Thirty percent of the existing Oak canopy on the site would remove 4.25 acres of Oak canopy. The 4.25 acres of Oak tree canopy removal is broken down into 3 areas: Tree removal for project Option A roads and grading - 1.26 acres, and off-site sewer line – 0.07 acres, both performed by the developer; Option A removal for lots by lot owners – 2.92 acres.

Under County Mitigation Option A, woodland replacement is required at a 1:1 ratio of square feet or acreage removed. The developer is proposing to provide an Oak Woodland Conservation Easement on APN: 120-166-29 (Lot D) with an area of 6.38 acres available. The Oak Woodland canopy available for use in the easement area was calculated as 5.66 acres in March, 2012. This provides the required 4.25 acres and leaves an available mitigation surplus of 1.41 acres for future tree removal. The site was visited and will serve as a suitable conservation easement area for county oak woodland preservation. Four photos of the proposed easement site are included in the appendix.

Safeguarding Trees During Construction

Proposed Option A for roads and sewer line construction will require the removal of the designated trees in the road and sewer construction footprints. The trees shall be adequately marked for removal and trees beyond the removal zone protected so they are retained and not damaged by the tree removal operations.

The remaining existing trees in these identified lots shall be protected from construction impacts by placing temporary fencing around the Tree Protection Zone, which will be calculated at a minimum of six times the trunk diameter of the tree to be retained, measured at 4.5 feet above grade. Stakes may be driven into the ground to support the fence, or sturdy on surface footings may be used. The fencing shall remain in place during the construction and landscaping activities. Any approved construction or landscaping within the fenced area will have clear specifications that include hand excavation or trenchless tunneling under roots, placement of mulch over the soil to reduce compaction, and supplemental irrigation as recommended by the project arborist depending on dust, temperature, and precipitation.

Grading and fill work should not be planned within the Tree Protection Zone. If an unavoidable situation occurs, any grading and fill shall be supervised by an arborist or trained competent person to minimize compaction to the soil and impacts to the tree.

Any excavation that will cause roots to be cut on trees to be retained shall have a trained person observing the careful excavation. All roots encountered greater than one inch in diameter shall be severed prior to further digging, to avoid tearing the root back toward the tree to be retained. The root severance shall be performed with the appropriate sharp tool, a lopper, hand saw, or chain saw. Once the root is severed, the cut portion in the site work area can be excavated.

Fill shall be kept a minimum distance of six times the trunk diameter, measured at 4.5 feet above grade, from the tree to be retained. If the distance has to be closer for required conditions like fire access, mitigation shall be implemented such as: keeping the fill as far from the tree as possible, and a minimum of 36 inches; placement of a geotextile over the existing soil; placement of coarse fill over the geotextile to meet the critical final grade of the base or roadway bed; and an adequate retaining structure to hold the height of the fill in place away from the tree. The method of installing the fill shall not cause compaction to the soil within the Tree Protection Zone.

Construction activities, vehicle and equipment storage, parking, fluids other than water, chemicals, paints, or construction materials shall not be stored within the area fenced around trees.

Drains and directed surface water flow shall be directed away from the base of oak trees. The tree shall not be designed as the low point for water flow unless an adequate method to move the water away from the base of the tree is implemented. Irrigation lines shall either be laid upon the surface or installed with careful excavation that avoids severing roots greater than 1 inch in diameter.

Wires, signs, and nails shall not be attached to protected trees. No open flames shall be allowed within 15 feet of a tree foliar canopy.

Damage to any protected tree shall be immediately reported to the County's Planning Services.

Safeguarding Trees after Construction

Trees required to be retained, and trees planted to meet requirements shall be maintained in a manner that protects the trees from detrimental practices. Irrigation for landscapes shall be designed to start at the minimum distance of 48 inches from the base of the protected oak tree and deliver water outward away from the tree. Drainage patterns shall be directed away from the tree. If the tree is the low point in the design and water flows around the base, a drain or adequate method to move water away from the base of the tree shall be provided. Mulch is recommended over the root systems and covering bare soil around trees. The best mulch materials are ground-up tree parts (wood chips). Wood chip mulch can be colored to be used in decorative designs. Decorative bark products, such as Cedar or Redwood bark, do not easily decompose, and while they cover the soil, they do not add desired organic matter to the soil. Mulch shall not be piled against nor placed over the trunk flare greater than one inch. The final landscape plan is subject to the approval of the Director of Development Services.

Revegetation and Restoration Plan

The mitigation plan is to designate the Oak Woodland Conservation easement on APN: 120-166-29 (Lot D) and match the removed oak canopy with easement oak canopy. The site is in close proximity to the Ridgeview Village # 9 site located behind lots fronting Ridgeview Drive and Patterson Way. There are two access

points to the easement parcel from Patterson Way at two locations on the parcel, and the parcel is adjacent to a proposed conservation easement.

The developer will provide the county with the appropriate terms, conditions and endowments for monitoring and management deemed necessary by the County.

The Conservation easement is preferable to on-site replanting on the Ridgeview Village No. 9 site and supported by:

- The level of protection of the habitat is superior in an existing mature oak stand compared to seedlings planted amongst $^1/_3$ to ½ acre home sites (General Plan Policy 7.4.2.8D)
- The regional consideration of "connectivity with adjacent protected lands and important habitat" (General Plan Policy 7.4.2.8D) is superior on Lot D, since contiguous to the proposed conservation easement is an oak filled 4.4 acre El Dorado Hills Community Services District park site. Use of Lot D "achieves multiple agency and community benefits" (General Plan Policy 7.4.2.8D)

Monitoring and Reporting Plan
The developer will provide the county with the appropriate terms, conditions and endowments for monitoring and management deemed necessary by the County.

Funding Mechanism
The developer will provide the county with the appropriate terms, conditions and endowments for monitoring and management deemed necessary by the County.

Findings and Recommendations
The inspections, findings, and recommendations for this project plans and mitigation are presented with practices in alignment with International Society of Arboriculture best management practices associated with development and tree preservation, and mitigation planting, and the appropriate parts of the ANSI A300 Tree Management Standards. The intent of the tree related specifications is to minimize impacts and be sufficient to protect the remaining oak resources on the subject property, as required by El Dorado County General Plan, and CEQA.

Certification
I performed the site inspections and canopy evaluation on the project site. As the plans were prepared, I reviewed the calculations, images, and map, and am confident they are accurate as presented. The calculations are valid based on my field survey and map review. I meet the county's qualifications to perform this work. My resume is attached.

Assumptions and Limitations: This report provides information about the subject trees at the times of the inspection. Trees and conditions may change over time. This report is only valid for the trees with the conditions present at the times of the inspections. All observations were made while standing on the ground. The inspection consisted of visual observations, using probe to gain additional information about decay and hollow portions of the tree, and light excavation was performed to observe the root crown areas at the base of the tree. No further examinations were requested or performed.

The site lacked many clear topographic and structural landmarks. Sincere attempts were made to accurately locate the trees and show the trees on the Tree Preservation Map. Some dense stand areas may not have the exact tree shown as observed in the field. However, the relative canopy changes are realistically and accurately reflected on the Tree Preservation Map to the best of my ability.

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that can fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatments, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, landlord-tenant matters, etc. Arborists cannot take such issues into account unless complete and accurate information is given to the arborist. The person hiring the arborist accepts full responsibility for authorizing the recommended treatment or remedial measures.

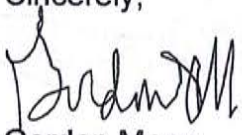
Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risks is to eliminate all trees. Our company goal is to help clients enjoy life with trees.

Report Certification

I certify that all the statements furnished above in this report and the attached exhibits present the data and information required for this Arborist Report, and that the facts, statements, and information are true, complete, and correct to the best of my knowledge and belief, and that all statements were made in good faith.

Please contact me at 650-740-3461, or gordon@mannandtrees.com, if you have any questions about this report or desire any other services for this project.

Sincerely,



Gordon Mann
Consulting Arborist and Urban Forester

Registered Consulting Arborist #480
ISA Certified Arborist and Municipal Specialist #WE-0151AM
CaUFC Certified Urban Forester #127
Certified Tree Risk Assessor #1005
Nevada County Fire Safe Council Defensible Space Advisory Training

Mann Made Resources
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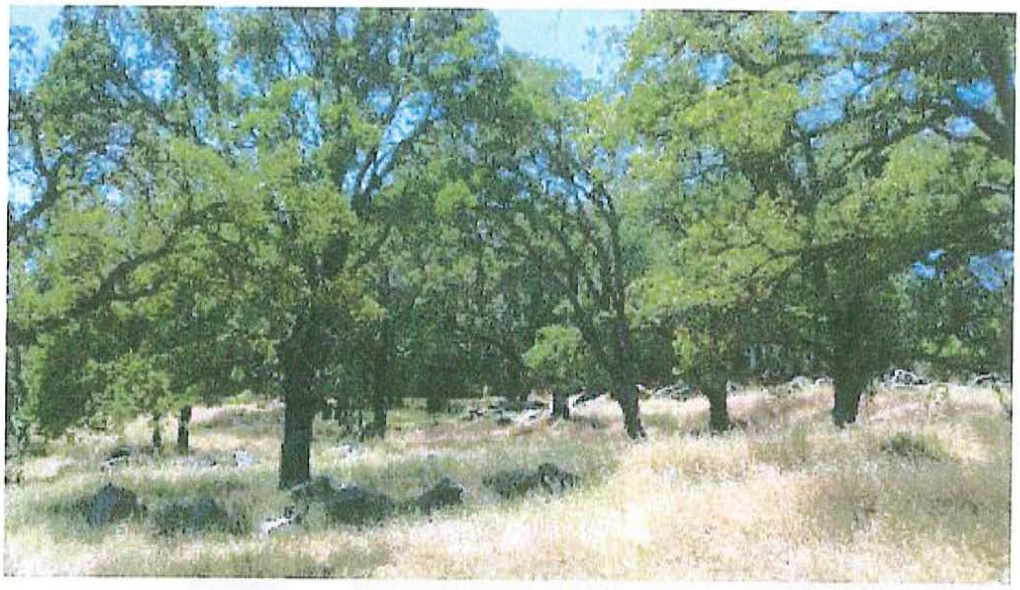
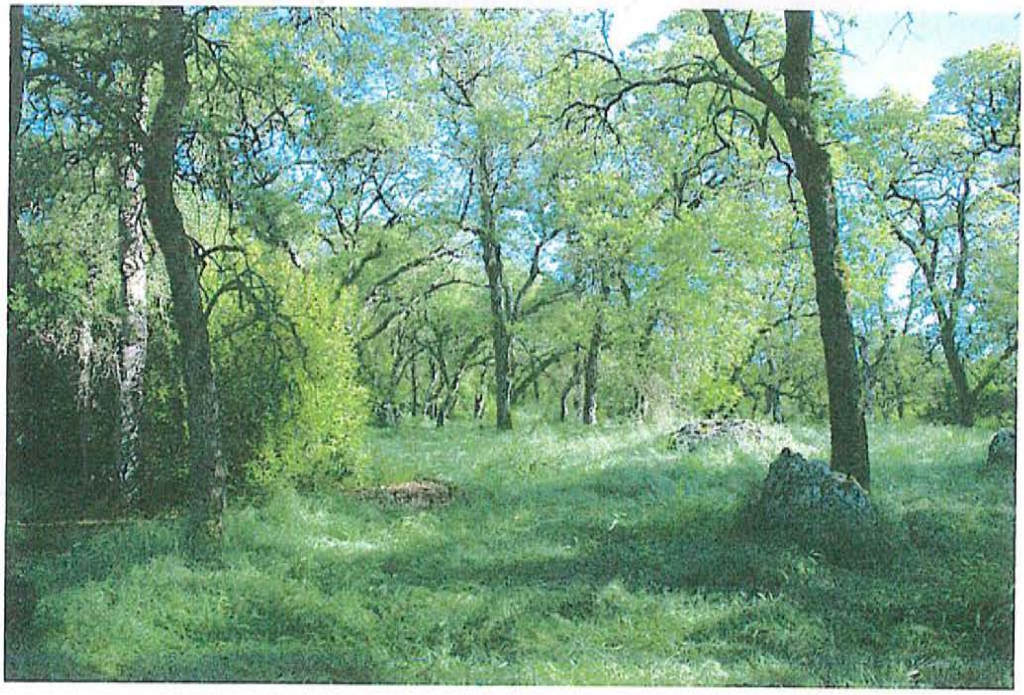
gordon@mannandtrees.com
www.mannandtrees.com

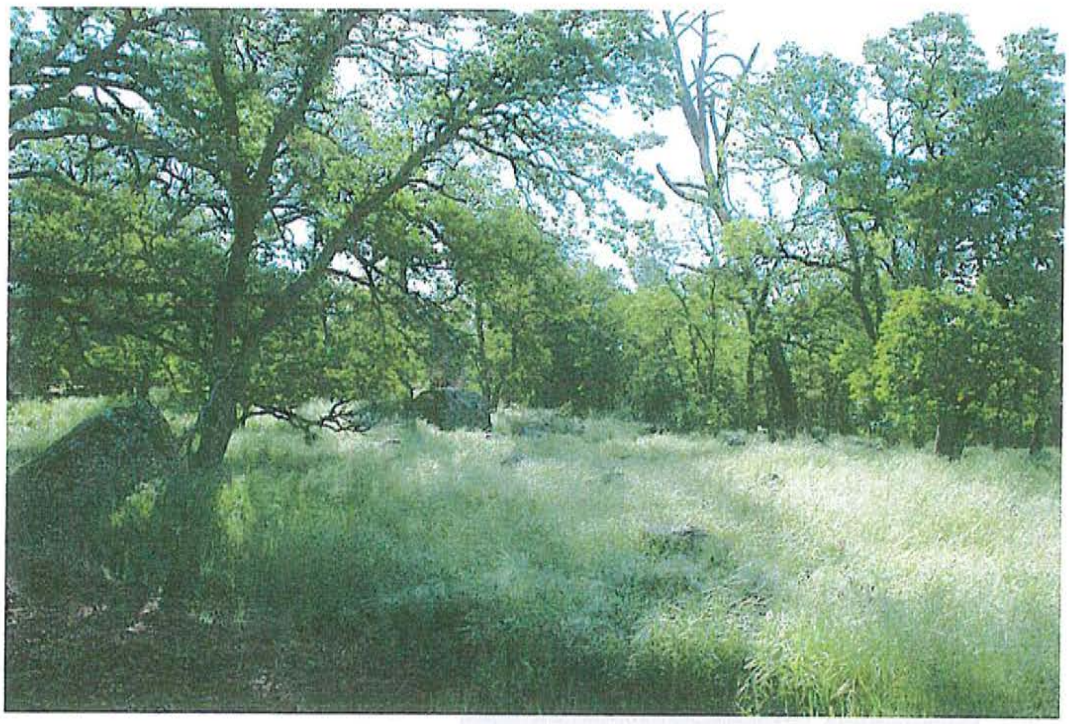
Appendices

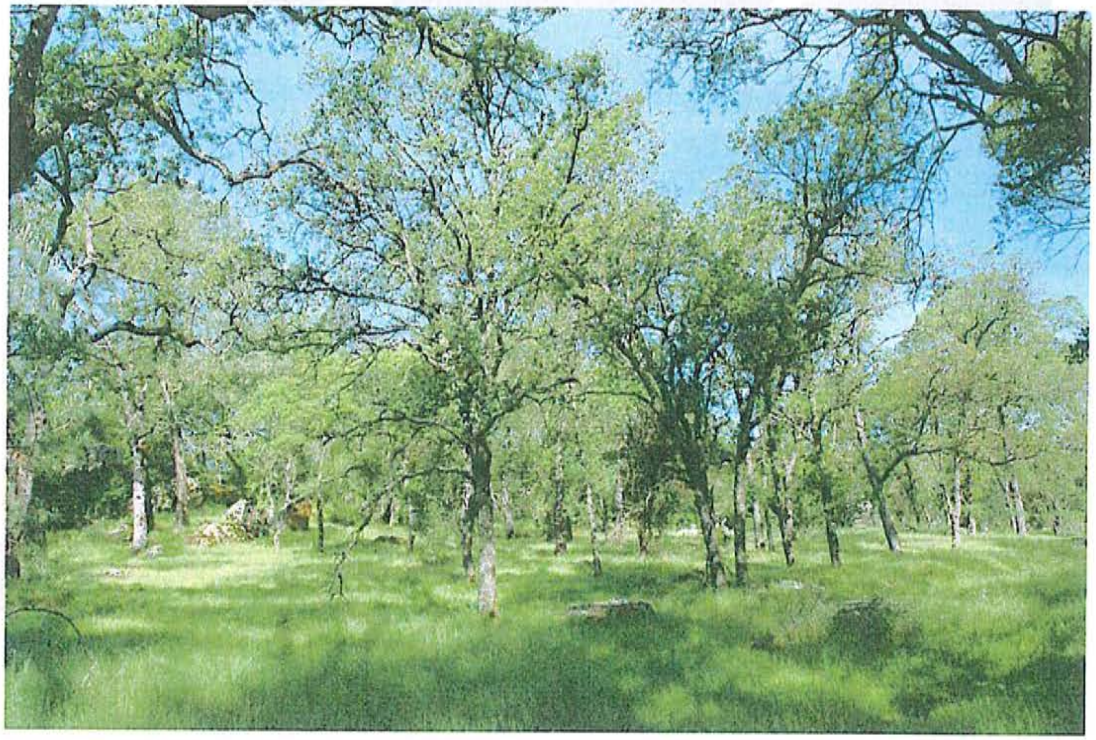
Appendix

The following four photos were taken of the Oak Woodland Conservation easement parcel 120-166-29. The parcel consists of an oak woodland consistent with the type of tree cover and species variety present on the Ridgeview Village # 9 site.









Gordon Mann
Consulting Resume

Education:
B.S. Forestry, University of Illinois
Horticulture courses, College of San Mateo
Continuing Education sessions to maintain Certifications and ASCA membership

Awards, Certifications, and Professional Memberships:
Received the 2011 True Professional of Arboriculture award from ISA
Received 2011 Author's Citation from the Society of Municipal Arborists
Member American Society of Consulting Arborists (ASCA), Registered Consulting Arborist #480
Member International Society of Arboriculture (ISA), ISA Certified Arborist and Municipal Specialist #WE-0151 AM; PNWISA Certified Tree Risk Assessor # 1005
Member California Urban Forest Council (CaUFC), Certified Urban Forester #127
Member Western Chapter International Society of Arboriculture (WCISA)
Member Society of Municipal Arborists (SMA)
Member California Arborist Association (CAA)

Employment:
Owner Mann Made Resources, consulting and marketing tree friendly products, since 1986
Over 34 years in municipal tree and risk management, and public administration

- 1.5 years Full time consultant and product sales with Mann Made Resources
- 1 year with Fallen Leaf Tree Service as Sales/Municipal Manager/General Manager
- 1.5 years with the Sacramento Tree Foundation as Urban Forest Services Director
- 22.5 years with the City of Redwood City, CA as Arborist, City Arborist and Public Works Superintendent - Streets, Sidewalk, Traffic Signals and Markings, & Trees
- 2.5 years with the City of San Mateo, CA as Tree Maintenance Supervisor
- 5 years with the Village of Brookfield, IL as Village Forester

Professional Leadership:
Current President-Elect, American Society of Consulting Arborists (ASCA)
Current representative for SMA on American National Standards Institute (ANSI) A300 Tree Maintenance Standards Committee
Current Board Member California Urban Forests Council (CaUFC)
Current WCISA Municipal Committee chair, and member on Certification Committee
2012 WCISA Annual Conference Chair Asilomar, CA, April 29-May 2, 2012
Past President, Western Chapter International Society of Arboriculture
Past President, California Arborists Association
Past Board Member, Society of Municipal Arborists
Past chairperson (3 years) of the International Tree Climbing Competition
Past chairperson (13 years) of the Northern California Tree Climbing Competition
Past President, San Mateo Arboretum Society
Past President, CityTalk Toastmasters

Professional outreach:

- Developed and led training programs with the California Arborists Association
- Provided urban forestry and municipal arboriculture instruction in Sydney and Melbourne, Australia

- Presented urban forestry related sessions at regional and annual meetings with ASCA, ISA, SMA, ISA Chapters, CAA, PAPA, PNW-ISA, Sacramento Tree Foundation, APWA, Arbor Day Foundation, Maintenance Superintendents Association, and Oregon Department of Forestry, San Mateo County Stormwater Pollution Prevention Program
- Authored articles in newsletters and magazines including: Western Arborist, Arborist News, City Trees, and Utility Arborists Association
- Presented sessions on urban tree management topics at 2012 Colorado Pro-Green Conference, 2012 Idaho Hort Expo, 2012 WCISA Annual Conference, and 2012 Association of Environmental Professionals

Key Projects:

Performed risk assessment and tree risk management plan for Nevada Joint Union High School District, Grass Valley, CA; reference - Paul Palmer

Performed Urban Forest Program analysis Oakdale, CA; reference - Robert Swift

Performing Campus Urban Forest Management Plan San Francisco State University, San Francisco, CA; reference – Phil Evans

Item No.	Tree Number	species	est trunk dia	Remove	Comments
1	1181	Quercus douglasii	8	X	dead
2	1152	Quercus douglasii	9	X	dead
3	1149	Quercus douglasii	8	X	dead
4	538	Quercus douglasii	9	X	dead
5	1148	Quercus douglasii	8	X	dead
6	1147	Quercus douglasii	9	X	2 stem, dead
7	1145	Quercus douglasii	10	X	dead
8	1171	Quercus douglasii	15	X	dead
9	326	Quercus wislizenii	28	X	2 leader broken tops on both leaders
10	241	Quercus douglasii	16	X	dead
11	388	Quercus wislizenii	30		Broken branches, dieback, reduce crown 2/3
12	486	Quercus douglasii	16		Broken leader, decay, reduce crown 1/2
13	289	Pinus sabiniana	20		Pine, reduce crown from canopy
14	?	Quercus douglasii	8	X	next to 731 and 732, broken leader reduce crown
15	974	Quercus douglasii	8	X	dead
16	1035	Quercus douglasii	8	X	dead
17	936	Pinus sabiniana	16		Pine, reduce crown from canopy
18	938	Pinus sabiniana	30		Pine, reduce crown from canopy

Data Collected May 24, 2012

RIDGEVIEW VILLAGE UNIT 9

OFF-SITE SEWER THROUGH
VILLADORO HOA LOT B (RIDGEVIEW WEST)
TREE PRESERVATION ANALYSIS

EL DORADO COUNTY, CALIFORNIA

SCALE: 1"=40' JANUARY, 2019

LEGEND

CANOPY TO REMAIN (1996)

CANOPY TO BE REMOVED (2019)
FOR RIDGEVIEW UNIT 9 OFF-SITE SEWER

PROJECT AREA

RIDGEVIEW WEST LOT B:	347,653 SF
TOTAL CANOPY (1996):	196,518 SF
CANOPY REMOVAL (2019):	19,870 SF

DISTURBED AREA

OFF-SITE SEWER LOT B:	1.2 AC

PROJECT NOTES

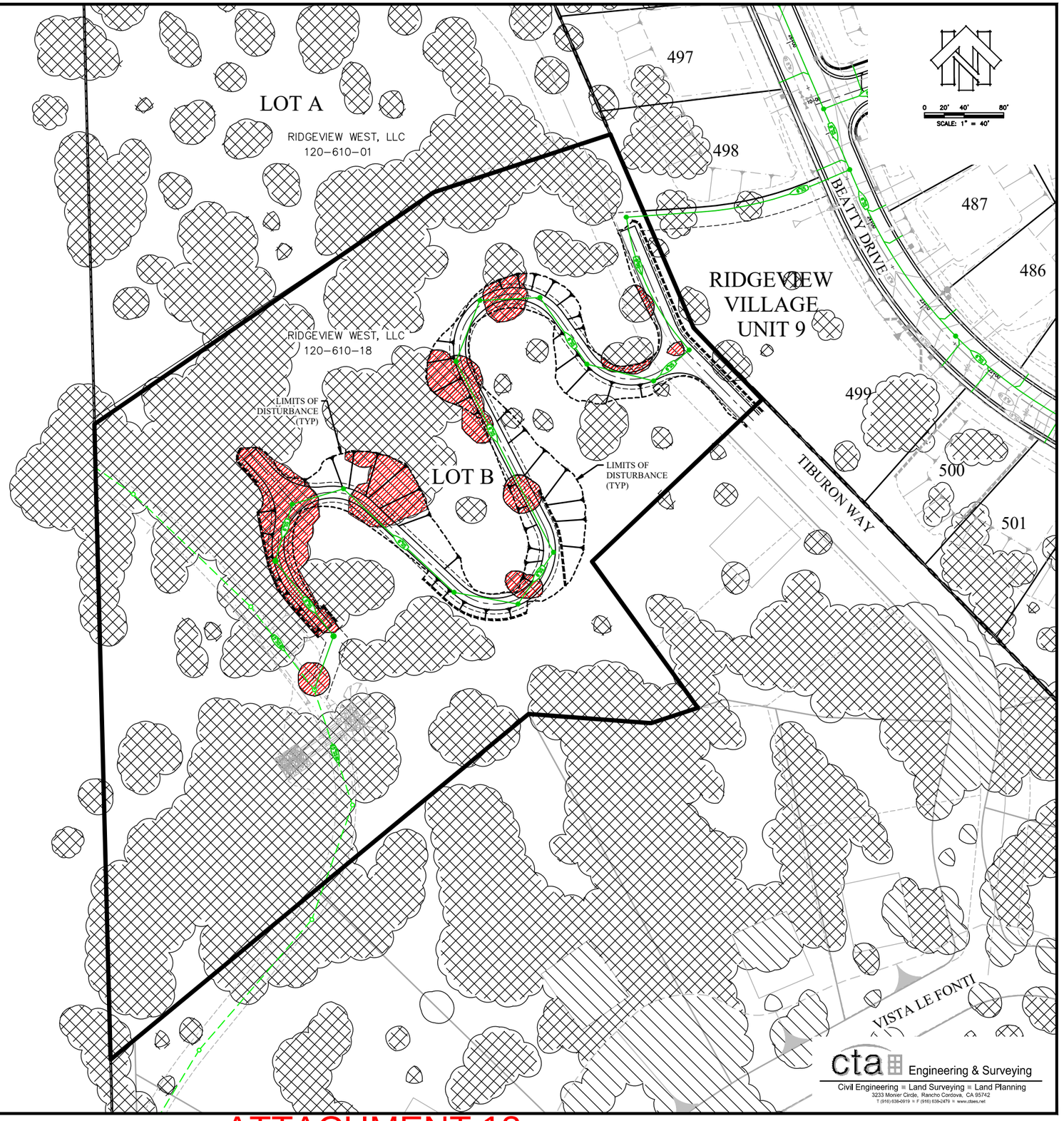
FROM STAFF REPORT, PAGE 8, FILE NO. 295-21/PD95-15/TM95-1309 RIDGEVIEW WEST, DATED JULY 11, 1996, ACCORDING TO POLICY 7.4.4.4, SINCE 80% OF THE TREE CANOPY IS RETAINED, A REPLACEMENT PLAN IS NOT NECESSARY. RIDGEVIEW WEST IS CONSISTENT WITH BOTH POLICIES 7.4.4.4 & 7.4.5.1.

REFERENCE

*CANOPY SHOWN IS FROM THE TREE PRESERVATION PLAN FOR RIDGEVIEW WEST, MARCH 1996

TREE PRESERVATION PLAN ANALYSIS

*RIDGEVIEW WEST – JULY 1996
*REMOVE CANOPY (1996) 360,220 SF
*REMOVE CANOPY (2019) 19,870 SF
*TOTAL PROJECT CANOPY (1996) 2,076,647 SF
*ORIGINAL CANOPY TO BE REMOVED IS 17% (1996)
*CURRENT TOTAL CANOPY REMOVAL IS 18% (2019)
*PROPOSED CANOPY TO BE RETAINED IS 82% (2019)
THEREFORE SHOULD NOT REQUIRE MITIGATION (1996)



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