

DRAFT

DORADO OAKS TENTATIVE SUBDIVISION MAP

Environmental Impact Report

SCH # 2019071041

Prepared for
El Dorado County Planning Services Division

July 2021



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CHAPTER 1

Introduction

1.1 Overview

This Environmental Impact Report (EIR) is an informational document intended to disclose to the public and decision-makers the environmental effects of the Dorado Oaks Tentative Subdivision Map Project (the project or proposed project). This document assesses the direct, indirect, and cumulative environmental impacts that could result from implementation of the project. The analyses in this document are based upon information submitted by Stonehenge Springs, LLC (the applicant) in an application to the County of El Dorado for approval of the project and subsequent implementing approvals, including but not limited to a Planned Development Permit, rezoning, subdivision maps, lot line adjustments, and building specific design review approvals. This EIR is intended as an informational document that, in itself, does not determine whether the project should be approved, but informs the public and local officials in the planning and decision-making process.

This EIR evaluates the project, as currently proposed, and a detailed project description, the project objectives, and further information about the project site can be found in Chapter 3, *Project Description*.

1.2 Environmental Review under the California Environmental Quality Act

The proposed project's approvals constitute a "project" as defined by, and are subject to the requirements of, the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and the "CEQA *Guidelines*" (California Code of Regulations, Title 14, Section 15000 et seq.). For purposes of CEQA, the term "project" refers to the whole of an action which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA *Guidelines* Section 15378). As the principal public agency responsible for approving the project, the County of El Dorado is the "lead agency" overseeing and administering the CEQA environmental review process.

As set forth in the provisions of CEQA *Guidelines* Section 15126.4, before deciding whether to approve a project, public agencies must consider the significant environmental impacts of the project and must identify feasible measures to minimize those impacts. Pursuant to CEQA *Guidelines* Section 15064, if any aspect of the proposed project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, an Environmental Impact Report (EIR) must be

prepared. The County has determined that the size, scale, and potential impacts resulting from the proposed project require the preparation of an EIR.

This EIR is a factual informational document, prepared in conformance with CEQA, and written for the purpose of making the public and decision-makers aware of the environmental consequences of the proposed project. For any consequence, or project impact, that is considered “significant,” the EIR identifies mitigation measures, where feasible, to reduce or avoid the significant impact. The EIR also considers the objectives of the project and identifies whether there might be alternative ways of accomplishing those objectives while avoiding or substantially reducing the project’s impacts.

Before any action may be taken to approve the project, the County must certify that it has reviewed and considered the information in the EIR and that the EIR has been completed in conformity with the requirements of CEQA. Certification of the EIR does not approve or deny the proposed project.

1.2.1 Notice of Preparation

Per the requirements of CEQA for the initiation of environmental review, on July 29, 2019, the County sent a Notice of Preparation (NOP) to the State Clearinghouse [SCH No. 2019071041], responsible and trustee government agencies, organizations, and individuals potentially interested in the project. The NOP requested that agencies with regulatory authority over any aspect of the project describe that authority and identify relevant environmental issues that should be addressed in the EIR. Interested members of the public were also invited to comment. A scoping meeting was held on August 28, 2019. The public comment period closed on September 12, 2019.

The NOP and the comments received on the NOP are included in **Appendix A** of this EIR. As discussed in the NOP and per the provisions of CEQA, the County did not prepare a CEQA Initial Study prior to preparation of the EIR, because the County determined that it was clear at the time of the issuance of the NOP that an EIR was required (CEQA *Guidelines* Section 15060[d]).

1.2.2 Draft EIR

This document and all attachments hereto constitute the Draft EIR. The Draft EIR contains a description of the project, including the project objectives, description of the environmental setting, identification of project impacts, identification of recommended mitigation measures to avoid or reduce impacts found to be potentially significant, identification of impacts after the implementation of recommended mitigation measures, identification of alternative ways of accomplishing the project’s objectives while avoiding or reducing the project’s impacts, and a comparative analysis of those alternatives (see Section 1.3, below). The County has filed a Notice of Completion (NOC) for the Draft EIR with the Governor’s Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161).

Public Notice and Public Review

This Draft EIR is available for public review for a 45-calendar-day period, during which time written comments on the Draft EIR may be submitted to the County of El Dorado. A public

hearing will also be held on the Draft EIR, during which public comments may also be submitted. The date of the public hearing will be posted on the County's website (<https://www.edcgov.us/Government/planning>). Responses to all comments received on environmental issues regarding the Draft EIR and submitted within the specified review period will be prepared and included in the Final EIR.

All comments or questions regarding the Draft EIR should be addressed to:

Tom Purciel, Associate Planner
Planning and Building Department
2850 Fairlane Court
Placerville, CA 95667

dorado_oaks@edcgov.us

1.2.3 Final EIR and Certification

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments made at the public hearing.

Certification of the EIR and Project Consideration

The County will review and consider the Final EIR. If the County finds that the Final EIR is adequate and complete, the County will certify the Final EIR. Upon review and consideration of the Final EIR, the El Dorado County Board of Supervisors may take action to approve, conditionally approve, revise, or reject the proposed project. A decision to approve the project would be accompanied by written findings in accordance with CEQA *Guidelines* Section 15091, and Section 15093, as applicable. A Mitigation Monitoring and Reporting Program, as described below, would also be adopted for project design features and mitigation measures that have been incorporated into the proposed project or adopted as conditions of approval to reduce or avoid significant effects on the environment.

Mitigation Monitoring and Reporting Program

Throughout the EIR, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a mitigation monitoring and reporting program. CEQA *Guidelines* Section 21081.6(a) requires lead agencies to adopt a mitigation monitoring and reporting program to describe measures that have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The Mitigation Monitoring and Reporting Program will be presented to the Board of Supervisors for adoption at the time of project approval. This Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during project implementation.

1.3 Range of Alternatives

CEQA requires that an EIR discuss a range of reasonable alternatives to the proposed project (see Chapter 5). This EIR describes and analyzes a range of reasonable alternatives, including a “No

Project” alternative as required under CEQA (CEQA *Guidelines* Section 15126.6[e]); compares the environmental effects of each alternative with the effects of the proposed project; and addresses the relationship of each alternative to the project objectives. The determinations of the Lead Agency concerning the feasibility, acceptance, or rejection of each and all alternatives considered in this EIR will be addressed and resolved in the findings, when the County considers approval of the project, as required by CEQA.

1.4 Organization of the Draft EIR

The *Summary* (Chapter 2) includes a brief project description and an overview table of the environmental impacts identified by this EIR. The summary table lists the environmental impacts, proposed mitigation measures (including standard conditions), and the level of significance after mitigation. Detailed analysis of these impacts and mitigations is provided in Chapter 4 (*Environmental Setting, Impacts, and Mitigation Measures*).

The *Project Description* (Chapter 3) describes the project location and boundaries; lists the project objectives; and provides a general description of the characteristics of the proposed project. This chapter also includes a list of the County’s required approvals and other agencies that may be responsible for approving aspects of the project.

Environmental Setting, Impacts, and Mitigation Measures (Chapter 4) contains a description of the environmental setting (existing physical environmental conditions), the regulatory framework, and the environmental impacts (including cumulative impacts, where relevant) that could result from the proposed project. It includes the thresholds of significance used to determine the significance of adverse environmental effects. The chapter also identifies the mitigation measures and/or standard conditions of approval that would reduce or eliminate the adverse impacts that have been determined to be significant. The impact discussions disclose the significance of the impact both with and without implementation of mitigation measures and/or standard conditions.

Alternatives (Chapter 5) evaluates a range of reasonable alternatives to the proposed project and identifies an environmentally superior alternative, consistent with the requirements of CEQA. The alternatives analyzed are the Reduced Project Alternative (Alternative 1), the Preservation Alternative (Alternative 2), and the No Project/No Development Alternative (Alternative 3).

Other Statutory Sections (Chapter 6) presents growth-inducing effects, significant irreversible changes, a summary of cumulative impacts, significant and unavoidable environmental impacts, and effects found to be less than significant.

Report Preparation (Chapter 7) identifies the authors of the EIR. Persons and documents consulted during preparation of the EIR are listed at the end of each analysis section (Sections 4.1 through 4.14).

Appendices. The NOP, comment letters received on the NOP, and comments from the scoping hearing, as well as supporting documents and technical information for the impact analyses are presented in **Appendices A through H**.

1.5 Intended Uses of the EIR

This EIR provides the CEQA compliance documentation upon which the County of El Dorado’s consideration of, and action on, all applicable land use permits and other approvals (collectively, “approvals”) for the proposed project or an alternate may be based. These include all approvals listed in this EIR, as well as any additional approvals that may be necessary to implement the proposed project or alternative, including activities such as planning, construction, operation and maintenance (e.g., use permits, grading permits, building permits, certificates of occupancy and other development-related approvals).

This EIR also provides the CEQA compliance or the basis for NEPA compliance which would be relied upon by Responsible Agencies and Trustee Agencies in considering and acting upon other project approvals.

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CHAPTER 2

Summary

2.1 Introduction

As provided by Section 15123 of the California Environmental Quality Act (CEQA) Guidelines (CEQA *Guidelines*), this chapter provides a brief summary of the proposed Dorado Oaks Tentative Subdivision Map Project and its consequences. This chapter is intended to summarize in a stand-alone section the proposed project described in Chapter 3 (*Project Description*), the impacts and mitigation measures discussed in the various subsections of Chapter 4 (*Environmental Setting, Impacts, and Mitigation Measures*), and the alternatives analysis presented in Chapter 5 (*Alternatives to the Proposed Project*).

This Environmental Impact Report (Draft EIR) has been prepared to evaluate the anticipated environmental effects of the project in conformance with the provisions of CEQA and the CEQA *Guidelines*. The lead agency, the County of El Dorado (County), is the public agency that has the principal responsibility for approving the project, which includes approving the proposed tentative subdivision map and other approvals (referred to collectively hereafter as the project or proposed project).

2.2 Regional Location and Project Area

2.2.1 Regional Setting

The project site is located in the unincorporated Diamond Springs Community Region¹ in El Dorado County, California, about three miles south of Placerville and 40 miles east of downtown Sacramento. The project site location and regional context are presented in **Figure 2-1**. Regional access to the area is generally provided by U.S. Highway 50 (US-50), which is a major national highway corridor that begins in Sacramento and crosses the Sierra Nevada Mountains to South Lake Tahoe and continues on to points east. SR-49 provides access to the area from the north and the south along the western front of the Sierra Nevada Mountains and its foothills.

2.2.2 Project Site

The project consists of both on-site improvements (“Dorado Oaks Tentative Subdivision Map Site”) and off-site improvements (“State Route 49 Intersection Area” and the “Optional Fowler Lane Improvement Area”) related to a proposed 382-lot residential subdivision. **Figure 2-2**

¹ A small southeasterly portion of the Tentative Map site lies outside of the Diamond Springs Community Region area.

shows an aerial overview of these areas. For purposes of environmental review, the on-site improvements are described separately as the “Dorado Oaks Tentative Subdivision Map Site” and the associated off-site improvements are referred to as the “State Route 49 Intersection Area” and the “Optional Fowler Lane Improvement Area.” Proposed work at all three locations is collectively referred to as the “project”.

2.3 Project Description

As stated above, the project is comprised of three principal components: 1) Dorado Oaks Tentative Subdivision Map Site; 2) State Route 49 Intersection Area; and 3) Optional Fowler Lane Improvement Area. Proposed work at each of the three locations is described below.

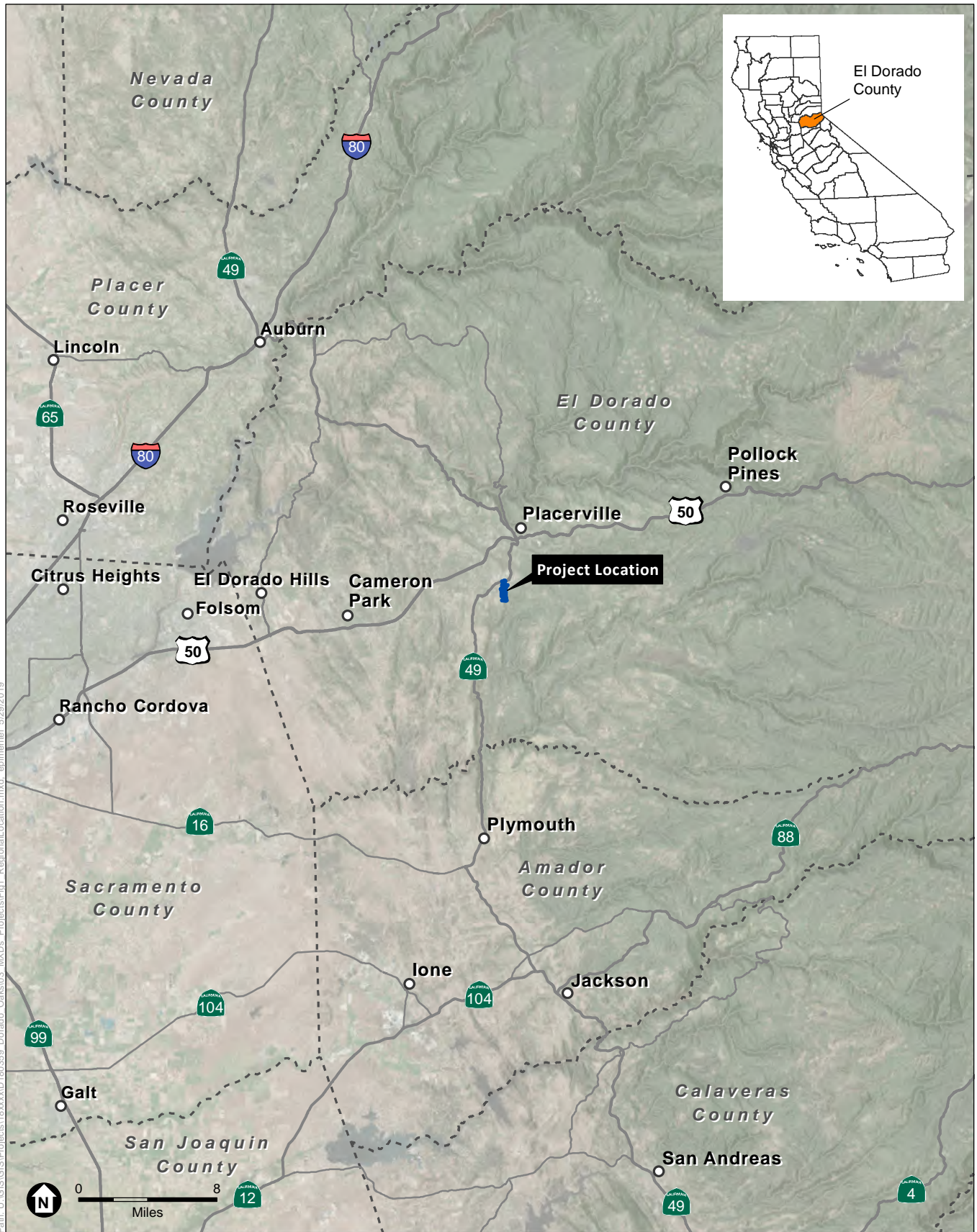
Dorado Oaks Tentative Subdivision Map Site

The Dorado Oaks Subdivision consists of the following entitlement requests:

1. A Rezone (Application # Z19-0005) of an approximately 18.1-acre portion of the approximately 142.5-acre project site from Residential, Multi-Unit (RM) to Residential, Multi-Unit - Planned Development (RM-PD), in accordance with the El Dorado County Zoning Code;
2. A Phased Tentative Subdivision Map (Application # TM18-1538), to subdivide the property into 14 Large Lots for financing and phasing purposes, 156 single-family lots ranging in size from 6,000 square feet to approximately 24,000 square feet, 225 multi-family lots ranging in size from approximately 2,000 square feet to 7,170 square feet ; one single-family lot of approximately 6.4 acres; seven roadway lots; and 18 open space/landscape lots open space/landscape lots in accordance with the El Dorado County Subdivision Ordinance,;
3. A Planned Development Permit (Application # PD19-0005) to establish an official Development Plan for the Dorado Oaks Subdivision that includes modification to front yard setback standards in the RM zone district for 225 multi-family lots on an 18.1-acre portion of the project site in accordance with the El Dorado County Zoning Code.
4. A Development Agreement (Application# DA20-0002) between the County and the project applicant.
5. Lot line adjustments along portions of the site’s eastern boundary to correct a series of inadvertent encroachments and lot line errors from adjoining properties and structures onto the proposed subdivision site.

This component of the project would provide for development of residential uses on a series of parcels that cover a combined area of approximately 142.5 acres. **Figure 2-3** shows the proposed subdivision map. In addition to the proposed residential and open space lots, other components of the project include:

- On-site roadway improvements to facilitate circulation within the development (approximately 18.5 total acres).
- Provision of a 3.1-acre public park site.

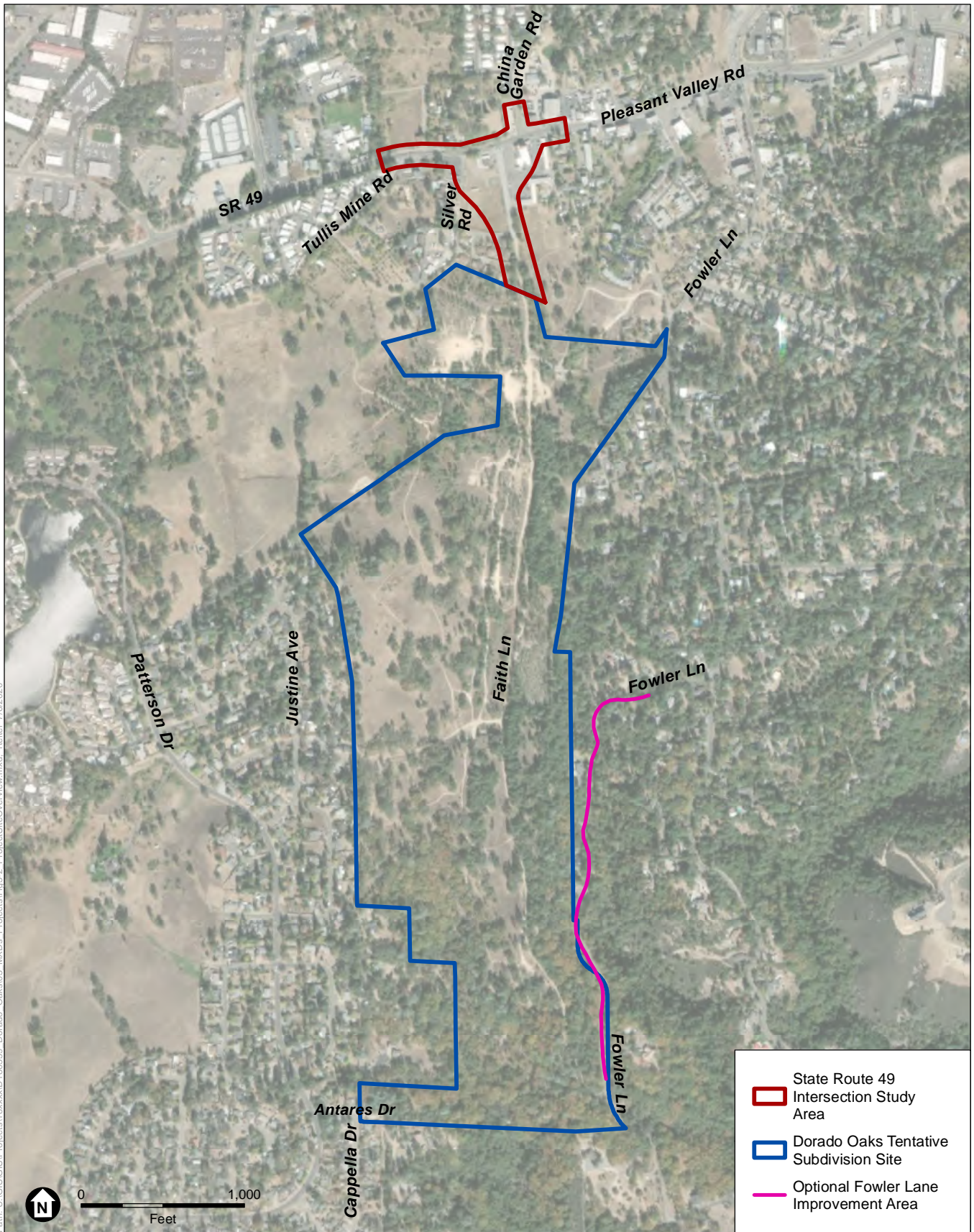


SOURCE: Esri, 2018; ESA, 2019

Dorado Oaks Tentative Subdivision Map Project

Figure 2-1
Regional Location

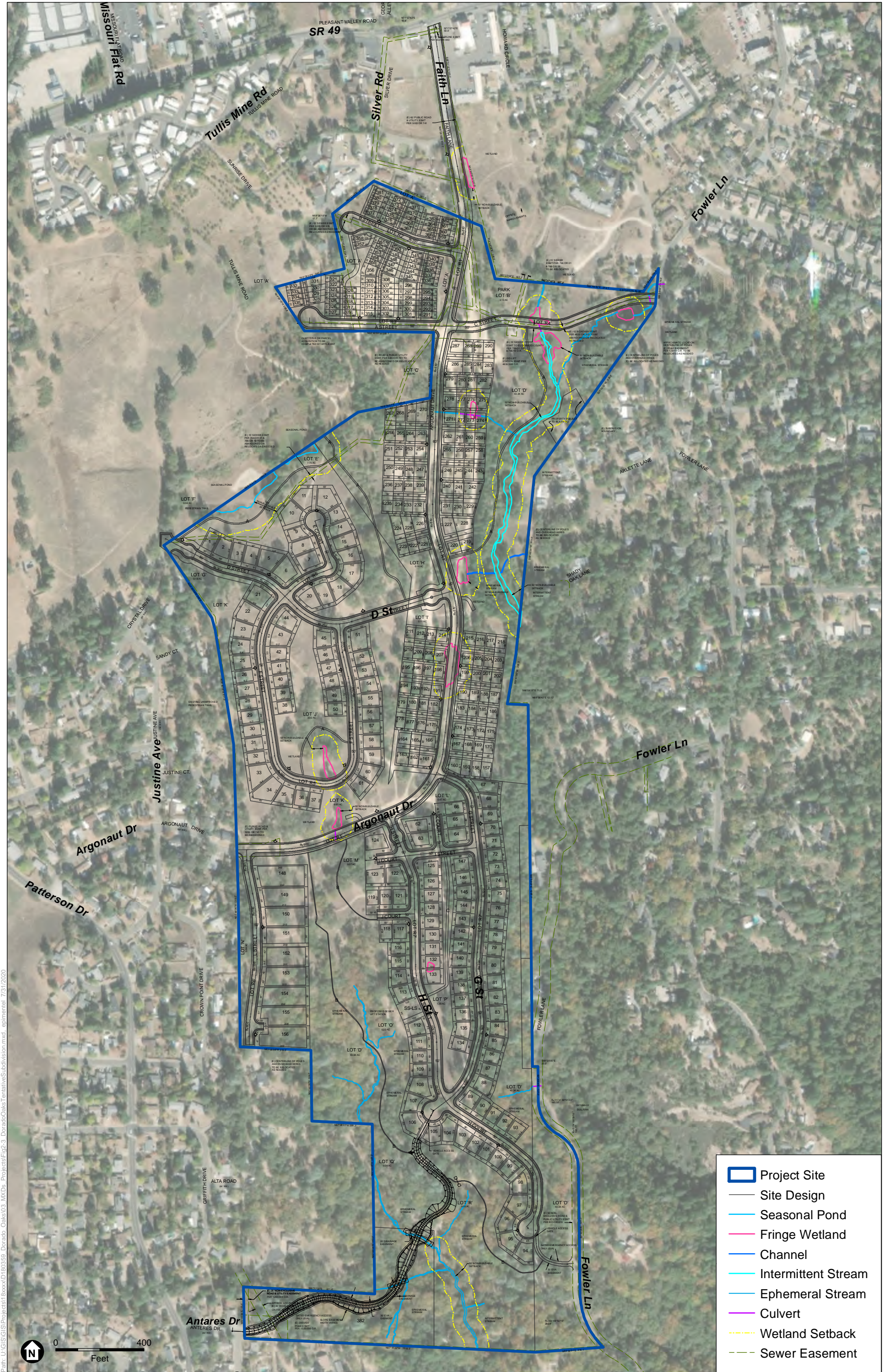




SOURCE: USDA, 2016; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 2-2
Project Site Overview



Path: U:\GIS\GIS\Projects\16000\16000-03_Dorado Oaks Tentative Subdivision.mxd, epimperial 7/31/2020

SOURCE: USDA, 2018; CTA, 2020; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 2-3
Dorado Oaks Tentative Subdivision



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- On-site infrastructure improvements relating to potable water delivery, wastewater conveyance, storm drainage, electric, propane, and communications.
- Provision of four public vehicular access points and one or two emergency vehicle access points to and from the project site to existing adjoining roadways:
 - a) Faith Lane, connecting to SR-49/Pleasant Valley Road and providing primary access at the north end of the project site.
 - b) Faith Lane/Argonaut Drive, connecting to Argonaut Drive on the west side of the project.
 - c) “C” Street, connecting to Fowler Lane on the northeast side of the project site.
 - d) “D” Street, connecting to Crystal Drive/Tullis Mine Road on the northwest side of the project site.
- Two emergency vehicle access options are under consideration, the first deriving from the southern terminus of “G” Street and exiting the subdivision site to the southwest, connecting to Antares Drive. The second emergency access option would derive from “H” Court and connect to Fowler Lane. If selected, the Fowler Drive option could require offsite widening of the southerly offsite portions of Fowler Drive to meet County Fire Department requirements.

State Route 49 Intersection Area

This component of the project would provide access to the Dorado Oaks Subdivision site from State Route (SR) 49, which is also known in this vicinity as Pleasant Valley Road. **Figures 2-4** and **2-5** show the two intersection options/alternatives that are currently under consideration, which include the following:

Option A: a four-way roundabout at the intersection of China Garden Road/SR-49, to the east of Faith Lane.

Option B: Realignment of the existing Faith Lane alignment westwards to connect with Silver Drive, and installation of two coordinated signals at the intersections of Silver Drive/SR-49 and China Garden Road/SR-49.

For purposes of this analysis, the entirety of these two areas are considered collectively as the “State Route 49 Intersection Area.” Both of the above options also include a study area buffer extending 50 feet on either side of each option’s edge-of-pavement improvements. Ultimately, only one of these options/alternatives would be selected for construction, but both of the options/alternatives will be evaluated in this Draft EIR.

Optional Fowler Lane Improvement Area

In addition to the four public points of access to the Dorado Oaks Subdivision site described previously, emergency vehicle access to and from the site would be provided via dedicated emergency-only roadways at the southern end of the subdivision site. Two options are under consideration to provide this access, and one or both of the options would be implemented as part

of the project's construction. The first option would come off of "G" Street near the southern end of the subdivision site and travel southwesterly to connect with Antares Drive. See Figure 2-3 for the location of this connection. Construction of improvements for this option would all occur on the subdivision site, and no offsite improvements would be required, except for the tie-in with Antares Drive.

The second option would come off of "H" Court, but would exit the subdivision site near its southeastern corner and connect with Fowler Lane. If the Fowler Lane option were selected as the sole point of emergency access, the Antares Drive emergency access option described above would likely not be constructed, and the southerly offsite portions of Fowler Lane would likely need to be widened to a minimum 20-foot paved width to meet County Fire Department requirements. In all, the paved areas along about 2,600 linear feet (approximately 0.5 mile) of Fowler Lane would need to be widened by anywhere from 2.5 to 10 feet, extending northwards from the interface with "H" Court to a point about 450 feet west of Fowler Lane's intersection with South Point Road. The location of the improvement area is shown in **Figure 2-6**.

As can be seen in the figure, the recorded easement of the roadway varies substantially from the as-built roadway as it actually exists on the ground. If this option were selected for construction, the recorded easement would be adjusted to conform with the roadway's actual alignment. Should the Antares Drive option be selected as the sole point of emergency access, a gated emergency access connection to Fowler Lane from "H" Court would still be provided, but the aforementioned widening of Fowler Lane and the easement adjustments would not occur.

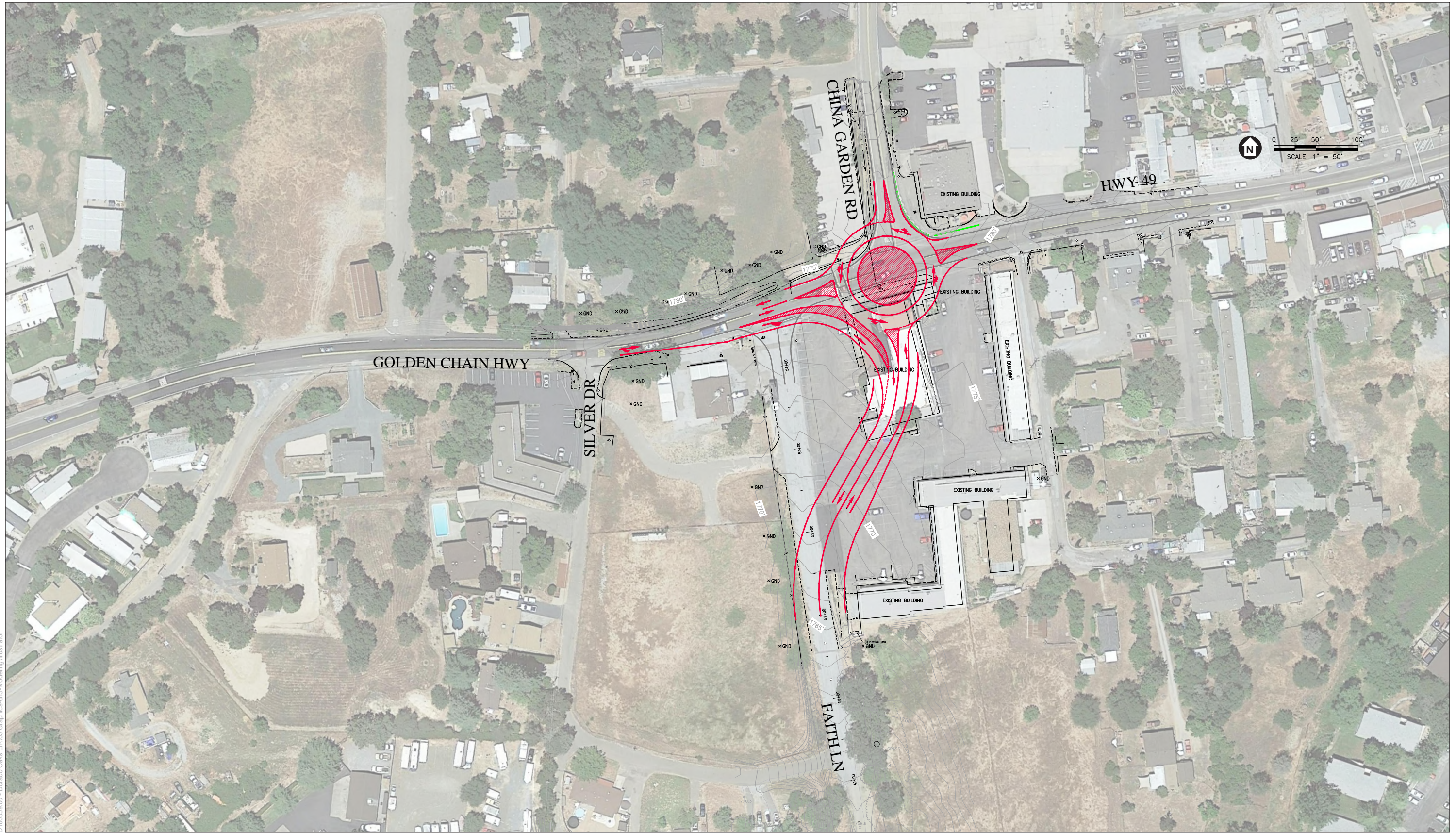
2.4 Project Objectives

CEQA Guidelines Section 15124(b) requires the description of the project in an EIR to state the objectives sought by the project.

"A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project."

This section states the project objectives for the CEQA review of the project. Clarifying information is provided for each objective. The project objectives are:

- Develop a residential project that is in compliance with existing County land use and zoning requirements for the property, as defined in the General Plan and Zoning Code.
- Provide housing of various types to fulfill the goals of the County's Housing Element and help meet the County's Regional Housing Need Allocation.
- Provide options for housing that meet the needs of a wide demographic.
- Develop an economically sustainable and financially sound new development that can fund the construction of the facilities and services that are needed to serve the plan area and achieve General Plan objectives, while avoiding any financial impact on the County's ability to provide services to the rest of the County.



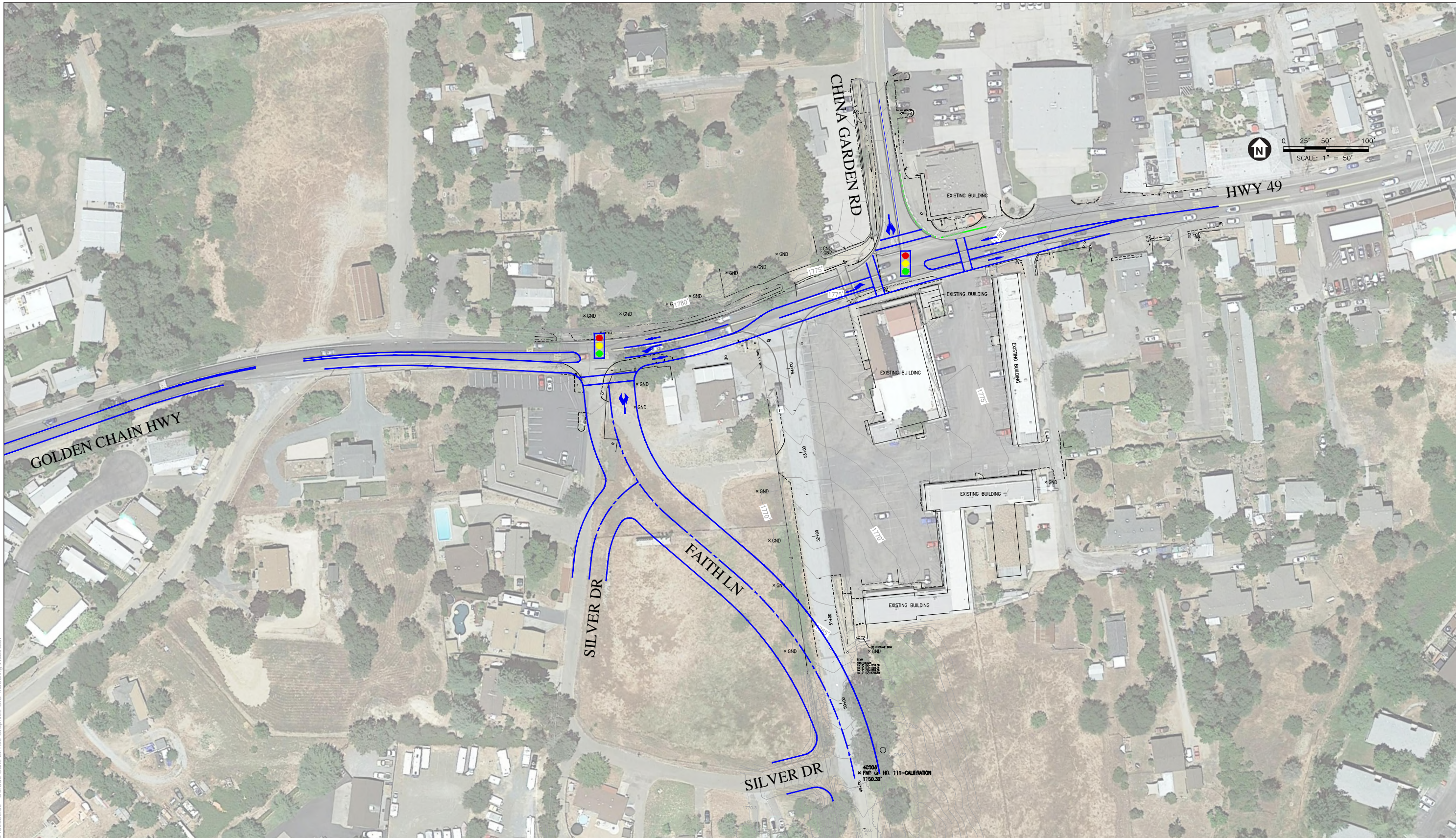
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SOURCE: CTA Engineering & Surveying, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 2-4
State Route 49 Intersection Option A





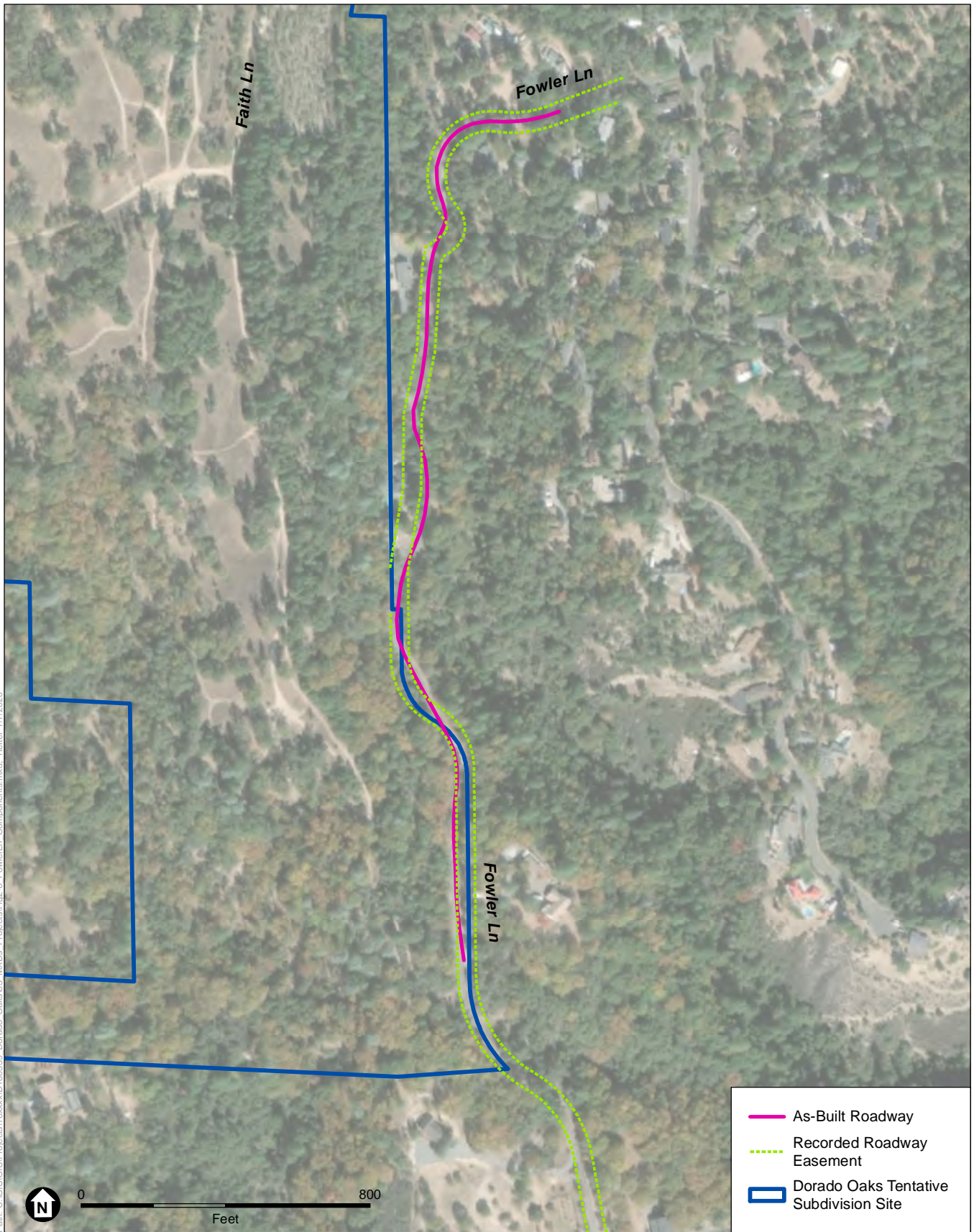
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SOURCE: CTA Engineering & Surveying, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 2-5
State Route 49 Intersection Option B





SOURCE: USDA, 2016; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 2-6
Optional Fowler Lane Improvement Area

2.5 Proposed Project Impacts

As provided by the CEQA *Guidelines* Section 15123(b)(1), an EIR must provide a summary of the impacts, mitigation measures and significant impacts after mitigation for a proposed project. This information is presented in the various subsections within Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR, and summarized in **Table 2-1** at the end of this chapter. The proposed project would result in the following significant and unavoidable impacts:

Impact 4.4-1: The project could cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. (Significant and Unavoidable Impact, with Mitigation) (For State Route 49 Intersection Improvement Option A only)

Impact 4.4-4a: The project could cause a cumulative impact to a historical resource as defined in CEQA Guidelines Section 15064.5. (Significant and Unavoidable Impact, with Mitigation) (For State Route 49 Intersection Improvement Option A only)

Impact 4.10-1c: Construction of the proposed project would result in temporary increases in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Significant and Unavoidable Impact, with Mitigation)

Impact 4.10-4: Construction activities for the proposed project combined with cumulative construction noise in the project area would result in a substantial temporary or periodic increase in ambient noise levels in excess of standards established in the General Plan or Noise Ordinance. (Significant and Unavoidable Impact, with Mitigation).

2.6 Alternatives to the Proposed Project

Chapter 5, Alternatives, analyzes a range of reasonable alternatives to the proposed project, including the No Project/No Development Alternative (Alternative 1), the SR-49 Roundabout Alternative (Alternative 2), and the SR-49 Signalized Intersection Alternative (Alternative 3).

The analysis of the alternatives is summarized and compared in **Chapter 5**, which provides a summary of impact levels within all environmental topic areas. Overall, the analysis shows that the SR-49 Signalized Intersection Alternative, particularly with the Optional Fowler Lane Improvement component of the project deleted, would reduce some of the project's significant impacts.

Based on the evaluation described in **Chapter 5**, the No Project/No Development alternative and the SR-49 Signalized Intersection Alternative would both be environmentally superior to the proposed project. The No Project/No Development alternative would be the most environmentally superior alternative with the fewest environmental impacts. However, the No Project/No Development alternative would not meet any of the basic objectives of the project.

CEQA requires that that a second alternative be identified when the "No Project" alternative is the environmentally superior alternative (CEQA *Guidelines*, Section 15126.6(e)). Therefore, the **SR-49 Signalized Intersection Alternative**, particularly with the Optional Fowler Lane

Improvement component of the project deleted, would be the Environmentally Superior Alternative for the purpose of this analysis.

2.7 Comments on Notice of Preparation

Per the requirements of CEQA for the initiation of environmental review, on July 29, 2019 the County sent a Notice of Preparation (NOP) to the State Clearinghouse [SCH No. 2019071041], responsible and trustee government agencies, organizations, and individuals potentially interested in the project. The NOP requested that agencies with regulatory authority over any aspect of the project describe that authority and identify relevant environmental issues that should be addressed in the EIR. Interested members of the public were also invited to comment. A scoping meeting was held on August 20, 2019.

The NOP and the comments received on the NOP are included in **Appendix A** of this EIR.

2.8 Areas of Controversy

Section 15123(b)(2) of the CEQA *Guidelines* requires that an EIR summary identify areas of controversy known to the lead agency, including those issues raised by other agencies and the public. Issues raised by the public have included concerns regarding land use, population and housing, cultural resources, biological resources, public services, wildfire, and transportation and circulation. As a result, these issues are potential areas of controversy.

2.9 Issues to be Resolved

Section 15123(b)(3) of the CEQA *Guidelines* requires that an EIR present the issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects. The major issues to be resolved for the proposed project include decisions by the County of El Dorado, as the Lead Agency, as to whether:

- This EIR adequately describes the environmental impacts of the proposed project;
- Recommended mitigation measures should be adopted or modified;
- Additional mitigation measures need to be applied to the proposed project;
- Feasible alternatives exist that would achieve the objectives of the project and reduce significant environmental impacts;
- Selection of Options for the State Route 49 Intersection Improvements (Option A or B), and for the project's Emergency Vehicle Access (Antares Drive *and* the Optional Fowler Lane Improvements *or* Antares Drive solely).
- Significant and unavoidable impacts would occur if the project is implemented; and
- The proposed project should or should not be approved.

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
4.1. Aesthetics		
Impact 4.1-1: The proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict with applicable zoning and other regulations governing scenic quality.	None required	Less than Significant Impact
Impact 4.1-2: The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	None required	Less than Significant Impact
Cumulative Impact Impact 4.1-3: The proposed project, in combination with other cumulative development, would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict with applicable zoning and other regulations governing scenic quality.	None required	Less than Significant Impact
Cumulative Impact Impact 4.1-4: The proposed project, in combination with other cumulative development, would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	None required	Less than Significant Impact
4.2. Air Quality and Greenhouse Gas Emissions		
Impact 4.2-1: Construction activities associated with the project could result in a short-term emissions increase of NO _x , PM ₁₀ , and PM _{2.5} , for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	<p>Mitigation Measure 4.2-1(a): During construction, implement SCAQMD's Best Available Fugitive Dust Control Measures required by SCAQMD Rule 403, as adopted by the EDCAQMD and presented below.</p> <p>During construction, implement SCAQMD's Best Available Fugitive Dust Control Measures and Best Available Fugitive Dust Control Measures for High Wind Conditions as adopted by EDCAQMD and presented below.</p> <p>Earth-moving (except construction cutting and filling areas, and mining operations)</p> <p>1a. Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the District; two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR</p> <p>1a-1. For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.</p> <p>Earth-moving – construction fill areas</p> <p>1b. Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the District;</p>	Less than Significant Impact

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
	<p>for areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM method 1557 or other equivalent method approved by the District, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content; two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.</p> <p>Earth-moving – construction cut areas and mining operations</p> <p>1c. Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining areas unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.</p> <p>Disturbed surface areas (except completed grading areas)</p> <p>2a/b. Apply dust suppression in a sufficient quantity and frequency to maintain a stabilized surface; any areas which cannot be stabilized, as evidenced by wind driven dust, must have an application of water at least twice per day to at least 80 percent of the unstabilized area.</p> <p>Disturbed surface areas completed grading areas</p> <p>2c. Apply chemical stabilizers within 5 working days or grading completion; OR</p> <p>2d. Take action 3a or 3c specified for inactive disturbed surface areas.</p> <p>Inactive disturbed surface areas</p> <p>3a. Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible due to excessive slope or other safety conditions; OR</p> <p>3b. Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR</p> <p>3c. Establish a vegetative ground cover within 21 days after active operations have ceased; ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR</p> <p>3d. Utilize any combination of control actions 3a, 3b and 3c such that, in total, they apply to all inactive disturbed surface areas.</p> <p>Unpaved Roads</p> <p>4a. Water all roads used for any vehicular traffic at least once per every two hours of active operations; OR</p> <p>4b. Water all roads used for any vehicular traffic once daily and restrict vehicle speed to 15 mph; OR</p> <p>4c. Apply chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.</p>	

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
	<p>Open storage piles</p> <p>5a. Apply chemical stabilizers; OR</p> <p>5b. Apply water to at least 80 percent of the surface areas of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR</p> <p>5c. Install a three-sided enclosure with walls with no more than 50 percent porosity that extend, at a minimum, to the top of the pile.</p> <p>Track-out control</p> <p>6a. Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and width of at least 20 feet; OR</p> <p>6b. Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device.</p> <p>All Categories</p> <p>7a. Any other control measures approved by the District.</p> <p>Mitigation Measure 4.2-1(b): During high wind conditions during construction with gusts exceeding 20 miles per hour, implement SCAQMD's Best Available Fugitive Dust Control Measures for High Wind Conditions required by SCAQMD Rule 403, as adopted by the EDCAQMD and presented below.</p> <p>Earth moving</p> <p>1A. Cease all active operations, OR</p> <p>2A. Apply water to soil not more than 15 minutes prior to moving such soil.</p> <p>Disturbed surface areas</p> <p>0B. On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR</p> <p>1B. Apply chemical stabilizers prior to a wind event; OR</p> <p>2B. Apply water to all unstabilized disturbed areas 3 times per day; if there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR</p> <p>3B. Take the actions specified in Table B.6, Item 3c; OR</p> <p>4B. Utilize any combination of control actions specified in Table 1, Items 1B, 2B and 3B, such that, in total, they apply to all disturbed surfaced areas.</p>	

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
	<p>Unpaved Roads 1C. Apply chemical stabilizers prior to a wind event; OR 2C. Apply water twice per hour during active operation; OR 3C. Stop all vehicular traffic</p> <p>Open storage piles 1D. Apply water twice per hour; OR 2D. Install temporary coverings.</p> <p>Paved road track-out 1E. Cover all haul vehicles; OR 2E. Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for operation on both public and private roads.</p> <p>All categories 1F. Any other control measures approved by the District</p>	
<p>Impact 4.2-2: Operation of the project would not result in a long-term emissions increase of NO_x, PM₁₀, and PM_{2.5}, for which the project region is non-attainment under an applicable federal or state ambient air quality standard.</p>	None required	Less than Significant Impact
<p>Impact 4.2-3: Construction and operation of the project would not conflict with or obstruct implementation of the applicable air quality plan.</p>	None required	Less than Significant Impact
<p>Impact 4.2-4: Construction and operation of the project would not expose sensitive receptors to substantial pollutant concentrations.</p>	None required	Less than Significant Impact
<p>Impact 4.2-5: Construction and operation of the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.</p>	None required	Less than Significant Impact
<p>Impact 4.2-6: Implementation of the proposed Project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.</p>	None required	Less than Significant Impact
<p>Impact 4.2-7: The project, in combination with past, present, and probable future projects in the project area, would not result in significant adverse cumulative air quality or greenhouse gas impacts.</p>	None required	Less than Significant Impact

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
4.3 Biological Resources		
<p>Impact 4.3-1: The project would not 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 Wildlife or U.S. Fish and Wildlife Service.</p>	<p>Mitigation Measure 4.3-1: Avoidance and Minimization Measures for Western Pond Turtle. Preconstruction surveys for western pond turtle nests shall be conducted by a qualified biologist prior to vegetation removal, equipment staging or other off pavement construction-related activity within 325 feet of the seasonal pond, as specified below:</p> <ul style="list-style-type: none"> • A preconstruction survey shall be conducted within 5 days prior to vegetation removal or grading to identify any western pond turtle nests. • If an active nest is identified, the biologist shall establish a minimum 100-foot no-disturbance buffer zone around each nest using temporary orange construction fencing. The buffer zone shall include a minimum 100-foot wide swath from the nest to the seasonal pond, to allow a path without any construction for hatchlings to move from the nest to the seasonal pond. The buffer zones and fencing shall remain in place until the young have left the nest, as determined by the qualified biologist. <p>Mitigation Measure 4.3-2: Special-status bat species. In advance of tree or structure removal, a preconstruction survey for bats shall be conducted by a qualified biologist to identify any active roost sites. If active roosts are found the following shall be implemented:</p> <ol style="list-style-type: none"> 1. Removal of trees and structures shall occur when bats are active, between the periods of March 1 to April 15 and August 15 to October 15, and outside of bat maternity roosting season (approximately April 15 – August 15) and outside of months of winter torpor (approximately October 15 – February 28), to the extent feasible. 2. If removal of trees and structures during the periods above is not feasible and active bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the project site where tree and structure removal is planned, a no-disturbance buffer of 100 feet shall be established around these roost sites until they are determined to be no longer active by the qualified biologist or until the periods above. 3. The qualified biologist shall be present during tree and structure removal if active bat roosts, which are not being used for maternity or hibernation purposes, are present. Trees and structures with active roosts shall be removed only when no rain is occurring or is forecast to occur for three days and when daytime temperatures are at least 50°F. 4. Removal of trees with active or potentially active roost sites shall follow a two-step removal process: <ol style="list-style-type: none"> a) On the first day of tree removal and under supervision of the qualified biologist, branches and limbs not containing cavities or fissures in which bats could roost, shall be cut only using chainsaws. b) On the following day and under the supervision of the qualified biologist, the remainder of the tree may be removed, either using chainsaws or other equipment (e.g. excavator or backhoe). 5. Removal of structures containing or suspected to contain active bat roosts, which are 	<p>Less than Significant Impact</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
	<p>not being used for maternity or hibernation purposes, shall be dismantled under the supervision of the qualified biologist in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost.</p> <p>Mitigation Measure 4.3-3a: Avoidance of Nissenan manzanita. If the final site clearing and grading plans avoid any Nissenan manzanita plants, the plans shall include locations to install temporary fencing between clearing and grading and the avoided Nissenan manzanita plants. The fencing shall be installed prior to the initiation of any vegetation clearing. El Dorado County shall verify that the plans include the temporary fencing if any Nissenan manzanita plants are avoided.</p> <p>Mitigation Measure 4.3-3b: Compensatory Mitigation for Nissenan manzanita. The project proponent shall either:</p> <ul style="list-style-type: none"> • Prepare a mitigation plan for Nissenan manzanita on-site. The mitigation plan shall include success criteria that require the replacement of at least as many Nissenan manzanita plants as are removed by the project. If replacement utilizes an off-site plant nursery, the nursery shall follow the current version of the <i>Guidelines to Minimize Phytophthora Pathogens in Restoration Nurseries</i> by the Working Group for <i>Phytophthoras</i> in Native Habitats. The mitigation plan shall require that if the success criteria are not met, then the off-site preservation option below shall be implemented. The mitigation plan shall be approved by El Dorado County, in coordination with CDFW, prior to the removal of any Nissenan manzanita plants. <p>The mitigation plan may make use of graded areas around the margin of the subdivision for replacement. The mitigation plan may use various methods for the propagation of Nissenan manzanita, including by seed (such as either direct seeding or use of an off-site nursery) or transplantation.</p> <p>or:</p> <p>Preserve an off-site area containing at least as many Nissenan manzanita as are removed by the project. The off-site area shall be preserved via a method acceptable to El Dorado County. The off-site area shall be preserved prior to the removal of any Nissenan manzanita plants at the project site.</p> <p>The project proponent may utilize a third-party acceptable to El Dorado County, in coordination with CDFW, to either own or be the beneficiary of a conservation easement for an off-site preserve. A management plan for the off-site area may be required. If required, the management plan shall be approved by El Dorado County, in coordination with CDFW. A financial endowment may be required by a third-party to implement the management plan.</p> <p>Mitigation Measure 4.3-4: Avoidance and Minimization Measures for Nesting Birds, including birds-of-prey. If vegetation removal occurs during the nesting season (February 1 to September 15), a qualified biologist shall conduct a preconstruction survey for active nests within 300 feet of the construction area for nesting birds. The preconstruction survey shall be conducted within 5 days prior to commencement of</p>	

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
	<p>vegetation removal. If no active nests are found, then a letter shall be submitted to the County within 14 days of the survey and no additional measures are required.</p> <p>If construction does not commence within five days of the preconstruction survey, or halts for more than five days, an additional preconstruction survey is required. If vegetation removal occurs outside the nesting season, no preconstruction survey is required. If active nests are found the following shall be implemented:</p> <ol style="list-style-type: none"> 1. A buffer shall be established and maintained around active nests. The buffer shall be 300 feet for birds-of-prey. For other nesting birds, the buffer shall be established around the active nest upon approval of the County in consultation with CDFW, and the buffer may vary depending on species and site-specific conditions. No construction activities shall be permitted within the buffer except as described below. The buffer shall be maintained until the nest is no longer active. 2. Depending on conditions specific to each nest, and the relative location and type of construction activities, it may be feasible for some construction to occur within the buffer without impacting the nest. In this case (to be determined on a case-by-case basis and upon approval of the County in consultation with CDFW), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If in the opinion of the monitor, the project is impacting the nest, the biologist shall immediately inform the construction manager and the construction manager shall stop construction activities within the buffer until the nest is no longer active. 	
<p>Impact 4.3-2: The project would not 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 Wildlife or U.S. Fish and Wildlife Service.</p>	<p>Mitigation Measure 4.3-5a: Avoidance of natural vegetation, including oak resources. The final site clearing and grading plans shall include locations to install temporary fencing between clearing and grading and retained natural vegetation, including oak woodland, individual oak trees, and heritage trees. The fencing shall be installed prior to the initiation of any vegetation clearing. El Dorado County shall verify that the plans include the temporary fencing.</p> <p>Mitigation Measure 4.3-5b: Compensatory mitigation for oak resources. The project proponent shall comply with El Dorado County Zoning Code §130.39 et seq., including the mitigation requirements therein. The zoning code specifies several options for mitigation of oak resources. Consistent with the zoning code, the project proponent shall mitigate for oak resources impacts through either 1) payment of an in-lieu fee, 2) off-site conservation, 3) replacement planting on-site, 4) replacement planting off-site, or 5) a combination of these options.</p> <p>Mitigation Measure 4.3-6: Compensatory mitigation for sandbar willow scrub. The project proponent shall restore an equal or greater acreage of sandbar willow scrub than the acreage removed. The project proponent shall submit a restoration plan to El Dorado County, and the plan shall be approved prior to the removal of any sandbar willow scrub. The restoration plan shall include as success criteria 1) the minimum acreage, 2) that the restoration occur in close proximity to a channel, pond, or wetland, and 3) a requirement that the restoration area be dominated by sandbar willow (<i>Salix exigua</i>) at completion. The restoration area may be on- or off-site.</p>	<p>Less than Significant Impact</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
<p>Impact 4.3-3: The project would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.</p>	<p>Mitigation Measure 4.3-7a: Avoidance of wetlands and other waters. The final site clearing and grading plans shall include locations to install temporary fencing between clearing and grading and retained wetlands and waters, and including any setback areas. The fencing shall be installed prior to the initiation of any vegetation clearing, and remain through the completion of ground-disturbing construction. El Dorado County shall verify that the plans include the temporary fencing.</p> <p>Mitigation Measure 4.3-7b: Compensatory mitigation of wetlands and other waters. The applicant shall acquire a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (USACE) and a Section 401 water quality certification from the Regional Water Quality Control Board (RWQCB) prior to the fill of any wetlands that qualify as waters of the U.S. or State. The applicant shall acquire a Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) prior to work in any channels. El Dorado County shall verify the receipt of these permits prior to the issuance of a grading permit that would result in grading or work in these aquatic resources.</p> <p>The applicant shall mitigate for impacts to the aquatic resources at a minimum ratio of 1:1. Mitigation required by the permitting agencies above may be used to meet the 1:1 requirement.</p>	Less than Significant Impact
<p>Impact 4.3-4: The project would not 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.</p>	None required	Less than Significant Impact
<p>Impact 4.3-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant Impact)</p>	None required	Less than Significant Impact
<p>Cumulative Impact Impact 4.3-6: The proposed project, in combination with other cumulative development, would not 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 Wildlife or U.S. Fish and Wildlife Service.</p>	Implement Mitigation Measures 4.3-1, 4.3—2, 4.3-3a, 4.3-3b, 4.3-4.	Less than Significant Impact
<p>Cumulative Impact Impact 4.3-7: The proposed project, in combination with other cumulative development, would not 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 Wildlife or U.S. Fish and Wildlife Service.</p>	Implement Mitigation Measures 4.3-5a, 4.3-5b, and 4.3-6.	Less Than significant

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
<p>Cumulative Impact Impact 4.3-8: The proposed project, in combination with other cumulative development, would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.</p>	Implement Mitigation Measures 4.3-7a and 4.3-7b.	Less Than significant
<p>Cumulative Impact Impact 4.3-9: The proposed project, in combination with other cumulative development, would not 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.</p>	None required	Less than Significant Impact
<p>Cumulative Impact Impact 4.3-10: The proposed project, in combination with other cumulative development, would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.</p>	None required	Less than Significant Impact
4.4 Cultural Resources		
<p>Impact 4.4-1: The project could cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.</p>	<p>Mitigation Measure 4.4-1: HABS-like Recordation of 484 Pleasant Valley Road (Required for SR-49 Intersection Option A only). Prior to demolition and construction, the project applicant shall prepare a HABS-like recordation package for 484 Pleasant Valley Road as an individual historical resource. The HABS-like document shall be prepared by a qualified architectural historian, historic architect, or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualification Standards for History, Architectural History, or Architecture, pursuant to 36 CFR 61. This document shall record the history of Diamond Springs during the period prior to the turn of the twentieth century, as well as the Carpenter House itself, and detail the important events or other significant contributions to the patterns and trends of history with which the property is associated, as appropriate. The building's physical condition, both historic and current, shall be documented through historic photographs; large format photographs; and written data. The building's character-defining features, as well as the property setting and contextual views shall be documented. The document will be created relying on information already compiled for this project, as well as information and materials compiled from additional research with the El Dorado County Historical Society and El Dorado County records. The final document will be provided to the El Dorado County Historical Society for their records.</p>	<p>Significant and Unavoidable Impact (SR-49 Intersection Option A)</p> <p>Less than Significant Impact (SR-49 Intersection Option B)</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
<p>Impact 4.4-2: The project could cause a substantial adverse change in the significance of a historical resource, including unique archaeological resources, pursuant to CEQA Guidelines Section 15064.5.</p>	<p>Mitigation Measure 4.4-2a: Archaeological and Native American Monitoring. Prior to authorization to proceed, a Secretary of the Interior-qualified archaeologist shall prepare a cultural resources monitoring plan. Monitoring shall be required for work within 200 feet of the boundaries of known historical resources/unique archaeological resources. The plan shall include (but not be limited to) the following components:</p> <ul style="list-style-type: none"> • Training program for all construction and field workers involved in site disturbance; on-site personnel shall attend a mandatory pre-project training led by a Secretary of the Interior-qualified archaeologist. The training will outline the general archaeological sensitivity of the area (without providing site specifics) and the procedures to follow in the event an archaeological resource and/or human remains are inadvertently discovered. • Person(s) responsible for conducting monitoring activities, including a request to Native American representatives for a Native American monitor; • Person(s) responsible for overseeing and directing the monitors; • How the monitoring shall be conducted and the required format and content of monitoring reports, including schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports; • Clear delineation and fencing of sensitive cultural resource areas requiring monitoring; • Physical monitoring boundaries (e.g., 200-foot radius of a known historical resource); • Protocol for notifications in case of encountering cultural resources, as well as methods of dealing with the encountered resources (e.g., collection, identification, curation); • Methods to ensure security of cultural resources sites, including protocol for notifying local authorities (i.e. sheriff, police) should site looting and other illegal activities occur during construction. <p>During the course of the monitoring, the archaeologist may adjust the frequency—from continuous to intermittent—of the monitoring based on the conditions and professional judgment regarding the potential to impact resources.</p> <p>If an archaeological resource is encountered, all soil disturbing activities within 100 feet will cease until the find is evaluated. The archaeological monitor will immediately notify the County of El Dorado of the encountered archaeological resource. The monitor will, after making a reasonable effort to assess the identity, integrity, and significance of the encountered resource, present the findings of this assessment to the County of El Dorado.</p> <p>Mitigation Measure 4.4-2b: Cultural Resources Assessment for the Fowler Lane Improvement Area. If the Optional Fowler Lane Improvements component of the project is selected, and when the project plans are complete and access is granted for the Fowler Lane Improvement Area, the project area shall be subject to a cultural resources investigation that includes, at a minimum:</p> <ul style="list-style-type: none"> • An intensive survey of all areas proposed for ground disturbing activity; • A report disseminating the results of this research; and, • Recommendations for additional cultural resources work necessary to mitigate any adverse impacts to recorded and/or undiscovered cultural resources. 	<p>Less than Significant Impact</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
	<p>Mitigation Measure 4.4-2c: Inadvertent Discovery of Cultural Resources. If prehistoric or historic-era archaeological resources are encountered, all construction activities within 100 feet will halt. The County of El Dorado will be notified. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials might include deposits of metal, glass, and/or ceramic refuse.</p> <p>A Secretary of the Interior-qualified archaeologist will inspect the findings within 24 hours of discovery. If it is determined that the project could damage a significant archaeological resource, the applicant shall re-design the proposed project to avoid any adverse impacts. If avoidance is not feasible, a qualified archaeologist shall prepare and implement a detailed Archaeological Resources Management Plan in consultation with the County of El Dorado, and, for prehistoric resources, the appropriate Native American representative.</p>	
<p>Impact 4.4-3: The project could disturb any human remains, including those interred outside of dedicated cemeteries.</p>	<p>Mitigation Measure 4.4-3: Inadvertent Discovery of Human Remains. In the event of discovery of any human remains during construction activities, such activities within 100 feet of the find shall cease until the El Dorado County Coroner has been contacted to determine that no investigation of the cause of death is required. The Native American Heritage Commission will be contacted within 24 hours if it is determined that the remains are Native American. The Commission will then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to the County of El Dorado for the appropriate means of treating the human remains and any grave goods.</p>	Less than Significant Impact
<p>Cumulative Impact Impact 4.4-4a: The project could cause a cumulative impact to a historical resource as defined in CEQA Guidelines Section 15064.5.</p>	Implement Mitigation Measure 4.4-1 (Required for SR-49 Intersection Option A only)	Significant and Unavoidable Impact (SR-49 Intersection Option A) Less than Significant Impact(SR-49 Intersection Option B)
<p>Cumulative Impact Impact 4.4-4b: The project could cause a cumulative impact to an archaeological resources and/or human remains.</p>	Implement Mitigation Measures 4.4-2a, 4.4-2c, and 4.4-3.	Less than Significant Impact
4.5 Energy		
<p>Impact 4.5-1: Construction and operation of the project would not result in the inefficient, wasteful, or unnecessary use of energy resources.</p>	None required.	Less than Significant Impact
<p>Impact 4.5-2: Construction and operation of the proposed project would not conflict with or obstruct adopted energy conservation plans or violate energy efficiency standards.</p>	None required	Less than Significant Impact

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
<p>Cumulative Impact Impact 4.5-3: The proposed project, in combination with other cumulative development, could contribute to cumulative increases in demand for energy.</p>	None required	Less than Significant Impact
4.6 Geology, Soils, Paleontological Resources, and Mineral Resources		
<p>Impact 4.6-1a: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic groundshaking.</p>	None required	Less than Significant Impact
<p>Impact 4.6-1b: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction and landslides.</p>	None required	Less than Significant Impact
<p>Impact 4.6-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.</p>	<p>Mitigation Measure 4.6-2: 2-Year, 24-Hour Storm Evaluation – The project applicant shall conduct a study that verifies that post project flows will not exceed pre-project flow rate for the 2-year, 24-hour storm. The study shall be in accordance with the requirement of the County’s West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan.</p>	Less than Significant Impact
<p>Impact 4.6-3: The proposed project is not 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.</p>	None required	Less than Significant Impact
<p>Impact 4.6-4: The proposed project could be located on expansive or corrosive soil creating substantial direct or indirect risks to life or property.</p>	None required	Less than Significant Impact
<p>Cumulative Impact Impact 4.6-5: Concurrent construction and operation of the proposed project and related projects in the geographic scope would not result in cumulative impacts to geology and soils.</p>	None required	Less than Significant Impact
4.7 Hazards and Hazardous Materials		
<p>Impact 4.7-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.</p>	None required	Less than Significant Impact
<p>Impact 4.7-2: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.</p>	None required	Less than Significant Impact

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
<p>Impact 4.7-3: The project would 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, the project could create a significant hazard to the public or the environment.</p>	<p>Mitigation Measure 4.7-3a: Health and Safety Plan. Before the start of ground-disturbing activities in the vicinity of the former service station site at 493 Main Street, including grading, trenching, or excavation, or structure demolition in the vicinity, the project applicant for the specific work conducted shall require that the construction contractor(s) retain a qualified professional to prepare a site-specific Health and Safety Plan in accordance with federal OSHA regulations (29 CFR 1910.120) and Cal/OSHA regulations (8 CCR Section 5192).</p> <p>The plan shall be implemented by the construction contractor to protect construction workers, the public, and the environment during all ground-disturbing and structure demolition activities. The Health and Safety Plan shall be submitted to the El Dorado County Fire District and Diamond Springs El Dorado Fire Protection District to inform the permit approval process before the start of demolition and construction activities and as a condition of the grading, construction, and/or demolition permit(s). The Health and Safety Plan shall include, but not be limited to, the following elements:</p> <ul style="list-style-type: none"> • Designation of a trained, experienced site safety and health supervisor who has the responsibility and authority to develop and implement the site Health and Safety Plan. • A summary of all potential risks to demolition and construction workers and maximum exposure limits for all known and reasonably foreseeable site chemicals. • Specified personal protective equipment and decontamination procedures, if needed. • The requirement to prepare documentation showing that Health and Safety Plan measures have been implemented during construction (e.g., tailgate safety meeting notes with sign-up sheet for attendees). • A requirement specifying that any site worker who identifies hazardous materials has the authority to stop work and notify the site safety and health supervisor. • Emergency procedures, including the route to the nearest hospital. • Procedures to follow if evidence of potential soil or groundwater contamination is encountered (such as soil staining, noxious odors, debris or buried storage containers). These procedures shall be followed in accordance with hazardous waste operations regulations and specifically include, but not be limited to, immediately stopping work in the vicinity of the unknown hazardous materials release; notifying the MHFEOP and the regulatory agency overseeing site cleanup, if any; and retaining a qualified environmental firm to perform sampling and remediation. <p>Mitigation Measure 4.7-3b: Soil and Groundwater Management Plan. In support of the Health and Safety Plans described in Mitigation Measure 4.7-3a, the project applicant for the specific work conducted in the vicinity of the former service station site at 493 Main Street shall require that its contractor(s) develop and implement a Soil and Groundwater Management Plan for the management of soil and groundwater before any ground-disturbing activity. The Plan shall include the following, at a minimum:</p> <ul style="list-style-type: none"> • Site description, including the hazardous materials that may be encountered. • Roles and responsibilities of on-site workers, supervisors, and the regulatory agency. • Training for site workers focused on the recognition of and response to encountering hazardous materials. 	<p>Less than Significant Impact</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
	<ul style="list-style-type: none"> • Protocols for the materials (soil and/or dewatering effluent) testing, handling, removing, transporting, and disposing of all excavated materials and dewatering effluent in a safe, appropriate, and lawful manner. • Confirmation sampling to verify that the remaining soil and/or groundwater at the site does not have chemical concentrations above screening levels for the applicable planned land use. • Identification of licensed disposal sites permitted to accept the waste materials. • Reporting requirement to the overseeing regulatory agency, documenting that site activities were conducted in accordance with the Soil and Groundwater Management Plan. <p>The Soil and Groundwater Management Plan shall be submitted to the El Dorado County Fire District and Diamond Springs El Dorado Fire Protection District to inform the permit approval process before the start of demolition and construction activities and as a condition of the grading, construction, and/or demolition permit(s). The Contract specifications shall mandate full compliance with all applicable federal, state, and local regulations related to the identification, transportation, and disposal of hazardous materials.</p> <p>The Soil and Groundwater Management Plan shall include a groundwater dewatering control and disposal plan specifying how groundwater (dewatering effluent), if encountered, will be handled and disposed of in a safe, appropriate, and lawful manner. The groundwater portion of the Soil and Groundwater Management Plan shall include the following, at a minimum:</p> <ul style="list-style-type: none"> • The locations at which groundwater dewatering is likely to be required. • Test methods to analyze groundwater for hazardous materials. • Appropriate treatment and/or disposal methods. 	
<p>Impact 4.7-4: The project would not be located within an airport land use plan or within two miles of a public airport or public use airport.</p>	None required	Less than Significant Impact
<p>Impact 4.7-5: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p>	<p>Mitigation Measure 4.7-5: Construction Traffic Control/Traffic Management Plan. Prior to issuance of a grading permit, the project applicant shall prepare a Construction Traffic Control/Traffic Management Plan. The plan shall include measures and protocols to avoid project interference with evacuation routes and established emergency response procedures in the project area. The plan shall be submitted for review and approval by the County, in consultation with area emergency service providers.</p>	Less than Significant Impact
<p>Cumulative Impact Impact 4.7-6: Concurrent construction and operation of the proposed project and related projects in the geographic scope would not result in cumulative impacts to hazards and hazardous materials.</p>	Implement Mitigation Measure 4.7-5.	Less than Significant Impact

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
4.8 Hydrology and Water Quality		
Impact 4.8-1: The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	Implement Mitigation Measures 4.7-3a and 4.7-3b, as discussed above under Section 4.7, <i>Hazards and Hazardous Materials</i> , Impact 4.7-3.	Less than Significant Impact
Impact 4.8-2: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	None required	Less than Significant Impact
Impact 4.8-3: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation on- or offsite.	None required	Less than Significant Impact
Impact 4.8-4: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.	None required	Less than Significant Impact
Impact 4.8-5: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would 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.	None required	Less than Significant Impact
Impact 4.8-6: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.	None required	Less than Significant Impact
Impact 4.8-7: The proposed project would not conflict with or obstruct implementation of a water quality control plan.	Implement Mitigation Measures 4.6-2, as discussed above under Section 4.6, <i>Geology, Soils, Paleontological Resources, and Mineral Resources</i> , Impact 4.6-2.	Less than Significant Impact
Cumulative Impact Impact 4.8-8: Concurrent construction and operation of the proposed project and related projects in the geographic scope would not result in cumulative impacts to hydrology and water quality.	None required	Less than Significant Impact

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
4.9 Land Use and Planning		
Impact 4.9-1: The proposed project would not physically divide an established community.	None required	Less than Significant Impact
Impact 4.9-2: The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect (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.	None required	Less than Significant Impact
Cumulative Impact Impact 4.9-3: Implementation of the proposed project in combination with other cumulative development in El Dorado County would not result in significant impacts related to land use and planning.	None required.	Less than Significant Impact
4.10 Noise		
Impact 4.10-1a: Stationary sources associated with operation of the proposed project could result in generation of a permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Mitigation Measure 4.10-1a: Performance Standard for Outdoor Fixed Mechanical Equipment. All outdoor fixed mechanical equipment, such as air conditioning compressor units, installed as part of the project shall be located, shielded and/or designed to generate a noise level of less than 45 dBA at any adjacent residential property. Documentation of achieved this standard through either specification sheets for selected units or through an acoustical analysis shall be provided to the County as a condition of building permit by the applicant or its contractor.	Less than Significant Impact
Impact 4.10-1b: Project-generated traffic noise could result in permanent increases in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Mitigation Measure 4.10-1b: Construction of a Noise Barrier on Faith Lane. A solid, 5-foot noise barrier shall be constructed on the west side of Faith Lane extending 500 feet south from Silver Drive.	Less than Significant Impact
Impact 4.10-1c: Construction of the proposed project would result in temporary increases in ambient noise levels in the vicinity of the project in excess of standards established in the local General Plan or Noise Ordinance, or applicable standards of other agencies.	Mitigation Measure 4.10-1c: Construction Noise Reduction Plan. The project applicant or its contractor shall prepare a Construction Noise Reduction Plan, to be implemented as part of each individually contracted project within 900 feet of residential uses. The plan shall be submitted to the El Dorado County Director of Planning, Building and Code Enforcement, or the Director's designee, for review and approval, and implementation of identified measures shall be required as a condition of the permit. This Construction Noise Reduction Plan shall include, at a minimum, the following noise reduction measures: <ul style="list-style-type: none"> • All construction equipment and equipment staging areas shall be located as far as possible from nearby noise-sensitive land uses, and/or located such that existing topography blocks line-of-site from these land uses to the staging areas. • All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during 	Significant and Unavoidable Impact

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
	<p>equipment operation.</p> <ul style="list-style-type: none"> • Where feasible and consistent with building codes and other applicable laws and regulations, individual operations and techniques shall be replaced with quieter procedures (e.g., using welding instead of riveting, mixing concrete offsite instead of onsite). • All construction equipment with back-up alarms shall be equipped with either audible self-adjusting backup alarms or alarms that only sound when an object is detected. The self-adjusting backup alarms shall automatically adjust to 5 dBA over the surrounding background levels. All non-self-adjusting backup alarms shall be set to the lowest setting required to be audible above the surrounding noise levels. In addition to the use of backup alarms, the construction contractor shall consider other techniques such as observers and the scheduling of construction activities such that alarm noise is minimized. • When future noise sensitive uses are within close proximity to prolonged construction noise, noise attenuating buffers such as structures, truck trailers, temporary noise curtains or sound walls, or soil piles shall be located between noise sources and the receptor to shield sensitive receptors from construction noise. • The applicant or construction contractors shall post visible signs along the perimeter of the construction site that disclose construction times and duration. A contact number for an El Dorado County enforcement officer shall be included where noise complaints can be filed and recorded. The applicant will be informed of any noise complaints and will be responsible for investigating complaints and implementing feasible and appropriate measures to reduce noise at receiving land uses. These may include: <ul style="list-style-type: none"> ○ Noise-reducing enclosures and techniques shall be used around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors). ○ For construction activity that occurs within direct line-of-sight of existing sensitive land uses, install temporary noise curtains that meet the following parameters: <ul style="list-style-type: none"> ▪ Temporary noise curtains shall be installed as close as possible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s). ▪ Temporary noise curtains shall consist of durable, flexible composite material featuring a noise barrier layer bounded to sound-absorptive material on one side. The noise barrier layer shall consist of rugged, impervious, material with a surface weight of at least one pound per square foot. 	
<p>Impact 4.10-2: The proposed project could result in the generation of excessive groundborne vibration or groundborne noise levels.</p>	<p>Mitigation Measure 4.10-2: Alternative Compaction Methods for Option B (required for Option B only). To reduce potential vibration impacts to the historic structure at 484 Pleasant Valley Road under Option B, Project contractors shall use non-vibratory excavator-mounted compaction wheels and small smooth drum rollers for final compaction of asphalt base and asphalt concrete. If needed to meet compaction requirements, smaller vibratory rollers shall be used to minimize vibration levels during repaving activities where needed to meet vibration standards. These methods shall be employed for construction within 50 feet of the structure at 484 Pleasant Valley Road.</p>	<p>Less than Significant Impact</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
Impact 4.10-3 (Non-CEQA noise impacts of the environment on the project): The project would not expose people residing or working within the project area to excessive noise levels.	None required	Less than Significant Impact
Cumulative Impact Impact 4.10-4: Construction activities for the proposed project combined with cumulative construction noise in the project area would result in a substantial temporary or periodic increase in ambient noise levels in excess of standards established in the General Plan or Noise Ordinance.	Implement Mitigation Measure 4.10-1c.	Significant and Unavoidable Impact
Cumulative Impact Impact 4.10-5: Operation of the proposed project when considered with other cumulative development would cause a substantial permanent increase in ambient noise levels in excess of standards established in the General Plan or Noise Ordinance	Implement Mitigation Measure 4.10-1b.	Less than Significant Impact
4.11 Population and Housing		
Impact 4.11-1: The project would not directly or indirectly induce substantial population growth during construction or operation.	None required	Less than Significant Impact
Cumulative Impact Impact 4.11-2: Implementation of the proposed project in combination with other cumulative development in El Dorado County, would not result in significant impacts related to population growth and housing.	None required	Less than Significant Impact
4.12 Public Services and Recreation		
Impact 4.12-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government 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 following public services.	None required	Less than Significant Impact
Impact 4.12-2: The proposed project would not 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, or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	None required	Less than Significant Impact

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
<p>Cumulative Impact Impact 4.12-3: The proposed project, in combination with other cumulative development, would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government 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 public service.</p>	None required	Less than Significant Impact
<p>Cumulative Impact Impact 4.12-4: The proposed project, in combination with other cumulative development, would not 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, or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.</p>	None required	Less than Significant Impact
4.13 Transportation		
<p>Impact 4.13-1: The project would not result in an increase in VMT that is greater than 15 percent below the baseline unincorporated Countywide per capita VMT.</p>	None required	Less than Significant Impact
<p>Impact 4.13-2: The project would not result in inadequate emergency access.</p>	None required	Less than Significant Impact
<p>Impact 4.13-3: The project would not conflict with a program, plan, ordinance or policy addressing transit, bicycle, and pedestrian facilities.</p>	None required	Less than Significant Impact
4.14 Tribal Cultural Resources		
<p>Impact 4.14-1: The project could cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe.</p>	Implement Mitigation Measures 4.4-2a, 4.4-2b, and 4.4-2c, as discussed above under Section 4.4, <i>Cultural Resources</i> , Impact 4.4-2.	Less than Significant Impact
4.15 Utilities and Service Systems		
<p>Impact 4.15-1: Implementation of the project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.</p>	None required	Less than Significant Impact

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
Impact 4.15-2: The project would have sufficient water supplies available to serve the project and reasonably foresee future development during normal, dry, and multiple dry years.		Less than Significant Impact
Impact 4.15-3: Implementation of the project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	None required	Less than Significant Impact
Impact 4.15-4: Implementation of the project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, and would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	None required	Less than Significant Impact
Impact 4.15-5: Implementation of the proposed project, in combination with other cumulative development, could contribute to cumulative impacts to water supplies available to the County's service area during normal, dry, and multiple dry years.	None required	Less than Significant Impact
Cumulative Impact Impact 4.15-6: Implementation of the project, in combination with other development, would not contribute to cumulative increases to discharge flows or water conveyance demand, such that the relocation or construction of new or expanded water conveyance infrastructure or facilities could cause significant environmental effects.	None required	Less than Significant Impact
Impact 4.15-7: Implementation of the project, in combination with other development, would not result in a determination by the wastewater treatment provider which serves or may serve the development area that it does not have adequate capacity to serve the development's cumulative project demand in addition to the provider's existing commitments.	None required	Less than Significant Impact
Cumulative Impact Impact 4.15-8: Implementation of the project, in combination with other development, would not contribute to cumulative increases to surface runoff flows, such that the relocation or construction of new or expanded stormwater drainage infrastructure or facilities could cause significant environmental effects.	None required	Less than Significant Impact

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT**

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
<p>Cumulative Impact Impact 4.15-9: Implementation of the project, in combination with other development, would not contribute to cumulative increases to energy demand, such that the relocation or construction of new or expanded electrical transmission and distribution infrastructure or facilities could cause significant environmental effects.</p>	None required	Less than Significant Impact
<p>Cumulative Impact Impact 4.15-10: Implementation of the project, in combination with other development, could contribute to cumulative increases to solid waste, such that the relocation or construction of new or expanded solid waste services, or facilities could cause significant environmental effects.</p>	None required	Less than Significant Impact
4.16 Wildfire		
<p>Impact 4.16-1: Implementation of the project would not substantially impair an adopted emergency response plan or emergency evacuation plan.</p>	None required	Less than Significant Impact
<p>Impact 4.16-2: Implementation of the project would not exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.</p>	None required	Less than Significant Impact
<p>Impact 4.16-3: Implementation of the project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.</p>	None required	Less than Significant Impact
<p>Impact 4.16-4: Implementation of the project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.</p>	None required	Less than Significant Impact
<p>Cumulative Impacts Impact 4.16-5: Implementation of the project, in conjunction with other development, would not substantially impair an adopted emergency response plan or emergency evacuation plan.</p>	None required	Less than Significant Impact

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT

Impacts	Project Design Features and Mitigation Measures	Significance Including after Project Design Features and Mitigation
<p>Cumulative Impacts Impact 4.16-6: Implementation of the project, in conjunction with other development, would not exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.</p>	None required	Less than Significant Impact
<p>Cumulative Impacts Impact 4.16-7: Implementation of the project, in conjunction with other development, would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.</p>	None required	Less than Significant Impact
<p>Cumulative Impacts Impact 4.16-8: Implementation of the project, in conjunction with other development, would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.</p>	None required	Less than Significant Impact

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CHAPTER 3

Project Description

3.1 Introduction

This chapter of the Draft EIR describes the phased Dorado Oaks Tentative Subdivision Map Project and associated project elements evaluated in this Draft EIR. This chapter specifically describes the following characteristics of the project: location, general existing characteristics of the project site, project objectives, the proposed project site development plan, and various development characteristics. Also described are the jurisdictional approvals anticipated to be required to implement the project.

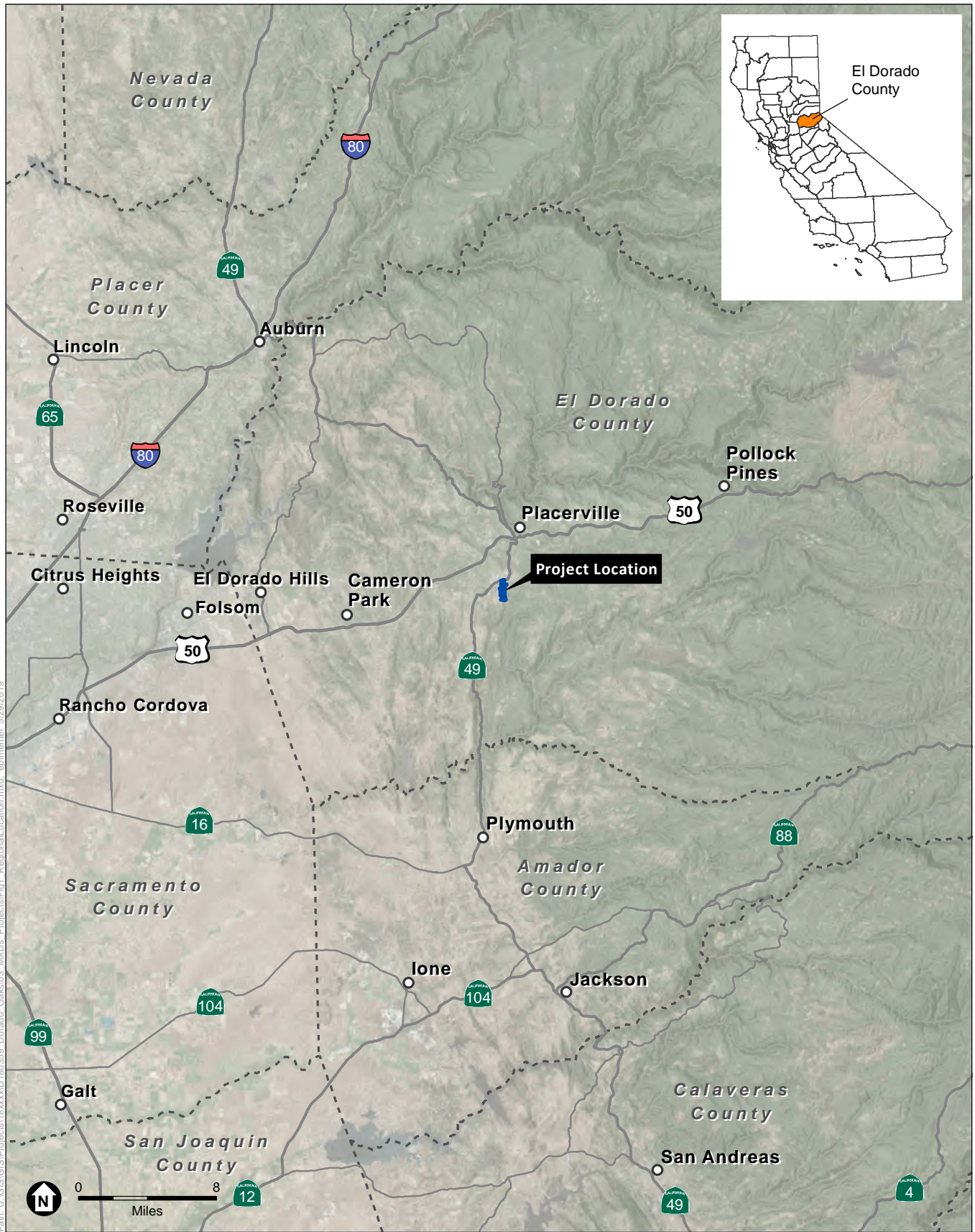
3.2 Project Overview and Objectives

3.2.1 Project Overview

The project site is located in the unincorporated Diamond Springs Community Region¹ in El Dorado County, California, about three miles south of Placerville and 40 miles east of downtown Sacramento. The project site location and regional context are presented in **Figure 3-1**. Regional access to the area is generally provided by U.S. Highway 50 (US-50), which is a major national highway corridor that begins in Sacramento and crosses the Sierra Nevada Mountains to South Lake Tahoe and continues on to points east. SR-49 provides access to the area from the north and the south along the western front of the Sierra Nevada Mountains and its foothills.

The project consists of both on-site improvements (“Dorado Oaks Tentative Subdivision Map Site”) and off-site improvements (“State Route 49 Intersection Area” and the “Optional Fowler Lane Improvement Area”) related to a proposed 382-lot residential subdivision. **Figure 3-2** shows an aerial overview of these areas. For purposes of environmental review, the on-site improvements are described separately as the “Dorado Oaks Tentative Subdivision Map Site” and the associated off-site improvements are referred to as the “State Route 49 Intersection Area” and the “Optional Fowler Lane Improvement Area.” Proposed work at all three locations is collectively referred to as the “project”.

¹ A small southeasterly portion of the Tentative Map site lies outside of the Diamond Springs Community Region area.

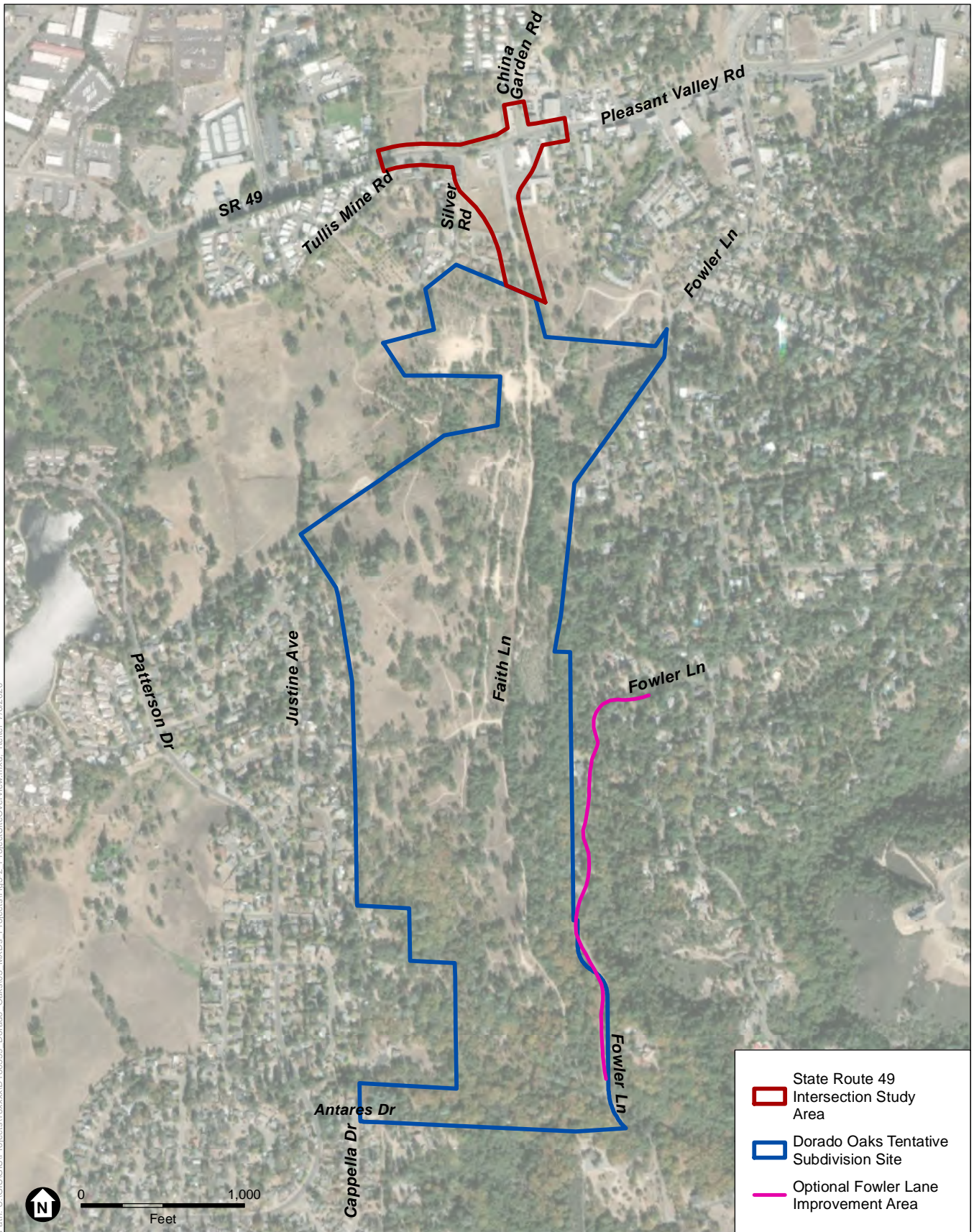


SOURCE: Esri, 2018; ESA, 2019

Dorado Oaks Tentative Subdivision Map Project

Figure 3-1
Regional Location





SOURCE: USDA, 2016; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 3-2
Project Site Overview

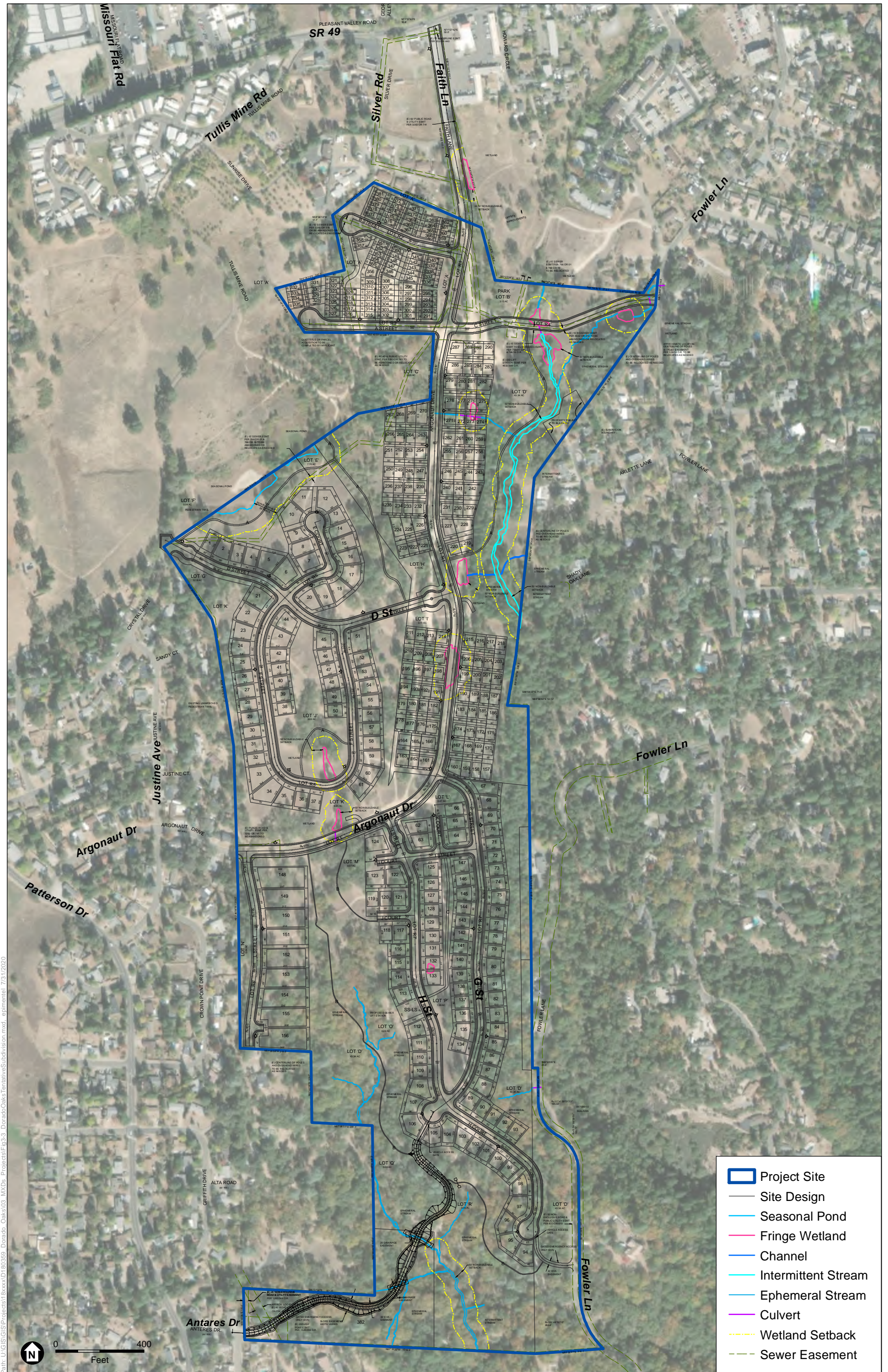
Dorado Oaks Tentative Subdivision Map Site

The Dorado Oaks Subdivision consists of the following entitlement requests:

1. A Rezone (Application # Z19-0005) of an approximately 18.1-acre portion of the approximately 142.5-acre project site from Residential, Multi-Unit (RM) to Residential, Multi-Unit - Planned Development (RM-PD), in accordance with the El Dorado County Zoning Code;
2. A Phased Tentative Subdivision Map (Application # TM18-1538), to subdivide the property into 14 Large Lots for financing and phasing purposes, 156 single-family lots ranging in size from 6,000 square feet to approximately 24,000 square feet, 225 multi-family lots ranging in size from approximately 2,000 square feet to 7,170 square feet ; one single-family lot of approximately 6.4 acres; seven roadway lots; and 18 open space/landscape lots open space/landscape lots in accordance with the El Dorado County Subdivision Ordinance;.
3. A Planned Development Permit (Application # PD19-0005) to establish an official Development Plan for the Dorado Oaks Subdivision that includes modification to front yard setback standards in the RM zone district for 225 multi-family lots on an 18.1-acre portion of the project site in accordance with the El Dorado County Zoning Code.
4. A Development Agreement (Application# DA20-0002) between the County and the project applicant.
5. Lot line adjustments along portions of the site’s eastern boundary to correct a series of inadvertent encroachments and lot line errors from adjoining properties and structures onto the proposed subdivision site.

This component of the project would provide for development of residential uses on a series of parcels that cover a combined area of approximately 142.5 acres. **Figure 3-3** shows the proposed subdivision map. In addition to the proposed residential and open space lots, other components of the project include:

- On-site roadway improvements to facilitate circulation within the development (approximately 18.5 total acres).
- Provision of a 3.1-acre public park site.
- On-site infrastructure improvements relating to potable water delivery, wastewater conveyance, storm drainage, electric, propane, and communications.
- Provision of four public vehicular access points and one or two emergency vehicle access points to and from the project site to existing adjoining roadways:
 - 1) Faith Lane, connecting to SR-49/Pleasant Valley Road and providing primary access at the north end of the project site.
 - 2) Faith Lane/Argonaut Drive, connecting to Argonaut Drive on the west side of the project.
 - 3) “C” Street, connecting to Fowler Lane on the northeast side of the project site.
 - 4) “D” Street, connecting to Crystal Drive/Tullis Mine Road on the northwest side of the project site.
 - 5) Two emergency vehicle access options are under consideration, the first deriving from the southern terminus of “G” Street and exiting the subdivision site to the southwest, connecting to Antares Drive. The second emergency access option would derive from “H” Court and connect to Fowler Lane. If selected, the Fowler Drive option could require offsite widening of the southerly offsite portions of Fowler Drive to meet County Fire Department requirements.



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SOURCE: USDA, 2018; CTA, 2020; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 3-3
Dorado Oaks Tentative Subdivision



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State Route 49 Intersection Area

This component of the project would provide access to the Dorado Oaks Subdivision site from State Route (SR) 49, which is also known in this vicinity as Pleasant Valley Road. **Figures 3-4 and 3-5** show the two intersection options that are currently under consideration, which include the following:

- Option A: a four-way roundabout at the intersection of China Garden Road/SR-49, to the east of Faith Lane.
- Option B: Realignment of the existing Faith Lane alignment westwards to connect with Silver Drive, and installation of two coordinated signals at the intersections of Silver Drive/SR-49 and China Garden Road/SR-49.

For purposes of this analysis, the entirety of these two areas are considered collectively as the “State Route 49 Intersection Area.” Both of the above options also include a study area buffer extending 50 feet on either side of each option’s edge-of-pavement improvements. Ultimately, only one of these options would be selected for construction, but both of the options will be evaluated in this Draft EIR.

Optional Fowler Lane Improvement Area

In addition to the four public points of access to the Dorado Oaks Subdivision site described previously, emergency vehicle access to and from the site would be provided via dedicated emergency-only roadways at the southern end of the subdivision site. Two options are under consideration to provide this access, and one or both of the options would be implemented as part of the project’s construction. The first option would come off of “G” Street near the southern end of the subdivision site and travel southwesterly to connect with Antares Drive. See Figure 3-3 for the location of this connection. Construction of improvements for this option would all occur on the subdivision site, and no offsite improvements would be required, except for the tie-in with Antares Drive.

The second option would come off of “H” Court, but would exit the subdivision site near its southeastern corner and connect with Fowler Lane. If the Fowler Lane option were selected as the sole point of emergency access, the Antares Drive emergency access option described above would likely not be constructed, and the southerly offsite portions of Fowler Lane would likely need to be widened to a minimum 20-foot paved width to meet County Fire Department requirements. In all, the paved areas along about 2,600 linear feet (approximately 0.5 mile) of Fowler Lane would need to be widened by anywhere from 2.5 to 10 feet, extending northwards from the interface with “H” Court to a point about 450 feet west of Fowler Lane’s intersection with South Point Road. The location of the improvement area is shown in **Figure 3-6**.

As can be seen in the figure, the recorded easement of the roadway varies substantially from the as-built roadway as it actually exists on the ground. If this option were selected for construction, the recorded easement would be adjusted to conform with the roadway’s actual alignment. Should the Antares Drive option be selected as the sole point of emergency access, a gated emergency access connection to Fowler Lane from “H” Court would still be provided, but the aforementioned widening of Fowler Lane and the easement adjustments would not occur.

3.2.2 Project Objectives

CEQA *Guidelines* Section 15124(b) requires the description of the project in an EIR to state the objectives sought by the project.

“A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.”

This section states the project objectives for the CEQA review of the project. Clarifying information is provided for each objective. The project objectives are:

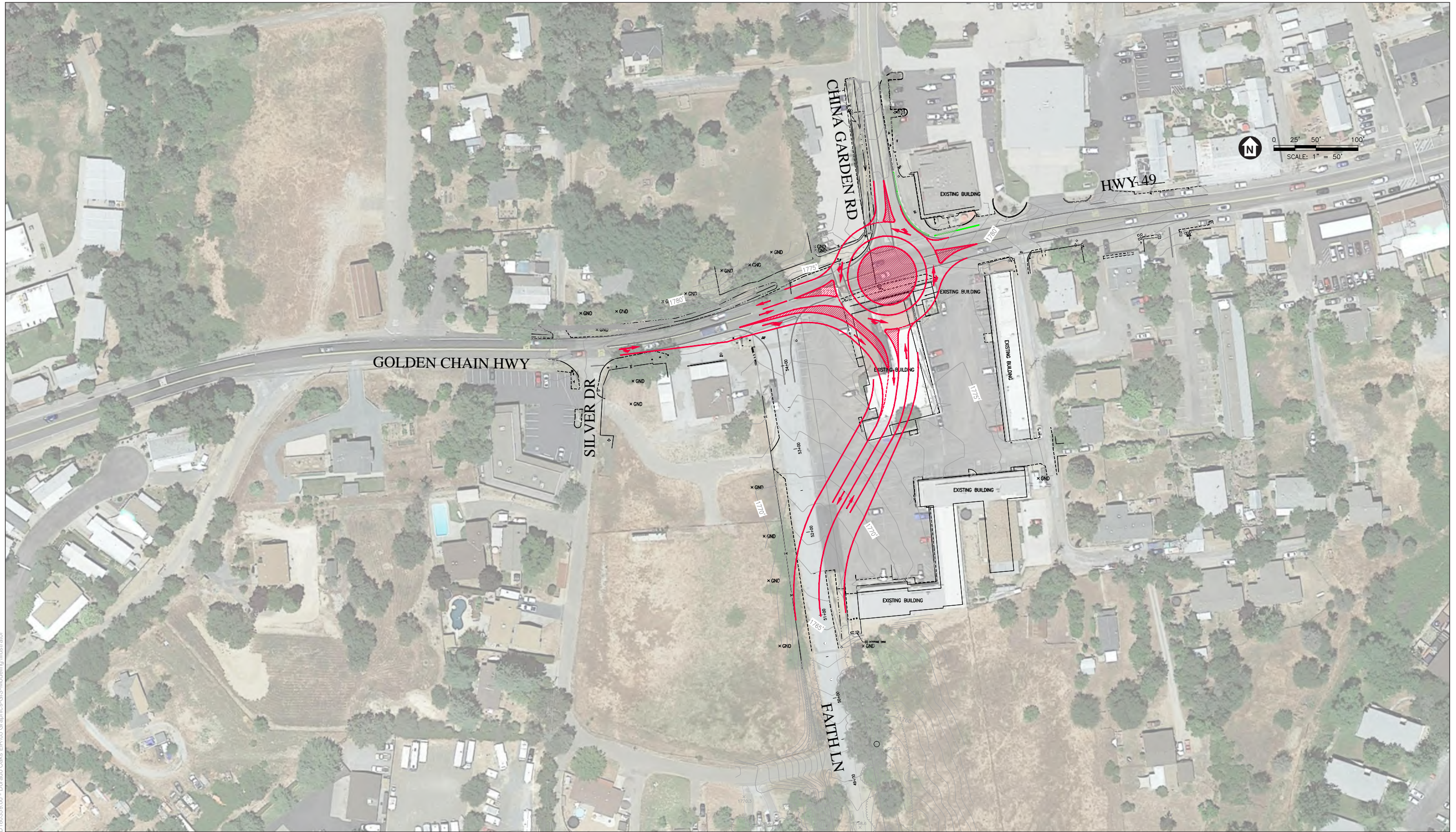
- Develop a residential project that is in compliance with existing County land use and zoning requirements for the property, as defined in the General Plan and Zoning Code.
- Provide housing of various types to fulfill the goals of the County’s Housing Element and help meet the County’s Regional Housing Need Allocation.
- Provide options for housing that meet the needs of a wide demographic.
- Develop an economically sustainable and financially sound new development that can fund the construction of the facilities and services that are needed to serve the plan area and achieve General Plan objectives, while avoiding any financial impact on the County’s ability to provide services to the rest of the County.

3.3 Existing Project Site Overview

Dorado Oaks Tentative Subdivision Map Site

The Dorado Oaks Tentative Subdivision Map site is located immediately south of SR-49, extending southwards from the intersection of SR-49 and Faith Lane (see Figure 3-2). The site is bounded to the west by undeveloped lands and a residential subdivision comprised of single family homes. South of the site lies undeveloped lands and scattered rural homes. To the east, the site is generally bounded by low density residential areas. To the north lies the SR-49 commercial corridor, with the most intensive commercial uses in the Diamond Springs area beginning about one-quarter-mile to the east. US-50 lies about three miles to the north, and is most directly reached via SR-49 or Missouri Flat Road. The US-50 corridor contains regional-serving commercial facilities, as well as the historic core of the City of Placerville.

The project site is approximately 142.5 acres, and consists entirely of undeveloped lands. Faith Lane extends into the project site southwards from SR-49. The roadway is paved for about the first 600 feet, and then encounters a locked gate, after which it becomes gravel or dirt. A number of dirt tracks run within the project site, none of which are dedicated public roadways. Portions of the site were cleared and graded as part of previous development proposals many years ago, but none of the previous development efforts were carried through to completion. The site is generally covered with oak woodlands, consistent with other undeveloped areas in the vicinity. A small El Dorado Irrigation District (EID) sewer lift station lies within a fenced enclosure in the northeastern portion of the site, and serves an existing sewer line within an easement that runs through a portion of the site. An existing overhead PG&E electric distribution line also crosses the approximate middle portion of the site in a diagonal north-to-south direction.



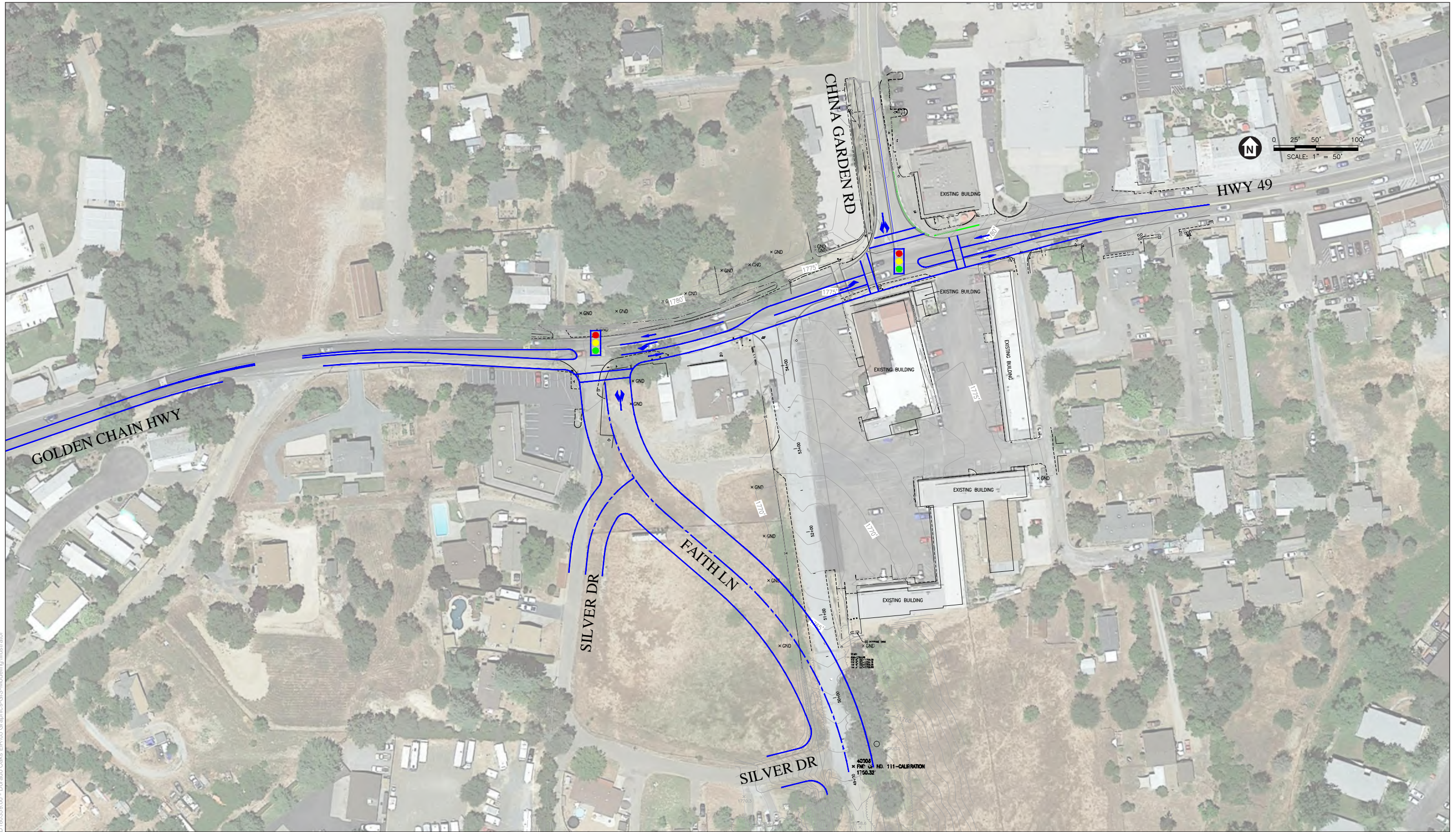
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SOURCE: CTA Engineering & Surveying, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 3-4
State Route 49 Intersection Option A





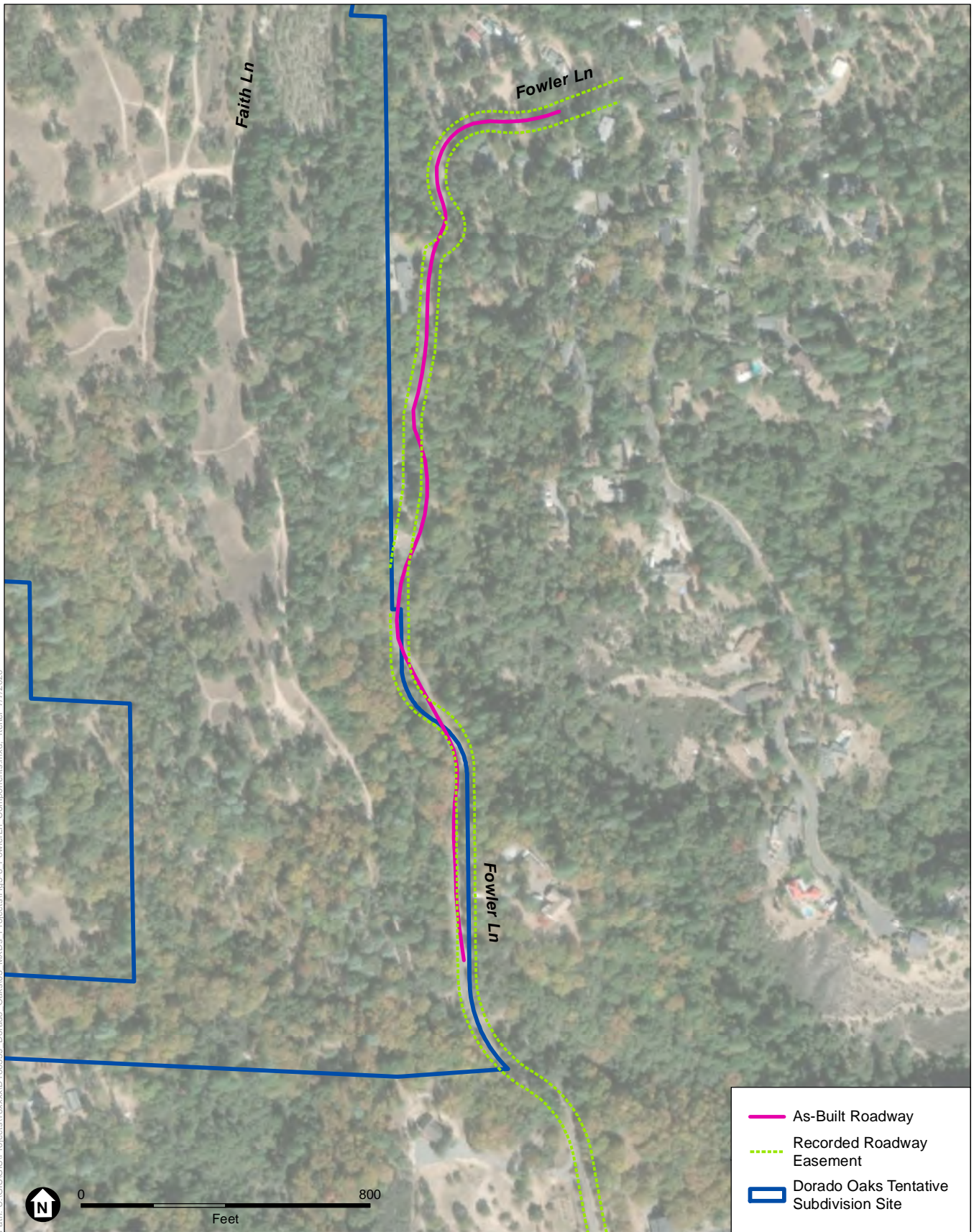
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SOURCE: CTA Engineering & Surveying, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 3-5
State Route 49 Intersection Option B





SOURCE: USDA, 2016; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 3-6
Optional Fowler Lane Improvement Area

State Route 49 Intersection Area

The SR-49 intersection area is shown in greater detail in Figures 3-4 and 3-5, which show each of the two intersection options under consideration. The SR-49 intersection area is currently comprised of roadways adjoining roadside and commercial areas. SR-49 along this segment is configured as an undivided two-lane roadway with a 25 mph speed limit, and is largely fronted with commercial properties. It is classified as a Major 2-Lane Road in the County's General Plan. Traffic counts taken in 2018 at the intersection of SR-49 and Faith Lane found that the roadway along this segment carried approximately 1,240 vehicles per hour during the AM peak period, and 1,579 vehicles per hour during the PM peak period (Prism Engineering, 2019).

Businesses within and adjacent to the project area are generally small in nature. The southwest corner of SR-49 and Silver Drive contains a small shopping center (Diamond Springs Plaza) with a printing shop, a hair salon, and similarly-sized businesses. Slightly further east, Deb's Frosty is located on the southwest corner of SR-49 and Faith Lane. The strip mall at the southeast corner of SR-49 and Faith Lane contains a bicycle shop, a pet store, gift shops, and similar businesses. Also on this corner are two older brick buildings (collectively known as the "Carpenter House") that appear to be vacant. The Gust Brothers Building lies on the northeast corner of SR-49 and China Garden Road, and contains a number of small businesses, including a dental office and a hair salon.

Besides driveways and other access points, four roadways intersect SR-49 within the project area. From west to east these roadways are Tullis Mine Road, Silver Drive, Faith Lane, and China Garden Road.

Tullis Mine Road is an unstriped two-lane roadway that connects to SR-49 from the south. The roadway provides alternative access to residential areas to the south. This three-approach intersection with SR-49 is unsignalized with stop sign control only for the Tullis Mine Road northbound approach, and no control for the eastbound or westbound SR-49 approaches.

Silver Drive is a unstriped two-lane roadway that leads south from SR-49. The roadway provides access to several local businesses and residences, and it loops down and connects with Faith Lane. This three-approach intersection with SR-49 is unsignalized with stop sign control only for the Silver Drive northbound approach, and no control for the eastbound or westbound SR-49 approaches.

Faith Lane is a two-lane roadway that intersects SR-49 from the south. It is also a local road, but receives limited use since it dead ends at a locked gate approximately 700 feet south of SR-49. The roadway generally provides access to several local businesses, and also to several residences at the southern end of the roadway. This three-approach intersection with SR-49 is unsignalized with stop sign control only for the Faith Lane northbound approach, and no control for the eastbound or westbound SR-49 approaches.

China Garden Road is a two-lane roadway that leads north to intersect with Missouri Flat Road. China Garden is designated as a Local Road in the County's General Plan. This three-approach

intersection with SR-49 is unsignalized with stop sign control only for China Garden Road southbound approach, and no control for the eastbound and westbound SR-49.

Optional Fowler Lane Improvement Area

Figure 3-6 shows the location of the Optional Fowler Lane Improvement Area, which begins approximately 450 feet from Fowler Lane's intersection with South Point Road, and extends westerly and southerly for approximately 2,600 feet. This portion of the roadway passes through a rural residential area that is largely comprised of rural residential homes on large lots.

Approximately 15 residential parcels and their associated driveways adjoin the roadway within the improvement area. Fowler Lane is paved along its entire length, but many segments have narrow pavement widths ranging from 10 to 13 feet, as well as narrow shoulders. An overhead utility line runs along a portion of the roadway. As can be seen in Figure 3-6, there is significant variation in several locations between the recorded roadway easement (parallel green lines on the figure) and the as-built roadway (red line in the figure) as it appears on the ground.

3.3.1 Existing Land Use and Zoning Designations

Figures 3-7 and 3-8 show existing land use and zoning designations, respectively, for the entire project area.

Dorado Oaks Tentative Subdivision Map Site

Existing Land Use Designations

The Dorado Oaks Tentative Subdivision site is currently comprised of three designated land use areas, as designated and defined in the County's General Plan: 1) High Density Residential (HDR), approximately 89.6 acres; 2) Multi-Family Residential (MFR), approximately 48.6 acres; and 3) Rural Residential (RR), approximately 4.3 acres.

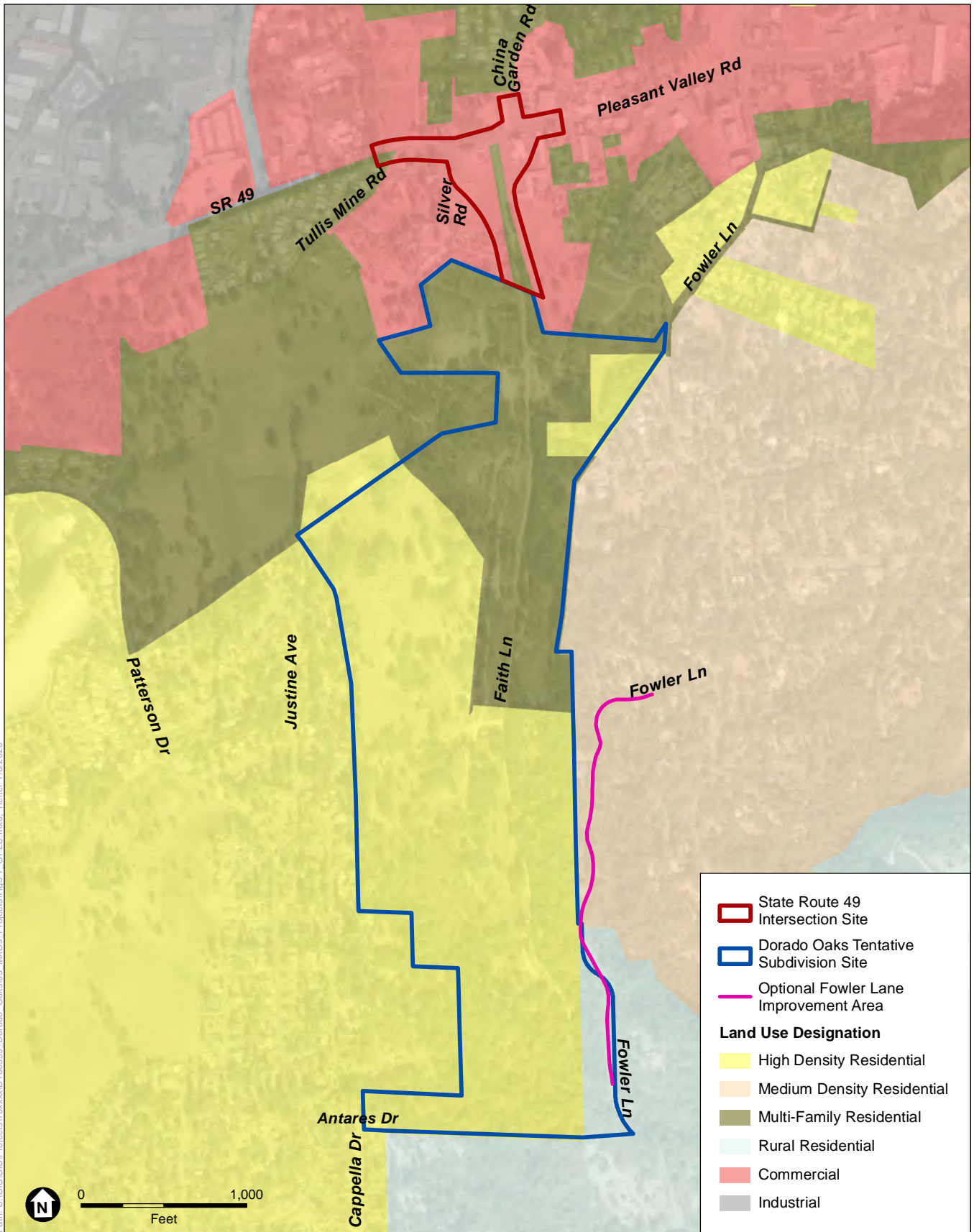
Existing Zoning Designations

The Dorado Oaks Tentative Subdivision Map site is comprised of three zoning areas: 1) Single-Unit Residential (R1), approximately 89.6 acres; 2) Multi-Unit Residential (RM), approximately 48.6 acres, with approximately 8.9 acres of the RM-zoned lands also carrying a Planned Development (PD) overlay; and 3) Rural Lands (RL-10), approximately 4.3 acres.

State Route 49 Intersection Area

Existing Land Use Designations

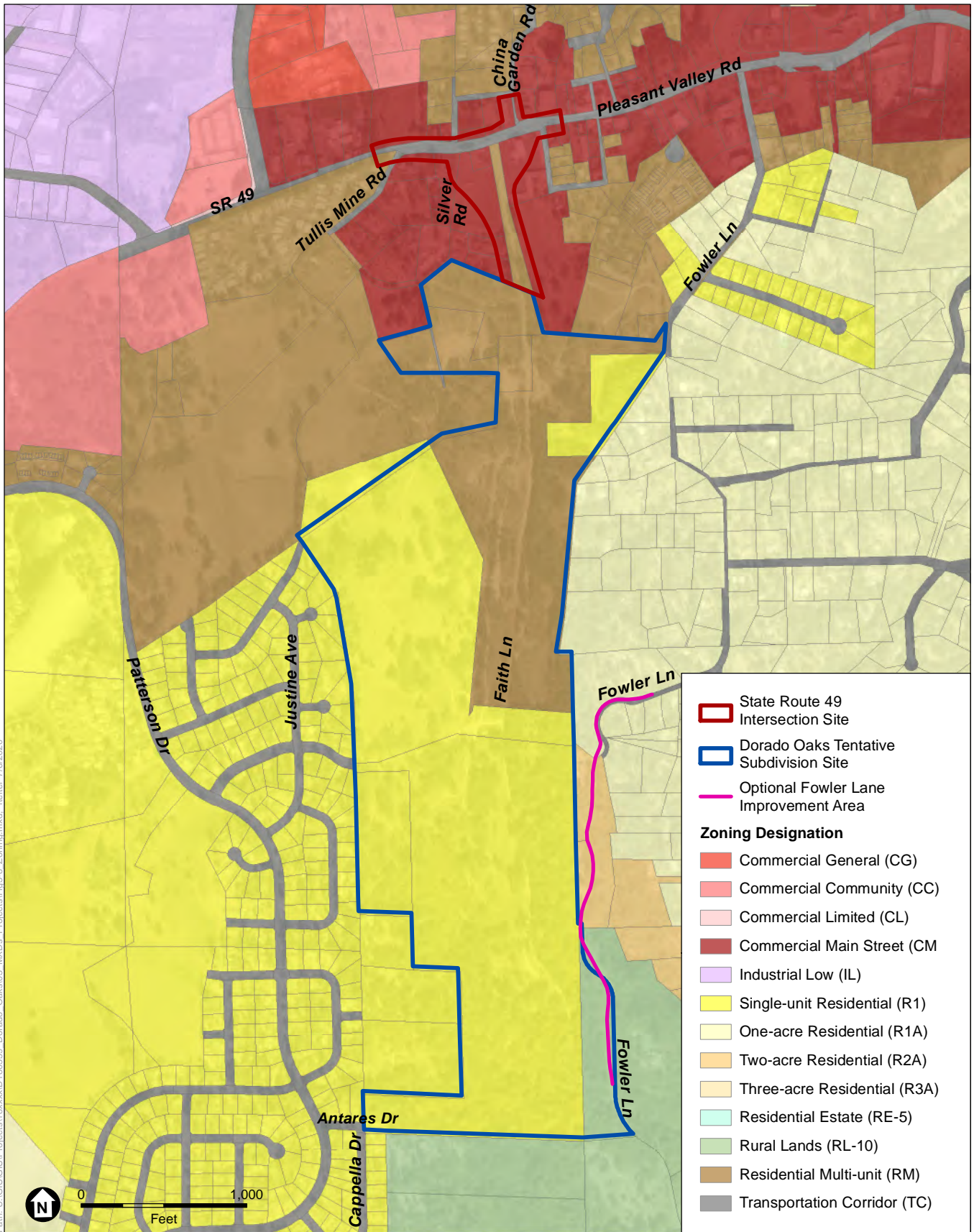
The bulk of the lands within the SR-49 intersection area consist of dedicated right-of ways for SR-49 and attached local roads. Lands along both sides of SR-49 are designated as Commercial in the County's General Plan, with the exception of Faith Lane itself, which is designated as Multi-Family Residential.



SOURCE: USDA, 2016; El Dorado County, 2018; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 3-7
Existing General Plan Land Use Designations



SOURCE: USDA, 2016; El Dorado County, 2019; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 3-8
Existing Zoning Designations

Optional Fowler Lane Improvement Area

Existing Land Use Designations

The Optional Fowler Lane Improvement Area is currently comprised of two designated land use areas, as designated and defined in the County's General Plan: 1) Medium Density Residential (MDR); and Rural Residential (RR).

Existing Zoning Designations

Lands abutting Fowler Lane within the improvement area fall within three zoning areas: 1) One-Acre Residential (R1A); 2) Two-Acre Residential (R2A); and 3) Rural Lands (RL-10).

3.3.2 Existing Utilities

Potable Water

Dorado Oaks Tentative Subdivision Map Site

There are no existing potable water facilities serving the proposed subdivision site. The El Dorado Irrigation District (EID) supplies potable water service in the area. Currently, an 18-inch water line is present beneath SR-49, and a 10-inch water line is located in Fowler Lane. Several water lines of various sizes are located around the project perimeter.

State Route 49 Intersection Area

There is an existing 18-inch water main located within the right-of-way for SR-49. The water main transitions to 24-inches roughly halfway between Faith Lane and Howard Circle, easterly along SR-49.

Optional Fowler Lane Improvement Area

There is an existing 10-inch water main located within the right-of-way for Fowler Lane that extends into the northern limits of the improvement area.

Sanitary Sewer

Dorado Oaks Tentative Subdivision Map Site

There is an existing 6-inch sewer line within the Fowler Lane right-of-way, northeast of the proposed subdivision site. This line turns to the west at the approximate location of Decair Court, and terminates at the existing sewer lift station within the northeastern portion of the subdivision site. The force main from this lift station makes its way westwards through the proposed subdivision site to Sunrise Drive and Tullis Mine Road and eventually connects to the 24-inch gravity sewer main within the SR-49 right-of-way.

State Route 49 Intersection Area

Existing sewer facilities within SR-49 consist of a 24-inch sewer main located at the intersection with Tullis Mine Road. There are also 6-inch sewer collectors that come from the east, west, and north that connect to the 24-inch main. There is an additional 6-inch sewer line that comes from the north side of SR-49 and heads south within the Faith Lane alignment, connecting to the aforementioned lift station in the proposed subdivision site.

Optional Fowler Lane Improvement Area

There are no sanitary sewer facilities within the Fowler Lane Improvement Area. Homes in this area are served by private septic systems.

Stormwater

Dorado Oaks Tentative Subdivision Map Site

The proposed subdivision site is currently unimproved, and contains minimal improvements for stormwater runoff from or through the site. Drainage from the site generally follows a southerly course, via natural stream channels, which eventually flow into Martinez Creek about a half-mile south of the site's southern boundary.

State Route 49 Intersection Area

Limited stormwater facilities are present in the State Route 49 intersection area, with drainage generally accommodated in a system of roadside ditches, curbing, and sheet flows.

Optional Fowler Lane Improvement Area

Existing storm drain facilities within Fowler Lane consist primarily of roadside ditches with culvert crossings that flows predominately to the south.

Electrical Service

Dorado Oaks Tentative Subdivision Map Site

Electrical facilities exist within the proposed subdivision site to serve the aforementioned EID sewer lift station. In addition, an existing overhead PG&E electric distribution line crosses the approximate middle portion of the site in a roughly diagonal north-to-south direction, exiting the subdivision site near its southwest corner.

State Route 49 Intersection Area

Existing electrical facilities with SR-49 consist of overhead lines located on the north side of the road. These overhead lines are owned and operated by PG&E, and also house communication conductors (telephone, etc.).

Optional Fowler Lane Improvement Area

Existing electrical facilities consist of overhead electrical lines running alongside the roadway. Electrical service along Fowler Lane is provided by PG&E.

3.4 Project Components

Dorado Oaks Subdivision

The Dorado Oaks Subdivision component of the project would provide for development of residential and open space uses on a series of parcels that cover a combined area of approximately 142.5 acres. The project would also include new access and circulation to and within the site, as well as infrastructure and roadway improvements. These characteristics are described in detail further below, and the conceptual site layout is illustrated in Figure 3-3.

A Phased Tentative Subdivision Map, consisting of 14 Large Lots, is proposed to subdivide the property into 156 single-family lots ranging in size from 6,000 square feet to approximately 24,000 square feet; 225 multi-family lots ranging in size from approximately 2,000 square feet to 7,170 square feet; one single-family lot of approximately 6.4 acres; and 18 open space/landscape lots.

The proposed project would incorporate project-specific design guidelines to be applied consistently throughout the development including architectural standards and review processes, landscape standards (if different from Title 130 zoning requirements), maintenance agreements, signage, and Covenants, Codes and Restrictions (CC&Rs).

Issuance of a Planned Development Permit would be required to establish an official Development Plan for the Dorado Oaks Subdivision that includes modification to specific development standards in the RM zone district for 225 multi-family lots on an 18.1-acre portion of the project site in accordance with the El Dorado County Zoning Code. Specifically, the Planned Development (PD) overlay in this area would provide for reduced front yard setbacks from 20 feet to 15 feet.

Residential Uses

Up to 382 residential lots would be developed on the site comprised of approximately 225 multifamily lots, and 157 single family lots. Residential development would comprise approximately 48 acres of the site, or about 34 percent of the site.

Open Space and Recreation

Approximately 68.7 acres, or about 48 percent, of the project site would be dedicated to landscaping and public open space, including a 3.1-acre public park that would be provided in the northern portion of the site, and could include features such as a soccer field, playground and possibly an interactive trail adjacent to the existing wetlands. The park would be administered by the El Dorado County Parks and Recreation District.

A pedestrian trail system would be constructed within the subdivision, and would generally provide pedestrian access through the open space areas of the site.

Internal Circulation

A system of internal roadways would be constructed to serve the subdivision, and the rights-of-way for these roadways would cover about 18.5 acres of the site. Faith Lane/Argonaut Drive would serve as the primary roadway within the site, and would extend southwards from its current terminus south of SR-49 to connect with Argonaut Drive on the project's western boundary. Faith Lane/Argonaut Drive would have a right-of-way width of 60 feet, with two 12-foot travel lanes, 8-feet of on-road parking on both sides of the roadway, a 5-foot sidewalk on one side, and an 8-foot Class 1 multi-use path on the other side. Other roadways would branch from Faith Lane, and would have various widths ranging from 30 to 40 feet, with sidewalks on one or both sides of each roadway, depending on adjoining lot sizes. Limited off-site work could be required where these new roadways connect to existing roadways (Crystal Drive, Argonaut Drive, Antares Drive, Fowler Lane, Faith Lane), and would consist of pavement interfaces, sidewalk connections, and curb/gutter connections, as applicable.

Two emergency vehicle access options are under consideration to provide emergency ingress/egress to and from the southern portion of the site, the first deriving from the southern terminus of “H” Court and connecting to Fowler Lane. If selected, the Fowler Drive option could require offsite widening of the southerly portions of Fowler Drive to meet County Fire Department requirements. The second emergency access option would derive from the southern terminus of “G” Street and exit the subdivision site to the southwest, connecting to Antares Drive, with all improvements occurring on the subdivision site. Regardless of the option selected, the roadway would be gated and would be 20-feet in width and used for emergency/official purposes only. The roadway would provide an alternate route of ingress/egress in the event of an emergency.

Vegetation and Fuels Management

To reduce the exposure of the subdivision’s homes and residents to wildfire, and to provide defensible space for firefighters and residents, a number of measures would be implemented, as outlined in the project’s Wildland Fire Safe Plan (CDS Fire Prevention Planning, 2018). These measures include, but would not be limited to:

- Fuel hazard reduction zones (FHRZ) would be installed around the perimeter of the subdivision and fuel hazard reduction zone along both sides of all roads including the EVA routes. Interior open space perimeters would have a FHRZ adjacent to backyards. Sidewalks and planted landscaping areas could be a part of the FHRZ. Tree canopies over the roads and driveways would require vertical clearance over the roadways.
- All residences would have NFPA 13D fire sprinkler systems. Since the project is located in a CALFIRE-designated Moderate Fire Hazard Severity Zone, implementation of Wildland-Urban Interface Fire Areas Building Standards (7A) would be required for the construction of new residences. These standards address roofing, venting, eave enclosure, windows, exterior doors, siding, and decking.
- A Community Service District (CSD), Lighting and Landscape District (LLD), Homeowner’s Association (HOA), a Zone of Benefit (ZOB), or similar entity would be formed for the purpose of maintaining the fuel hazard reduction zones along the roads and open space areas and the EVA gates.

Utilities

Potable Water

EID would be the potable water service provider to the subdivision site. According to EID, there were 12,630 equivalent dwelling units (EDUs) of water supply available in their Western/Eastern Water Supply Region as of January, 2017. The proposed project would require approximately 337.75 EDUs of water supply via EID’s existing 18-inch-diameter water line located within SR-49 and 10-inch water line located within Fowler Lane (EID, 2021).

The Diamond Springs/El Dorado Fire Protection District has determined that in order to meet minimum fire flows, the project would need to construct a water line extension connecting to water lines in SR-49 and Fowler Lane, as noted above. The project would also be required to connect to a water main from the Deer Park Estates Subdivision located west of the subdivision, which could require limited offsite work within the rights-of-way/easements of these facilities.

Wastewater

A new wastewater collection system would be constructed within the proposed street network within the project site. The project would require approximately 325.75 EDUs of sewer service (EID, 2021). The new collection system would include pipelines, likely ranging in size from six to eight inches in diameter and would provide new connections to residential building areas. In addition, a new sewer lift station would be required to pump waste water to the existing 24-inch gravity sewer main located beneath SR-49, as the existing EID lift station does not have adequate capacity to serve any of the proposed project. Instead of two stations on the property, the EID has requested that if feasible, the proposed project make an attempt to grade in such a way as to allow for a single new lift station that would serve both the proposed project and existing demands. If this is not feasible, the project would be required to construct odor control at the existing lift station, in addition to constructing a new lift station to serve the project.

The offsite force main is assumed to route via Faith Lane to the existing 24-inch sewer located beneath SR-49. If the existing lift station remains in place, this is the likely scenario with the existing station continuing to route to the existing offsite Tullis Mine force main and then to the SR-49 sewer main. However, if the existing station is merged with a new station, EID could prefer upsizing of the existing force main in Tullis Mine Road as an alternative to a new line in Faith Lane. If that is the case, then some offsite work within EID's existing easement beneath Tullis Mine Road would be needed to upsize the existing line.

Stormwater

Stormwater within the subdivision would be collected through a curb and gutter system and collected in catch basins, and then conveyed to an underground conveyance system within the subdivision's roadway network. Stormwater thus collected would be discharged to various detention basins located throughout the project. These detention basins would meter flows to existing creeks at rates that match pre-project storm water flows, as required. Additionally, the new stormwater management system would include water quality treatment measures to control the quality of stormwater runoff from the site prior to discharge to the surrounding waters. Typical measures could include bio-filtration planters, bio-filtration basins, infiltration areas, permeable paving, localized rainwater harvesting, where feasible, and other treatment measures as approved by the County.

Electric and Propane

Electrical service is provided to the subdivision site by Pacific Gas & Electric (PG&E). Service would be brought to the subdivision site via on and off-site aboveground and undergrounded facilities as determined necessary by PG&E. An existing aboveground electric line runs through a portion of the subdivision site in a north-south direction. This existing facility would be relocated as needed.

Propane would be provided by a combination of individual propane tanks for the less dense portions of the project and centralized propane distribution for more dense portions of the project.

Lot Line Adjustments

The project approvals would include several lot line adjustments along portions of the site's eastern boundary to correct a series of inadvertent encroachments from adjoining properties onto the proposed subdivision site. These adjustments would occur with cooperation from the affected property owners, and would generally result in a net gain for those property owners.

State Route 49 Intersection Area

The subdivision's main point of entry would be via Faith Lane from its intersection with SR-49. Two options are under consideration for Faith Lane's interface with SR-49. These options are analyzed at a similar level of detail in this EIR, and are presented as Alternatives 2 and 3 in Chapter 5, *Alternatives*, of this EIR:

- Option A: a four-way roundabout at the intersection of China Garden Road/SR-49, to the east of the existing Faith Lane alignment.
- Option B: Option B: Realignment of the existing Faith Lane alignment westwards to connect with Silver Drive, and installation of two coordinated signals at the intersections of Silver Drive/SR-49 and China Garden Road/SR-49.

Option A would require demolition of several buildings within the existing strip mall on the southeast corner of SR-49 and Faith Lane, including the red brick Carpenter house. When completed, the roundabout would accommodate four-way circulation for east-bound and west-bound SR-49, China Garden Road, and Faith Lane.

Option B would require the realignment of Faith Lane westwards to connect with Silver Drive. The existing Faith Lane alignment would be abandoned, and realigned to connect with Silver Drive, where it would intersect with SR-49. A three-way traffic signal would be placed at this intersection, and an additional three-way signalized intersection would be placed approximately 400 feet to the east at China Garden Road and SR-49. No building demolitions would be required.

Optional Fowler Lane Improvement Area

If selected as the preferred emergency vehicle access option, Fowler Lane would be widened to minimum paved width of 20 feet, starting approximately 450 linear feet from the intersection of Fowler Lane and South Point Road headed southwest, following Fowler Lane to the south for approximately 2,600 feet (about 0.5 mile).

A review of County records and Geographic Information System (GIS) data has determined that there is significant variation in several locations between the recorded roadway easement for Fowler Lane and the as-built roadway as it actually appears on the ground. In some instances, the recorded easement actually passes through people's homes, whereas the actual road lies as much as 75 feet away. As part of this project component, the recorded Fowler Lane roadway easement would be adjusted to conform with the roadway's actual alignment.

Should the Antares Drive option be selected as the sole point of emergency access, a gated emergency access connection to Fowler Lane from "H" Court would still be provided, but the aforementioned widening of Fowler Lane and the easement adjustments would not occur.

3.4.1 Project Construction

Conceptual Project Phasing

The subdivision project is expected to be developed in six phases. Work on the SR-49 intersection component could occur concurrent with the initial site grading, and ultimate scheduling for that effort would be confirmed and approved by Caltrans. Regardless of the option selected, the southerly emergency access roadway improvements would probably not be constructed until the southerly phases of the project (i.e., those phases lying south of the Faith Lane/Argonaut Drive alignment) commence construction. Overall project construction is anticipated to begin in 2022 and complete by 2025.

Grading and Site Preparation

Dorado Oaks Subdivision

Construction of the subdivision would occur in typical fashion, with mass grading of the entire site probably occurring first, followed by detailed grading on a phase-by-phase basis. Preliminary earthwork calculations indicate that the amount of cut/fill on the site will likely balance at final design. Trenching for utilities would occur within the subdivisions roadbeds, followed by installation of curbs, gutters, and pavement. Building construction would then commence, with releases of housing likely following one after the other.

State Route 49 Intersection Area

Acquisition of needed right-of-way would be undertaken prior to the initiation of construction for the intersection improvements. Work on the SR-49 intersection would vary depending on the option selected. Option A (the roundabout option) would require demolition of buildings on the affected parcels, followed by roadway and roundabout construction. Necessary utility relocations would occur. Temporary detours could be required during the construction period, and would be planned in accordance with Caltrans requirements. Construction would take approximately 9-to 12 months.

Option B (the signalized intersections options) would be more straightforward, as no building demolition would be required. Necessary utility relocations would occur, followed by installation of curb and gutter improvements, then pavement. The two signals would be set, and roadway striping placed. Construction would take approximately 6 to 9 months.

Optional Fowler Lane Improvement Area

If selected as the preferred emergency vehicle access option, Fowler Lane would be widened to minimum paved width of 20 feet, starting approximately 450 linear feet from the intersection of Fowler Lane and South Point Road headed southwest, following Fowler Lane to the south for approximately 2,600 feet. The work would likely require construction of new drainage ditches or culverts in some locations, reconstruction of some existing drainage facilities, earthwork (cut and fill slopes where necessary), and the removal of trees where necessary to accommodate the additional pavement width. Any existing connections to Fowler Lane such as driveways or other types of access would be modified as part of the widening work. Some temporary offsite

easement may be required to accommodate the work. Construction would take approximately 3 to 6 months.

3.5 Required Jurisdictional Approvals

3.5.1 El Dorado County

Project implementation would require a series of interrelated planning and regulatory approvals by El Dorado County, as Lead Agency. Specifically, the County is considering taking the following approval actions:

- Certification of the Dorado Oaks Tentative Subdivision Map project EIR pursuant to CEQA;
- Tentative Subdivision Map;
- Adoption of a Rezone Ordinance to apply a Planned Development overlay zone to the subdivision project area;
- Establishment of a Development Plan with the Planned Development Permit for the design of structures, common areas, and roadways;
- Development Agreement;
- Public Facilities and Financing Plan (PFFP); and
- Other local approvals that may be required, such as:
 - Grading permits;
 - Demolition permits;
 - Construction Waste Management Plan (for construction waste);
 - Encroachment permits;
 - Building permits; and
 - Other ministerial County approvals as necessary to develop the project.

The project would require review and recommendation by the Planning Commission to the County Board of Supervisors, followed by consideration and action by the Board of Supervisors. The EIR would provide the CEQA-required environmental documentation for use in considering County approvals required to implement the project.

3.5.2 Other Governmental Agency Approvals

As the Lead Agency and as appropriate under CEQA, the County also intends the EIR to serve as the CEQA-required environmental documentation for consideration of this project by other Responsible Agencies and Trustee Agencies which may have limited discretionary authority over development proposals associated with the project. Under the CEQA *Guidelines*, the term “Responsible Agency” includes all public agencies, other than the Lead Agency, which have discretionary approval power over aspects of the project for which the Lead Agency has prepared an EIR (CEQA Guidelines Section 15381); and the term “Trustee Agency” means a state agency having jurisdiction by law over natural resources affected by the project which are held in trust by

the people of California (Section 15386). Responsible Agencies and Trustee Agency approvals for the project may include, but are not limited to, the following:

- **Caltrans District 3**
 - Issuance of an encroachment permit for construction of the selected SR-49 intersection option;
 - Review and approval of the design and construction of the intersection project.
- **El Dorado County Transportation Commission (EDCTC)**
 - Review of the project in relation to the Regional Transportation Plan, the Diamond Springs and El Dorado Area Mobility and Livable Community Plan and Improvement Program.
- **El Dorado County Air Quality Management District (AQMD)**
 - Review of project plans may be required.
- **El Dorado County Fire District and Diamond Springs El Dorado Fire Protection District**
 - Review of project with consideration for impacts to firefighting and emergency services.
- **El Dorado Irrigation District (EID)**
 - Review of project with consideration for impacts to EID facilities.
 - Approval of Facility Plan Report.
- **El Dorado County Parks and Recreation Commission**
 - Review of the project with consideration for impacts to facilities and services.
- **Other utilities and community service providers (Sheriff's Department, Schools, etc.)**
 - Review of the project with consideration for impacts to facilities and services.
- **Central Valley Regional Water Quality Control Board (RWQCB)**
 - National Pollution Discharge Elimination System (NPDES) General Permit for storm water discharges associated with construction activity;
 - Clean Water Act Section 401 Water Quality Certification and Notice of Intent for construction activities; and
 - Storm Water Pollution Prevention Plan (SWPPP) for on-site storm water management and pollution prevention.
- **California Department of Fish and Wildlife (CDFW)**
 - Section 1602 Streambed Alteration Agreement; and
 - CDFW would also review and comment on specific sensitive species aspects of the project if potential effects are found.
- **U.S. Army Corps of Engineers (USACE)**
 - Approval of Section 404 Permit under the Federal Clean Water Act for project impacts to jurisdictional waters of the United States.

3.6 References

- CDS Fire Prevention Planning. 2018. Wildland Fire Safe Plan, Prepared for Stonehenge Springs, LLC. October 25, 2018.
- El Dorado County. 2004. El Dorado County General Plan. Adopted July 19, 2004. Available: https://www.edcgov.us/Government/planning/Pages/adopted_general_plan.aspx. Accessed November 22, 2019.
- El Dorado County. 2018. El Dorado County Zoning Ordinance. Adopted December August 14, 2018. Amended January 8, 2019. Available: <https://www.edcgov.us/Government/planning/Documents/TITLE%20130%20Master%20Complete%20Adopted%2008-14-18%20AMD%2001-08-19.pdf>. Accessed November 22, 2019.
- El Dorado Irrigation District, 2021. Facility Improvement Letter (FIL), 3472FIL, Dorado Oaks Assessor's Parcel No. 329-310-010, 011, 012 and 329-301-015 & 020 (Diamond Springs) EDC Project No. TM08-1474. June 3, 2021. See **Appendix I** of this EIR.
- Prism Engineering. 2019. Traffic Impact Study for Dorado Oaks in El Dorado County, California. July 2, 2018.

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CHAPTER 4

Environmental Setting, Impacts, and Mitigation Measures

4.0 Introduction to the Environmental Analysis

This draft environmental impact report (EIR) evaluates and documents the physical environmental effects that would potentially occur with the implementation of the proposed Dorado Oaks Subdivision Project (project) in accordance with the California Environmental Quality Act (CEQA), Public Resources Code (PRC) Sections 21000, et seq., and the Guidelines for the California Environmental Quality Act (CEQA Guidelines), California Code of Regulations, Title 14, Chapter 3, Section 15000, et seq.). Sections 4.1 through 4.17 consider the regulatory background, existing conditions, and environmental impacts associated with implementation of the project, as well as mitigation measures to reduce the impact of project-specific and cumulative environmental impacts, and the level of significance of impacts following mitigation.

4.0.1 Definitions of Terms Used in the EIR

This EIR uses a number of terms that have specific meaning under CEQA. Among the most important of the terms used in the EIR are those that refer to the significance of environmental impacts. The following terms are used to describe environmental effects of the project:

- **Significance Criteria:** A set of criteria used by the lead agency to determine at what level or threshold an impact would be considered significant. Standards of significance used in this EIR were derived from El Dorado County’s established significance standards. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, State, and local regulations and ordinances.
- **Significant Impact:** A project impact is considered significant if the project would result in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project-related physical change compared to specified significance criteria. A significant impact is defined as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.”¹

¹ CEQA Guidelines, Section 15382.

- **Potentially Significant Impact:** A potentially significant impact is identified where the project may cause a substantial adverse change in the environment, depending on certain unknown conditions related to the project or the affected environment. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.
- **Less-than-Significant Impact:** A project impact is considered less than significant when the physical change caused by the project would not exceed the applicable significance criterion.
- **Significant and Unavoidable Impact:** A project impact is considered significant and unavoidable if it would result in a substantial adverse physical change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level.
- **Cumulative Impact:** Under CEQA, a cumulative impact refers to “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”² Like any other significant impact, a significant cumulative impact is one in which the cumulative adverse physical change would exceed the applicable significance criterion and the project’s contribution is “cumulatively considerable.”³
- **Mitigation Measure:** A mitigation measure is an action that could be taken that would avoid or reduce the magnitude of a significant impact. Section 15370 of the CEQA Guidelines defines mitigation as:
 - a. Avoiding the impact altogether by not taking a certain action or parts of an action;
 - b. Minimizing impacts by limiting the degree of magnitude of the action and its implementation;
 - c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and

Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements.

4.0.2 Section Format

Chapter 4 is divided into technical sections (e.g., Section 4.1, *Aesthetics*) that present for each environmental resource issue area the physical environmental setting, regulatory setting, significance criteria, methodology and assumptions, and impacts on the environment. Where required, potentially feasible mitigation measures are identified to lessen or avoid potentially significant impacts. Each section includes an analysis of project-specific and cumulative impacts for each issue area.

The technical environmental sections each begin with a description of the project’s **environmental setting** and the **regulatory setting** as it pertains to a particular issue. The environmental setting provides a point of reference for assessing the environmental impacts of the

² CEQA Guidelines, Section 15355.

³ CEQA Guidelines, Section 15130(a).

project and project alternatives. The environmental setting discussion addresses the conditions that exist prior to implementation of the project. This setting establishes the baseline by which the project and project alternatives are measured for environmental impacts. The regulatory setting presents relevant information about federal, state, regional, and/or local laws, regulations, plans or policies that pertain to the environmental resources addressed in each section.

Next, each section presents **significance criteria**, which identify the standards used by El Dorado County to determine the significance of the environmental effects of the project. The significance criteria used for this analysis were derived from the County's established significance standards, as well as other criteria applicable under CEQA, including thresholds established by trustee and responsible agencies.

A **methods and assumptions** description in each section presents the analytical methods and key assumptions used in the evaluation of effects of the project, and is followed by an **impacts and mitigation** discussion. The impact and mitigation portion of each section includes impact statements, prefaced by a number in bold-faced type. An explanation of each impact is followed by an analysis of its significance. The subsection concludes with a statement that the impact, following implementation of the mitigation measure(s) and/or the continuation of existing policies and regulations, would be reduced to a less-than-significant level or would remain significant and unavoidable.

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the project. As required by section 15126.2(a) of the CEQA Guidelines, direct, indirect, short-term, long-term, onsite, and/or off-site impacts are addressed, as appropriate, for the environmental issue area being analyzed. Under CEQA, economic or social changes by themselves are not considered to be significant impacts, but may be considered in linking the implementation of a project to a physical environmental change, or in determining whether the physical change is significant.⁴

Where enforcement exists and compliance can be reasonably anticipated, this EIR assumes that the project would meet the requirements of applicable laws and other regulations.

Mitigation measures pertinent to each individual impact, if available, appear after the impact discussion section. The magnitude of reduction of an impact and the potential effect of that reduction in magnitude on the significance of the impact is also disclosed. An example of the format is shown below.

Impacts and Mitigation Measures

Impact 3.X-1: Impact statement.

A discussion of the potential impact of the project on the resource is introduced in paragraph form. To identify impacts that may be site- or project element-specific, where appropriate, the

⁴ A "significant effect on the environment" is defined in CEQA Guidelines Section 15382.

discussion differentiates between construction effects and operational effects. A statement of the level of significance before application of any mitigation measures is provided in **bold**.

Mitigation Measure

If the impact is determined to be less than significant, the text will say, “None required.” If the impact is determined to be significant or potentially significant, mitigation will be included in the following format:

Mitigation Measure 3.X-1:

Recommended mitigation measure provided in italics and numbered in consecutive order.

Where appropriate, one or more potentially feasible mitigation measures are described. If necessary, a statement of the degree to which the available mitigation measure(s) would reduce the significance of the impact is included in **bold**.

Cumulative Impacts

An analysis of cumulative impacts follows the project-specific impacts and mitigation measures evaluation in each section. A cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other past, present and reasonably foreseeable projects causing related impacts.⁵

The beginning of the cumulative impact analysis in each technical section includes a description of the cumulative analysis methodology and the geographic or temporal context in which the cumulative impact is analyzed (e.g., Diamond Springs Community Region, El Dorado County, the Mountain Counties Air Basin, other activity concurrent with project construction). In some instances, a project-specific impact may be considered less than significant, but when considered in conjunction with other cumulative projects or activities may be considered significant or potentially significant.

Projects considered in the cumulative analyses include the following currently active residential and commercial projects within the Diamond Springs Community Region:

- Indian Creek Ranch – A Tentative Subdivision Map on a 182-acre site, located on Echo Lane, west of the US-50/El Dorado Road interchange. The project would create 74 residential lots with RE-5-PD (Estate Residential 5-acre planned development) and R3A-PD (Single-Family 3-acre planned development) zoning on lots ranging in size from 1 to 5 acres.
- Diamond Village Apartments – A planned apartment complex on a 10.7-acre site, located on the south side of Black Rice Road, approximately 1,000 feet west of the intersection with SR-49. The project would construct ten multi-unit residential buildings and one community building totaling 80 multifamily residential units and one on-site manager unit.

⁵ CEQA Guidelines Section 15355.

- Piedmont Oak Estates – A Tentative Subdivision Map on a 26-acre site, located on the northeast corner of SR-49 and Black Rice Road. The project would consist of 75 single family residential lots and one commercial lot.
- El Mirage Plaza – A Large Lot Tentative Map on approximately 28.8 acres, located on Runnymede Drive at the southeast corner of the US-50/El Dorado Road interchange. Seven lots totaling 11.8 acres are envisioned for commercial use under the Commercial, Community (CC) zoning designation, and four lots totaling 10.9 acres are envisioned for residential use under the Multi-Unit Residential (RM) zoning designation. If developed at the maximum levels allowed under those zoning designations, the site could theoretically house up to 435,000 square feet of commercial uses and 260 multi-family residential units.
- El Dorado Senior Village – A senior citizen’s residential facility on approximately 8 acres, located on State Route 49 approximately 1.5 miles west of the proposed Dorado Oaks Tentative Subdivision Map site. The project would consist of 149 age-restricted multi-family residential rental units, as well as a 7,500 square-foot commercial building with restaurant, a 2,500 square-foot bed and breakfast inn, and a 3,500 square-foot clubhouse.
- Shinn Ranch – A residential subdivision map on 167.7 acres, located on Mother Lode Drive approximately 3.5 miles west of the proposed Dorado Oaks Tentative Subdivision Map site. The project would develop 143 single family detached homes.

As noted above, where a cumulative impact is significant when compared to existing or baseline conditions, the analysis must address whether the project’s contribution to the significant cumulative impact is “considerable.” If the contribution of the project is considerable, then the EIR must identify potentially feasible measures that could avoid or reduce the magnitude of the project’s contribution to a less-than-considerable level. If the project’s contribution is not considerable, it is considered less than significant and no mitigation of the project contribution is required.⁶ The cumulative impacts analysis is formatted in the same manner as the project-specific impacts, as shown above.

⁶ State CEQA Guidelines Section 15130(a)(2).

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4.1 Aesthetics

4.1.1 Introduction

This section evaluates the potential for the proposed project to result in substantial adverse visual impacts. Below, the Environmental Setting portion of this section includes descriptions of existing visual characteristics of the project site and vicinity. Existing plans and policies relevant to urban design and visual resource issues associated with implementation of the proposed project are provided in the Regulatory Setting section, further below. The impact discussion evaluates potential impacts to aesthetic and visual resources that could result from implementation of the proposed project in the context of existing conditions based on analyses of photographs, site reconnaissance, and project data.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Relevant comments expressed concern with potential project impacts to the visual character of the project area.

4.1.2 Environmental Setting

Regional Setting

Located in the foothills of the northern Sierra Nevada, El Dorado County lies east of the Central Valley and west of the state of Nevada. The county has a broad range of landscapes that change with the gradual increase in elevation. Elevations range from 200 feet in the western rolling foothills, adjacent to Sacramento County, to more than 10,000 feet along the Sierra Nevada crest on the edge of the Lake Tahoe Basin. The diverse environments of the region are represented by distinct natural communities and landforms that display different development patterns and historical features. Rolling hills dotted with mature oaks and oak woodlands, agricultural land, orchards and vineyards, evergreen forests and snow-capped mountains, scenic rivers, alpine lakes, and historic structures all contribute to the visual character of the county.

Scenic Views and Resources

As described in the El Dorado County General Plan EIR, visual resources are classified in two categories: scenic views and scenic resources. Scenic resources are specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements. Scenic views are elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually middle ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor.

A list of the county's significant scenic views and resources is presented in Table 5.3-1 of the El Dorado County General Plan EIR. Many of these viewpoints are areas along highways where viewers can see large water bodies (e.g., Lake Tahoe and Folsom Reservoir), river canyons, rolling hills, or forests. Other viewpoints are the locations of historic structures or districts that are reminiscent of El Dorado County's heritage. Exhibit 5.3-1 of the El Dorado County General

Plan EIR identifies scenic viewpoints within the county. The project site is not designated as or within an important public viewpoint.

Visual Character of the Project Site

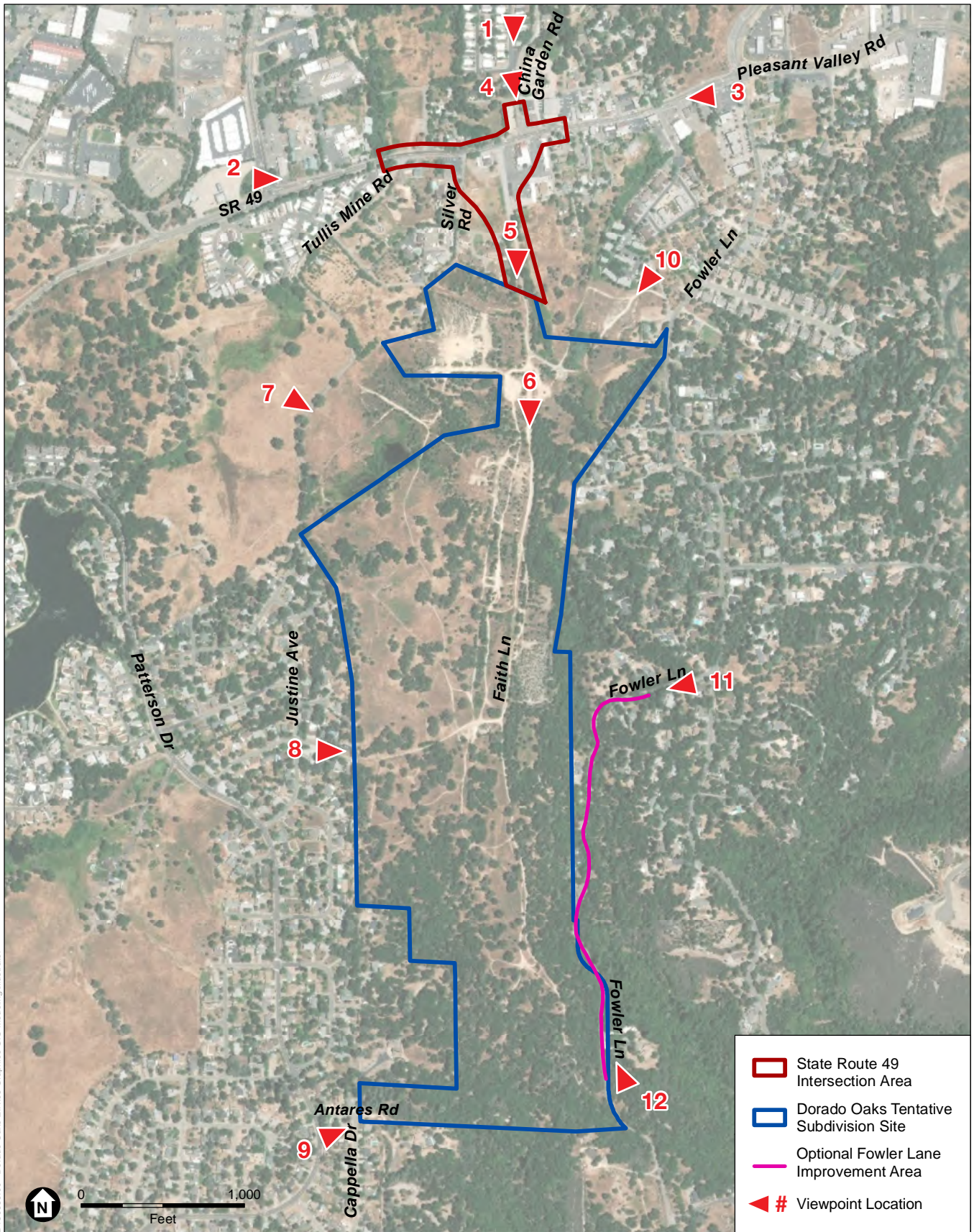
The project site is located in the unincorporated Diamond Springs Community Region in El Dorado County, about three miles south of Placerville and 40 miles east of downtown Sacramento. An aerial view of the project site and vicinity and the locations of photographic views included in subsequent figures are provided in **Figure 4.1-1**. Photographs of the project site and vicinity are provided in **Figure 4.1-2** through **Figure 4.1-7**.

Dorado Oaks Tentative Subdivision Map Site

The Dorado Oaks Tentative Subdivision Map site is located immediately south of State Route (SR) 49, extending southwards from the intersection of SR-49 and Faith Lane. The site is bounded to the west by undeveloped lands and a residential subdivision comprised of single-family homes. South of the site lies undeveloped lands and scattered rural homes. To the east, the site is generally bounded by low-density residential areas. To the north lies the SR-49 commercial corridor, with the most intensive commercial uses in the Diamond Springs area beginning about one-quarter-mile to the east.

The approximately 142.5-acre project site consists entirely of undeveloped lands. Faith Lane extends into the project site southwards from SR-49. The roadway is paved for about the first 600 feet, and then encounters a locked gate, after which it becomes gravel or dirt. A number of dirt tracks run within the project site. Portions of the site were cleared and graded as part of previous development proposals many years ago, but none of the previous development efforts were carried through to completion. The site is generally covered with oak woodlands, consistent with other undeveloped areas in the vicinity. A small El Dorado Irrigation District (EID) sewer lift station lies within a fenced enclosure in the northeastern portion of the site. An existing overhead PG&E electric distribution line also crosses the approximate middle portion of the site in a diagonal north-to-south direction. Other than these facilities, there are no other structures on the site, which is visually characterized by trees and other vegetation, variable topography, a network of unpaved trails, and open meadow areas.

Because of the topography of the site and surrounding areas, available views of the site are generally limited to private properties that immediately border the site, to motorists on SR-49, as well as to motorists on some nearby residential streets within the adjacent subdivisions, primarily where streets terminate at the project site (e.g., Argonaut Drive, Antares Road). Open views of the site from adjacent roadways and residential areas are also, to varying degrees, obstructed by trees and vegetation within the site and on its perimeter. Beyond the immediately adjacent residential subdivisions, partial views of the site are also available from surrounding hilltops and ridgelines in the project vicinity, although views of the site from some of these locations are in many cases obstructed by existing structures, trees, and bushes, are distant, and generally blend with surrounding developed and undeveloped areas.



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SOURCE: USDA, 2016; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.1-1
Photo Location Map





Viewpoint 1: View toward State Route 49 Intersection Area from China Garden Road. View facing south.



Viewpoint 2: View toward State Route 49 Intersection Area from Pleasant Valley Road (State Route 49). View facing east.

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SOURCE: ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.1-2
Viewpoints 1 and 2





Viewpoint 3: View toward State Route 49 Intersection Area from Pleasant Valley Road (State Route 49). View facing west.



Viewpoint 4: View toward Dorado Oaks Tentative Subdivision Map Site from Pleasant Valley Road (State Route 49) at Faith Lane. View facing south.

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SOURCE: ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.1-3
Viewpoints 3 and 4





Viewpoint 5: View from northern boundary of Dorado Oaks Tentative Subdivision Map Site from gravel-dirt portion of Faith Lane that extends into the site. View facing south.



Viewpoint 6: View of Dorado Oaks Tentative Subdivision Map Site interior. View facing south.

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SOURCE: ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.1-4
Viewpoints 5 and 6





Viewpoint 7: View toward Dorado Oaks Tentative Subdivision Map Site from Tullis Mine Road. View facing southeast.



Viewpoint 8: View toward Dorado Oaks Tentative Subdivision Map Site from the terminus of Argonaut Drive. View facing east

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SOURCE: ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.1-5
Viewpoints 7 and 8





Viewpoint 9: View toward Dorado Oaks Tentative Subdivision Map Site from the terminus of Antares Road. View facing northeast.



Viewpoint 10: View toward Dorado Oaks Tentative Subdivision Map Site from northeast near Panther Lane. View facing southwest.

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SOURCE: ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.1-6
Viewpoints 9 and 10





Viewpoint 11: View toward Dorado Oaks Tentative Subdivision Map Site from Fowler Lane at the northernmost extent of the Optional Fowler Lane Improvement Area. View facing west.



Viewpoint 12: Optional Fowler Lane Improvement Area. View facing north.

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SOURCE: ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.1-7
Viewpoints 11 and 12



State Route 49 Intersection Area

The SR-49 intersection area is currently comprised of roadways adjoining commercial areas. SR- 49 along this segment is configured as an undivided two-lane roadway and is largely fronted with low-rise commercial properties of various sizes, styles, and materials. Businesses within and adjacent to the SR-49 intersection area are generally small in nature. The southwest corner of SR-49 and Silver Drive contains a small shopping center (Diamond Springs Plaza) with a printing shop, a hair salon, and similarly-sized businesses within two adjoining buildings with shingled roofs. Slightly further east, Deb's Frosty is located on the southwest corner of SR-49 and Faith Lane and is characterized visually by its muted yellow exterior and matching elevated road sign. The strip mall at the southeast corner of SR-49 and Faith Lane contains a bicycle shop, a pet store, gift shops, and similar businesses, many with similar plywood cladding and shaded frontages. Also on this corner are two older brick buildings, including the red brick two-story Carpenter house. The Gust Brothers Building lies on the northeast corner of SR-49 and China Garden Road, and contains a number of small businesses, including a dental office and a hair salon.

Optional Fowler Lane Improvement Area

The Optional Fowler Lane Improvement Area begins approximately 450 feet from Fowler Lane's intersection with South Point Road and extends westerly and southerly for approximately 2,600 feet. This portion of the roadway passes through a rural residential area that is largely comprised of rural residential homes on large lots. Fowler Lane is paved along its entire length, but many segments have narrow pavement widths ranging from 10 to 13 feet, as well as narrow shoulders. An overhead utility line runs along a portion of the roadway. The Optional Fowler Lane Improvement Area is characterized visually as a narrow, moderately winding roadway flanked by substantial tree canopy, steep slopes, and intermittent rural residential frontages.

Light and Glare

Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare, and if designed incorrectly, could be considered unattractive. Although nighttime light is a common feature of urban areas, spillover light can adversely affect light-sensitive uses, such as residential units at nighttime.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare. Reflective glare, such as the reflected view of the sun from a window or mirrored surface, can be distracting during the day.

Residential and commercial development the north, east, and west of the project site and headlights from vehicles traveling on SR-49 and adjacent roadways currently produce a low to moderate amount of nighttime illumination in the project area. The Dorado Oaks Tentative Subdivision Map Site is currently undeveloped, does not contain existing lighting, and is almost entirely dark at night. Commercial buildings, adjacent residential uses, and vehicle headlights

provide moderate levels of nighttime illumination in and adjacent to the SR-49 Intersection Area. The main source of nighttime light along the Optional Fowler Lane Improvement Area is from vehicle headlights along this predominantly unlighted rural roadway. Sources of reflective glare on and adjacent to the project site are minimal to nonexistent.

4.1.3 Regulatory Setting

Federal

There are no federal regulations pertaining to visual resources that are applicable to the proposed project.

State

California Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. A scenic corridor is the land generally adjacent to and visible from the highway. A scenic corridor is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. The corridor protection program does not preclude development, but seeks to encourage quality development that does not degrade the scenic value of the corridor. Jurisdictional boundaries of the nominating agency are also considered. The agency must also adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program. County roads can also become part of the Scenic Highway System. To receive official designation, the county must follow the same process required for official designation of State Scenic Highways.

Officially designated scenic highways within El Dorado County include US-50 east of Placerville, and SR-89 near Lake Tahoe. SR-49 is an eligible State Scenic Highway, but is not officially designated (El Dorado County, 2003).

Local

El Dorado County General Plan

The following policies from the Land Use Element of the El Dorado County General Plan are applicable to visual resources within and in the vicinity of the project site.

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

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

Policy 2.8.1.1: Development shall limit excess nighttime light and glare from parking area lighting, signage, and buildings. Consideration will be given to design features, namely directional shielding for street lighting, parking lot lighting, sport field lighting, and other significant light sources, that could reduce effects from nighttime lighting. In addition, consideration will be given to the use of automatic shutoffs or motion sensors for lighting features in rural areas to further reduce excess nighttime light.

Policy 7.3.3.5: Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.

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

El Dorado County Standards and Ordinances

The County has several standards and ordinances that address issues relating to visual resources. Many of these can be found in the County Zoning Ordinance (Title 130 of the County Code). The Zoning Ordinance consists of descriptions of the zoning districts, including identification of uses allowed by right or requiring a special-use permit and specific development standards that apply in particular districts based on parcel size and land use density. These development standards often involve limits on the allowable size of structures, required setbacks, and design guidelines.

Chapter 130.30 of the Zoning Ordinance contains general requirements for various types of development in the county, including standards regulating materials, parking, setbacks, frontage design, landscaping, and other design elements. Section 130.34.020 of the Zoning Ordinance establishes outdoor lighting standards, and requires that all outdoor lighting shall be located, adequately shielded, and directed such that no direct light falls outside the property line, or into the public right-of-way.

Development projects in the County subject to discretionary review, such as the proposed project, are typically subject to design review to ensure the development is consistent with applicable plans and design standards and is compatible with surrounding development. The aspects of design considered in the design review process include architectural design, site design, adequacy of streets and accessways for all modes of travel, energy consumption, protection of environmentally sensitive features, safety, noise, and other relevant considerations.

4.1.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The criteria used to determine the significance of impacts related to aesthetics are based on Appendix G of the *CEQA Guidelines*. Implementation of the proposed project could have a significant impact on the environment if it would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict with applicable zoning and other regulations governing scenic quality;
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Issues not Discussed in Impacts

As described above in the Environmental Setting, visual resources are classified in two categories: scenic views and scenic resources. Scenic resources are specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements. Scenic views are elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually middle ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor.

A list of the county's significant scenic views and resources is presented in Table 5.3-1 of the El Dorado County General Plan EIR. Many of these viewpoints are areas along highways where viewers can see large water bodies (e.g., Lake Tahoe and Folsom Reservoir), river canyons, rolling hills, or forests. Other viewpoints are the locations of historic structures or districts that are reminiscent of El Dorado County's heritage. Exhibit 5.3-1 of the El Dorado County General Plan EIR identifies scenic viewpoints within the county. The project site is not designated as or within an important public viewpoint. Consequently, implementation of the proposed project would not have a substantial adverse effect on a scenic vista.

As described in the Regulatory Setting above, officially designated scenic highways within El Dorado County include US-50 east of Placerville, and SR-89 near Lake Tahoe. SR-49 is an eligible State Scenic Highway, but is not officially designated. Consequently, implementation of the proposed project would not damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

For these reasons, the first and second significance criteria listed above are not further addressed in this section of the EIR.

Methodology and Assumptions

The analysis of aesthetics involves a qualitative comparison of the existing built and natural environment to the future built and natural environment and evaluation of the visual changes that would result from implementation of the proposed project. Key view corridors were examined, and existing views to and from the project site were compared to those that would be expected to occur in the future under the proposed project. In addition, the changes proposed in the project were evaluated in the context of adopted County policies and regulations.

Impacts and Mitigation Measures

Impact 4.1-1: The proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict with applicable zoning and other regulations governing scenic quality. (*Less than Significant Impact*)

Changes to the visual character or quality of a site affect each individual differently, and thus to some extent are based on subjective and individual perspectives.

The Dorado Oaks Subdivision component of the proposed project would provide for development of new residential uses, open space, roadways, and infrastructure on a currently undeveloped approximately 142.5-acre site comprised primarily of oak woodlands and other natural features.

Residential development would comprise approximately 48 acres (approximately 34 percent) of the project site and would include approximately 225 multifamily lots and 157 single family lots. Approximately 68.7 acres of the project site would be dedicated to landscaping and public open space. A 3.1-acre public park would be provided in the northern portion of the site and could include features such as a soccer field, playground, and possibly an interactive trail adjacent to existing wetlands. A pedestrian trail system would be constructed within the subdivision to provide pedestrian access through the open space areas of the site.

A system of internal roadways would be constructed to serve the subdivision and would cover approximately 18.5 acres of the site. The subdivision's main point of entry would be via Faith Lane from its intersection with SR-49, and area currently comprised of roadways adjoining roadside and commercial areas. Options under consideration for Faith Lane's interface with SR-49 include a development of a four-way roundabout at the intersection of China Garden Road/SR-49, to the east of the existing Faith Lane alignment; or a realignment of the existing Faith Lane alignment westward to connect with Silver Drive, and installation of two traffic signals at the intersections of Silver Drive/SR-49 and China Garden Road/SR-49. The roundabout option would require demolition of several buildings within the existing strip mall on the southeast corner of SR-49 and Faith Lane, including the red brick Carpenter house. No building demolitions would be required under the option to realign Faith Lane westwards to connect with Silver Drive

In addition, an approximately 0.5-mile segment of Fowler Lane, a narrow rural roadway that runs along the eastern edge of the proposed Dorado Oaks Subdivision site would be widened to a minimum paved width of 20 feet if that option for emergency vehicle access were selected.

Physical development under the proposed project would be required to be consistent with the applicable policies of the El Dorado County General Plan, including Policy 2.5.1.1 which requires that low intensity land uses shall be incorporated into new development projects to provide for the physical and visual separation of communities. Low intensity land uses may include any one or a combination of the following: parks and natural open space areas, special setbacks, parkways, landscaped roadway buffers, natural landscape features, and transitional development densities. The proposed project would change the visual character of the site, but the overall effect of the new development would be reduced by the inclusion of open space features that separate the clustered residential uses from adjacent roadways and residences and serve to minimize views of the residential appearance of the site. Consistent with Policy 7.3.3.5, existing wetlands would be integrated into the new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided.

In addition to required consistency with applicable policies of the El Dorado County General Plan, the proposed project is also subject to compliance with the numerous County standards and ordinances that address issues relating to visual resources, including development standards that regulate materials, setbacks, building heights, landscaping, and other design elements. In addition, the proposed project is subject to the County's design review process to ensure the development is consistent with applicable plans and design standards and is compatible with surrounding development. The aspects of design considered in the design review process include architectural design, site design, protection of environmentally sensitive features, and other relevant considerations pertinent to aesthetic and visual quality. Design review would ensure that development of the proposed project is consistent with applicable plans and design guidelines, is of high quality, and is compatible with surrounding development, thus avoiding adverse impacts to visual character.

In summary, while the proposed project would represent a substantial visual change to the existing condition on the project site, new physical development that would occur with implementation of the proposed project would be required to comply with applicable County policies and development standards that are designed to ensure that new development is visually compatible and complimentary to its site and surroundings. Required compliance with these policies and standards would ensure that impacts related to substantial degradation of the existing visual character or quality of public views of the site and its surroundings would be **less-than-significant**.

Mitigation Measures

None required.

Significance Determination

Less than significant.

Impact 4.1-2: The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. (*Less than Significant Impact*)

As discussed in the Environmental Setting above, residential and commercial development to the north, east, and west of the project site and headlights from vehicles traveling on SR-49 and

adjacent roadways currently produce a low to moderate amount of nighttime illumination in the project area. The Dorado Oaks Tentative Subdivision Map Site is currently undeveloped, does not contain existing lighting, and is almost entirely dark at night. Commercial buildings, adjacent residential uses, and vehicle headlights provide moderate levels of nighttime illumination in and adjacent to the SR-49 Intersection Area. The main source of nighttime light along the Optional Fowler Lane Improvement Area is from vehicle headlights along this predominantly unlighted rural roadway. Sources of reflective glare on and adjacent to the project site are minimal to nonexistent.

Construction

Construction of the proposed project would take place during daylight hours, within a standard daily construction time window. Nighttime construction activities are not anticipated. Lighting within the construction site would be for security purposes only and would be focused within the project site so as to not be directly visible to nearby sensitive receptors residing in nearby housing units. Therefore, the impact related to construction lighting would be **less than significant**.

Operation

The proposed project would include a variety of lighting, including street lighting, outdoor security lighting, and interior lighting that would be visible from outside of residential structures. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare, and if designed incorrectly, could be considered unattractive. Although nighttime light is a common feature of urban areas, spillover light can adversely affect light-sensitive uses, such as residential units at nighttime.

Chapter 130.34. (Outdoor Lighting) of the County's Zoning Ordinance contains standards and provisions related to exterior lighting. The primary purpose of this chapter is to regulate lighting to balance the safety and security needs for lighting with the County's desire to preserve dark skies and to ensure that light trespass and glare have negligible impacts on surrounding property. Outdoor Lighting Standards requires that all outdoor lighting shall be located, adequately shielded, and directed such that no direct light falls outside the property line, or into the public right-of-way.

Chapter 130.34. of the El Dorado County Municipal Code complies with General Plan Objective 2.8.1, providing standards consistent with prudent safety practices for the elimination of excess nighttime light and glare

Development on the project site could also increase daytime glare because of an increase in the number of windows and use of certain types of building materials. However, use of highly reflective building materials is not proposed as part of the project. Glare from car windshields and the windows of structures would include glare similar to other areas residential uses and would not significantly increase glare in areas within or surrounding the project site.

The proposed project lighting would be installed consistent with the El Dorado County standards and specifications and would be required to incorporate design features to minimize the effects of light and glare. Compliance with General Plan Policy 2.8.1.1 and Zoning Ordinance Section 130.34.020 would ensure that all outdoor lighting would be located, adequately shielded, and

directed such that no direct light falls outside the property line, or into the public right-of-way. Consequently, project impacts related to the creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area would be **less than significant**.

Mitigation Measures

None required.

Significance Determination

Less than significant.

Cumulative Impacts

Impact 4.1-3: The proposed project, in combination with other cumulative development, would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict with applicable zoning and other regulations governing scenic quality. (*Less than Significant Impact*)

The geographic context considered for cumulative impacts related to degradation of visual character includes the Diamond Springs community in El Dorado County and the surrounding area that, when combined with the proposed project, could result in cumulative impacts to visual character. Present projects would include any projects currently under construction and reasonably foreseeable future projects are those that could be developed or occur in the project site area by buildout of the El Dorado County General Plan.

As discussed above, the proposed project would provide for development of new residential uses, open space, roadways, and infrastructure on a site comprised primarily of oak woodlands and other natural features. Physical development under the proposed project and other development projects in the County are required to comply with County policies and standards that address issues relating to visual resources, including development standards that regulate materials, setbacks, building heights, landscaping, and other design elements. In addition, the proposed project and other development projects in the County that require discretionary review and approval are subject to the County's design review process to ensure the development is consistent with applicable plans and design standards and is compatible with surrounding development. The aspects of design considered in the design review process include architectural design, site design, protection of environmentally sensitive features, and other relevant considerations pertinent to aesthetic and visual quality. Consequently, cumulative impacts related to substantial degradation of visual character would be **less than significant**.

Mitigation Measures

None required.

Significance Determination

Less than significant.

Impact 4.1-4: The proposed project, in combination with other cumulative development, would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. (*Less than Significant Impact*)

The geographic context considered for cumulative impacts related to the creation of adverse light and glare includes the Diamond Springs community in El Dorado County and the surrounding area that, when combined with the proposed project, could result in cumulative impacts to visual character. Present projects would include any projects currently under construction and reasonably foreseeable future projects are those that could be developed or occur in the project site area by buildout of the El Dorado County General Plan. The cumulative effect of this development could result in a cumulative loss of available nighttime views resulting in a potentially significant cumulative effect.

The cumulative context for glare is the geographic area where glare that is generated by the proposed project is also exposed to glare from other cumulative projects. This would primarily include development in the vicinity of the proposed project. It should be noted that glare is a project-specific effect, caused by individual occurrences that do not necessarily lead to cumulative effects. The cumulative effects would typically be annoyance and awareness that glare is recurring in an area.

As discussed above, the proposed project would include a variety of lighting, including street lighting, outdoor security lighting, and interior lighting that would be visible from outside of residential structures. The proposed project lighting would be installed consistent with the El Dorado County standards and specifications and would be required to incorporate design features to minimize the effects of light and glare. Compliance with County policies and standards would ensure that all outdoor lighting would be located, adequately shielded, and directed such that no direct light falls outside the property line, or into the public right-of-way. Compliance by future development in the county, including development allowed under the proposed project, with existing County policies and standards would limit excessive lighting and the cumulative impact would be **less than significant**.

Mitigation Measures

None required.

Significance Determination

Less than significant.

4.1.5 References

El Dorado County, 2003. *El Dorado County General Plan Draft Environmental Impact Report. State Clearinghouse No. 2001082030*. Prepared by El Dorado County Board of Supervisors Office and EDAW.

4.2 Air Quality and Greenhouse Gas Emissions

4.2.1 Introduction

This section addresses the potential impacts of the project on ambient air quality and its potential to expose people to unhealthful pollutant concentrations, as well as impacts of the project on climate change. This section also identifies mitigation measures to reduce the severity of significant air quality or greenhouse gas (GHG) impacts from the project. The analysis included in this section was developed based on project-specific construction and operational features and assumptions, traffic information provided by the traffic consultant (See Section 4.13, *Transportation*), and guidance provided by the El Dorado County Air Quality Management District's (EDCAQMD) *Guide to Air Quality Assessment* (EDCAQMD, 2002).

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Relevant comments identified topics of concern that included two statements that the development would add to air pollution in the area.

4.2.2 Environmental Setting

Air quality is affected by the quantity, type, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Wind speed, wind direction, barometric pressure and air temperature combined with geographic features such as mountains and valleys determine how air pollutant emissions affect local air quality.

The project area is located in the unincorporated Diamond Springs region in El Dorado County, California, about three miles south of Placerville and 40 miles east of downtown Sacramento. U.S. Highway 50 (US-50) provides regional access to the site, while State Route 49 (SR-49) provides the most direct access to the project area. The Dorado Oaks Tentative Subdivision Map Site is currently vacant and generates no direct or indirect emissions related to air quality or GHGs. The SR-49 Improvement Area and the Optional Fowler Lane Improvement Area currently serve as existing roadways.

The project site lies within the Mountain Counties Air Basin (MCAB or air basin) and is under the jurisdiction of the EDCAQMD. The MCAB covers approximately 11,000 square miles and encompasses Plumas County, Sierra County, Nevada County, Amador County, Calaveras County, Tuolumne County, and Mariposa County, as well as portions of El Dorado County and Placer County.

Climate and Topography

The MCAB includes topographic features that regulate the climate including the northern Sierra Nevada Mountains. Near the mountain range, elevations can reach 10,000 feet whereas elevations near the Sacramento County boundary are generally several hundred feet. These mountain ranges and elevation variations hinder dispersion and can create meteorological conditions leading to high pollutant concentrations.

The MCAB has a variable climate characterized by high precipitation in the mountain ranges and lower moisture levels towards the western boundary of the air basin. Due to the wide range of elevations, temperatures vary throughout the air basin within distinct microclimates. During the summer, temperatures in the mountains range from 70 to 80 degrees Fahrenheit, whereas temperatures in the western parts of the air basin can exceed 100 degrees Fahrenheit. In the winter, temperatures in the mountain ranges are generally below freezing, while temperatures in the western portion of the MCAB typically fall below 32 degrees Fahrenheit only at night (EDCAQMD, 2002).

During the summer, the MCAB receives a strong upwind flow of air from the Central Valley that transfers and deposits ozone precursors and ozone emissions from the Bay Area, the Sacramento Valley, and the San Joaquin Valley. The vertical and horizontal movement of air is an important atmospheric component involved in the dispersion and subsequent dilution of air pollutants. Without movement, in highly stable conditions, air pollutants can collect and concentrate in a single area, increasing the associated health hazards. Topographic conditions within the MCAB hinder dispersion of air pollutants and cause shallow vertical mixing which leads to high pollutant concentrations. The air basin also experiences inversion layers that restrict the vertical dispersion of pollutants released near ground level and can lead to localized increase in carbon monoxide (CO) concentrations during the winter (EDCAQMD, 2002).

Air Pollutants of Concern

Air pollutants of concern within the MCAB include criteria air pollutants and toxic air contaminants (TACs), along with GHGs which are discussed in a separate section below.

Criteria Air Pollutants

Criteria air pollutants are a group of six common air pollutants for which the United States Environmental Protection Agency (U.S. EPA) has set ambient air quality standards. Criteria air pollutants include ground-level ozone, CO, nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM) in size fractions of 10 microns or less in diameter (PM₁₀) and 2.5 microns or less in diameter (PM_{2.5}), and lead. Most of the criteria pollutants are directly emitted. Ozone, however, is a secondary pollutant that is formed in the atmosphere by chemical reactions between nitrogen oxides (NO_x) and reactive organic gases (ROG). In addition to the criteria air pollutants identified by the U.S. EPA, California has identified four criteria air pollutants (visibility reducing particulates, sulfates, hydrogen sulfide, and vinyl chloride).

Criteria air pollutants of concern in the MCAB include ozone, PM_{2.5}, and PM₁₀, as concentrations of these pollutants exceed either state standards, federal standards, or both. Concentrations of CO, NO₂, SO₂, lead, hydrogen sulfide, sulfates, vinyl chloride, and visibility reducing particles monitored at the ambient air quality monitoring stations within the MCAB are below the state and national air quality standards.

Ground-Level Ozone

As discussed above, ground-level ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ozone precursors ROG (also referred to as volatile organic compounds [VOC]) and NO_x. The main sources of ROG in the

MCAB are the evaporation of solvents, paints, and fuels; the main sources of NO_x are combustion processes (including motor vehicle engines). Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through a photochemical reaction process.

Ozone causes eye irritation, airway constriction, and shortness of breath, and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. People most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers. In addition, people with certain genetic characteristics, and people with reduced intake of certain nutrients, such as vitamins C and E, are at greater risk from ozone exposure. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and airway inflammation. It also can reduce lung function and harm lung tissue. Ozone can worsen bronchitis, emphysema, and asthma, leading to increased medical care. Ozone also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges and wilderness areas. In particular, ozone harms sensitive vegetation during the growing season (United States Environmental Protection Agency [U. S. EPA], 2018a).

Particulate Matter

PM₁₀ and PM_{2.5} represent the fractions of PM that can be inhaled into air passages and the lungs and can cause adverse health effects. Some sources of PM, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect.

PM contains microscopic solids or liquid droplets that are so small that they can be inhaled and cause serious health problems. Of these, PM_{2.5} particles pose the greatest risk to health, because they can get deep into the lungs, and some may even enter the bloodstream (U.S. EPA, 2018b). Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Due to this increasing awareness of the health risks posed by PM_{2.5}, it is now more heavily regulated in Districts throughout California.

Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than a health hazard. PM_{2.5} is the main cause of reduced visibility (haze) in parts of the United States, including many national parks and wilderness areas.

Nitrogen Dioxide

NO₂ is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO₂. Aside from its contribution to ozone formation, NO₂ can increase the risk of acute and chronic respiratory disease and reduce visibility. NO₂ may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels.

Carbon Monoxide

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure of humans to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impaired central nervous system function, and angina (chest pain) in persons with serious heart disease. Very high concentrations of CO can be fatal.

Other Criteria Air Pollutants

Other criteria air pollutants include SO₂ and lead, which are not air pollutants of concern within the MCAB. SO₂ is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO₂ is also a precursor to the formation of PM, atmospheric sulfate, and atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Leaded gasoline (phased out in the United States beginning in 1973), lead based paint (on older houses and cars), smelters (metal refineries), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects, which puts children at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California.

Existing Ambient Air Quality

Nearby ambient air quality monitoring stations that are representative of the ambient air quality in the project area are the Placerville-Gold Nugget Way monitoring station, the San Andreas-Gold Strike Road monitoring station, and the Colifax-City Hall monitoring station. The Placerville-Gold Nugget monitoring station is located approximately 2.2 miles from the project site at 3111 Gold Nugget Way in Placerville, California; the San Andreas-Gold Strike Way monitoring station is located approximately 34 miles from the project site at 501 Gold Strike Road in San Andreas, California; and the Colifax-City Hall monitoring station is located approximately 30 miles from the site at 33 South Main Street in Colfax. The Placerville-Gold Nugget Way monitoring station collects data for 1-hour ozone and 8-hour ozone concentrations, while the San Andreas-Gold Strike Way station collects PM₁₀ data, and the Colifax-City Hall monitoring station collects PM_{2.5} data. **Table 4.2-1** presents a 4-year summary of air pollutant concentration data collected at these monitoring stations for ozone, PM₁₀, and PM_{2.5}, as well as the number of days the applicable standards were exceeded during the given year.

There are no monitoring stations located within the air basin that collect data for either NO₂ or CO. Monitoring data from outside of the county would not be representative of the air quality at the project site and is therefore not included in Table 4.2-1.

**TABLE 4.2-1
 SUMMARY OF AIR QUALITY MONITORING DATA (2016–2019)**

Pollutant	National / State Standard	2016	2017	2018
Ozone				
Maximum 1-hour concentration, ppm	0.090 ^a	0.112	0.104	0.115
Number of days above State 1-Hour standard		9	1	8
Maximum 8-hour concentration, ppm	0.070	0.095	0.085	0.100
Number of days above National/State 8-Hour standard ^d		41/45	18/21	28/31
Respirable Particulate Matter (PM10)				
Annual average concentration, µg/m ³	20 ^a	12.2	*	*
Maximum 24-Hour concentration (national/state), µg/m ³	150 / 50	28.2 / 27.6	106.3 / 101.3	69.4 / 66.8
Estimated number of days above National 24-Hour standard ^c		0	*	0
Estimated number of days above State 24-Hour standard ^c		0	*	*
Fine Particulate Matter (PM_{2.5})				
Annual average concentration, µg/m ³	12.0 / 12.0	7.5	6.1	11
Maximum 24-Hour concentration, µg/m ³	35 ^b	26.2	48.8	87.1
Estimated number of days above National 24-Hour standard ^c		*	*	*

NOTES:

Number of days exceeded is for all days in a given year, except for particulate matter. PM₁₀ and PM_{2.5} are monitored every six days. Ozone monitoring data from Placerville-Golden Nugget Way Station (CARB 2019). PM₁₀ monitoring data from San Andreas-Gold Strike Road monitoring station (CARB 2019). PM_{2.5} monitoring data from the Colfax-City Hall monitoring station. The CARB and U.S. EPA use different methods to calculate the emissions for certain criteria air pollutants for comparisons to the state and national standards.

Bold values are in excess of applicable standard.

ppm = parts per million; µg/m³ = micrograms per cubic meter; NA = No data or insufficient data.

* mean there was insufficient data available to determine the value.

- a. State standard, not to be exceeded.
- b. National standard, not to be exceeded.
- c. Particulate matter sampling schedule of one out of every six days, for a total of approximately 60 samples per year. Estimated days exceeded mathematically estimates of how many days concentrations would have been greater than the level of the standard had each day been monitored.
- d. State and national statistics may differ because national 8-hour averages are truncated to three decimal places; state 8-hour averages are rounded to three decimal places; state criteria for ensuring that data are sufficiently complete for calculating 8-hour averages are more stringent than the national criteria.

SOURCE: CARB, 2020.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances designated by the State of California as capable of causing short-term (acute) and long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances and may be emitted from a variety of common sources including gasoline stations, automobiles, diesel engines, dry cleaners, industrial operations, and painting operations. TACs of concern, related to the proposed project, include diesel particulate matter (DPM) and asbestos.

Diesel Particulate Matter

The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of diesel particulate matter (DPM) are higher near heavily traveled highways and rail lines with diesel locomotive operations.

The California Air Resources Board (CARB) identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans. It is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM. More than 90 percent of DPM is less than 1 μm in diameter, and thus is a subset of $\text{PM}_{2.5}$; therefore, DPM also contributes to the same non-cancer health effects as exposure to $\text{PM}_{2.5}$ discussed above.

Regulation of diesel engines and fuels has decreased DPM levels by 68 percent since 1990. Furthermore, CARB estimates that emissions of DPM in 2035 will be less than half of that in 2010, even with increasing vehicle miles traveled (VMT) (CARB, 2016a). Nonetheless, based on 2012 estimates of statewide exposure, DPM is estimated to increase statewide lifetime excess cancer risk by 520 cancers per million residents.

Asbestos

Asbestos is a fibrous mineral and used as a processed component of building materials. Because asbestos has been proven to cause serious adverse health effects, including asbestosis and lung cancer, it is strictly regulated based on its natural widespread occurrence and its use as a building material. When building materials containing asbestos are disturbed, asbestos fibers may be released and suspended in ambient air. Asbestos is also naturally occurring in ultramafic rock (a rock type commonly found in California), but its occurrence with the project area has a low probability (California Department of Conservation, 2000). Based on the Asbestos Review Area Map for El Dorado county, the project area is not identified as containing naturally occurring asbestos (EDCAQMD, 2018).

Odors

Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

EDCAQMD identifies the common types of facilities that have been known to produce odors. Some of the major sources are associated with wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, refineries and asphalt batch plants. There are no such odor sources located in the vicinity of the project area.

Sensitive Land Uses

Air quality does not affect all individuals or groups within the population in the same way. Some groups are more sensitive to adverse health effects caused by exposure to air pollutants than others. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, those with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases.

Land uses such as schools, children's day care centers, hospitals, and nursing and convalescent homes are considered sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Parks and playgrounds are considered moderately sensitive to poor air quality because persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality; however, exposure times are generally far shorter in parks and playgrounds than in residential locations and schools, which typically reduces the overall health risk associated with pollutant exposure. Residential areas are considered more sensitive to air quality conditions compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions. Workers are not considered sensitive receptors because all employers are required to follow regulations set forth by the Occupation Safety and Health Administration (OSHA) to ensure the health and well-being of their employees, including protecting them from air pollution.

The proposed Dorado Oaks Subdivision site is surrounded by residences to the north, south, east and west. In addition to residential neighborhoods, there are multiple schools and daycares located in the project vicinity but none are located within 1,000 feet of the subdivision site. The nearest schools and daycare centers include the following. Reported distances are as measured from the boundary of the subdivision site.

- Independence High School, located approximately 1,000 feet to the west of the northernmost corner of the project site;
- Woodson School, located approximately 1,050 feet to the east of the northernmost corner of the project site;
- Westside Christian Preschool and Church, located approximately 1,400 feet northwest of the northernmost corner of the project site;
- Purple Butterfly Daycare, located approximately 1,600 feet west of the southwestern corner of the project site; and
- Country Kids Daycare & Preschool, located approximately 1,700 feet east of the northernmost corner of the project site.

Greenhouse Gas Emissions and Climate Change

“Global warming” and “climate change” are common terms used to describe the increase in the average temperature of the Earth's near-surface air and oceans since the mid-20th Century. Natural processes and human actions have been identified as impacting climate. The International

Panel on Climate Change (IPCC) has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. Since the 19th Century, however, increasing GHG concentrations resulting from human activity such as fossil fuel combustion, deforestation, and other activities are believed to be a major factor in climate change. GHGs in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the Earth and is reflected back into space – a phenomenon sometimes referred to as the “greenhouse effect.” Some GHGs occur naturally and are necessary for keeping the Earth’s surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have trapped solar radiation and decreased the amount that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) are the principal GHGs. When concentrations of these gases exceed historical concentrations in the atmosphere, the greenhouse effect is intensified. CO₂, CH₄, and N₂O occur naturally and are also generated through human activity. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ primarily results from off-gassing,¹ natural gas leaks from pipelines and industrial processes, and incomplete combustion; and is associated with agricultural practices, landfills, energy providers, and other industrial facilities. N₂O emissions are also largely attributable to agricultural practices and soil management. Other human-generated GHGs include fluorinated gases such as SFCs, PFCs, and SF₆, which have much higher heat-absorption potential than CO₂, and are byproducts of certain industrial processes. Carbon dioxide sinks include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution, which are two of the largest reservoirs for CO₂ sequestration.

CO₂ is the reference gas for climate change, as it is the GHG emitted in the highest volume. The effect that each of the GHGs have on global warming is the product of the mass of their emissions and their global warming potential (GWP). GWP indicates how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂. For example, CH₄ and N₂O are substantially more potent GHGs than CO₂, with GWPs of approximately 25 and approximately 298 times that of CO₂, which has a GWP of 1 (CARB, 2020).

In emissions inventories, GHG emissions are typically reported as metric tons of CO₂ equivalents (MT CO₂e). CO₂e is calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH₄ and N₂O have much higher GWPs than CO₂, CO₂ is emitted in higher quantities and it accounts for the majority of GHG emissions in CO₂e, both from developments and human activity in general.

Effects of Climate Change on the Environment

Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, an increase in high ground-level ozone

¹ Off-gassing is defined as the release of chemicals under normal conditions of temperature and pressure.

days, larger forest fires, and increased drought in some parts of the state. Secondary effects are likely to include the displacement of thousands of coastal businesses and residences (as a result of sea level rise), impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity. As the CARB *Climate Change Scoping Plan* (CARB, 2008) noted, the legislature, in enacting Assembly Bill (AB) 32 – The Global Warming Solutions Act, found that global warming would cause detrimental effects to some of the state’s largest industries, including agriculture, winemaking, tourism, skiing, commercial and recreational fishing, forestry, and the adequacy of electrical power generation. The *Climate Change Scoping Plan* states: “The impacts of global warming are already being felt in California. The Sierra snowpack, an important source of water supply for the state, has shrunk 10 percent in the last 100 years. It is expected to continue to decrease by as much as 25 percent by 2050. World-wide changes are causing sea levels to rise – about 8 inches of increase has been recorded at the Golden Gate Bridge over the past 100 years – threatening low coastal areas with inundation and serious damage from storms.” AB 32 is discussed further below in Section 4.2.3.

Ecosystem and Biodiversity Impacts

Climate change is expected to have effects on diverse types of ecosystems. As temperatures and precipitation change, seasonal shifts in vegetation will occur; this could affect the distribution of associated flora and fauna species. The IPCC states that “a large fraction of both terrestrial and freshwater species faces increased extinction risk under projected climate change during and beyond the 21st century, especially as climate change interacts with other stressors, such as habitat modifications, over exploitation, and invasive species” (IPCC, 2014a). Forest dieback poses risks to carbon storage, biodiversity, wood production, water quality, and economic activity. Wildfires, which are an important control mechanism in many ecosystems, are becoming more severe and more frequent, making it difficult for native plant species to repeatedly re-germinate. Continued emission of GHGs will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems (IPCC, 2014b).

Human Health Impacts

Climate change will likely increase the risk of vector-borne infectious diseases, particularly those found in tropical areas and spread by insects such as malaria, dengue fever, and encephalitis. Cholera, which is associated with algal blooms, could also increase. While these health effects would largely affect tropical areas in other parts of the world, effects would also be felt in California. Warming of the atmosphere would be expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma. Extreme heat events would also be expected to occur with more frequency and could adversely affect the elderly, children, and the homeless. Finally, the water supply impacts and seasonal temperature variations expected as a result of climate change could affect the viability of existing agricultural operations, making the food supply more vulnerable (USGCRP, 2016).

Greenhouse Gas Emissions Estimates

There is international scientific consensus that human-caused increases in GHGs have contributed and will continue to contribute to global warming. Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO₂

emissions (and thus substantial increases in atmospheric concentrations of CO₂). In 1994, atmospheric CO₂ concentrations were found to have increased by nearly 30 percent above pre-industrial concentrations.

Global Emissions

Worldwide emissions of GHGs in 2018 was approximately 51.8 billion MT CO₂e (PBL Netherlands Environmental Assessment Agency, 2019). This includes both ongoing emissions from industrial and agricultural sources, but excludes effects of changes in carbon sinks and carbon sequestration from land use changes.

United States Emissions

In 2017, the United States emitted about 6,457 million metric tons of CO₂e (MMTCO₂e). Of the four major emission sectors—residential, commercial, industrial, and transportation—transportation accounts for the highest fraction of GHG emissions (approximately 28.9 percent); these emissions are generated from direct fossil fuel combustion (U. S. EPA, 2019).

State of California Emissions

In 2017, California produced approximately 424 MMTCO₂e. Combustion of fossil fuels in the transportation sector was the single largest source of California’s GHG emissions in 2017, accounting for 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (24 percent), and the electric power sector (including both in-state and out-of-state sources) (15 percent) (CARB, 2019).

4.2.3 Regulatory Setting

Federal

Criteria Air Pollutants

The U.S. EPA is required by the federal Clean Air Act (CAA) to identify and establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The federal CAA identifies two types of NAAQS: primary and secondary. Primary standards provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

The U.S. EPA has set NAAQS for six principal pollutants, called criteria air pollutants. These criteria air pollutants include ozone, NO₂, SO₂, CO, PM, and lead. The original indicator for PM was total suspended particulates; currently the standards are in terms of PM₁₀ and PM_{2.5}. **Table 4.2-2** presents the current NAAQS (and state ambient air quality standards) and provides a brief discussion of the principal sources for each pollutant.

**TABLE 4.2-2
STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS AND MAJOR SOURCES**

Pollutant	Averaging Time	State Standard	National Standard	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	Formed when ROG and NO _x react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hour	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hour ¹	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	100 ppb	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030 ppm	0.053 ppm	
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	75 ppb	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hour	---	0.5 ppm ²	
	24 hour	0.04 ppm	0.14 ppm	
	Annual Avg.	---	0.030 ppm	
Respirable Particulate Matter (PM ₁₀)	24 hour	50 ug/m ³	150 ug/m ³	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Avg.	20 ug/m ³	---	
Fine Particulate Matter (PM _{2.5})	24 hour	---	35 ug/m ³	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.
	Annual Avg.	12 ug/m ³	12.0 ug/m ³	
Lead	Monthly Ave.	1.5 ug/m ³	---	Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 ug/m ³	
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Geothermal power plants, petroleum production and refining
Sulfates	24 hour	25 ug/m ³	No National Standard	Produced by the reaction in the air of SO ₂ .
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	See PM _{2.5} .
Vinyl chloride	24 hour	0.01 ppm	No National Standard	Polyvinyl chloride and vinyl manufacturing.

NOTES:

1. A more stringent 8-hour carbon monoxide state standard exists around Lake Tahoe (6 ppm).

2. Secondary national standard.

ppb = parts per billion; ppm = parts per million; ug/m³ = micrograms per cubic meter.

SOURCES: CARB, 2016b; CARB, 2009.

The U.S. EPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutant, based on whether or not the NAAQS have been achieved in that area. The classification is determined by comparing actual monitoring data with the standards. “Unclassified” is defined by the federal CAA as any area that cannot be classified, on the basis of available information, as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant. Furthermore, an area may be designated attainment with a maintenance plan (also known as a maintenance area), which means that an area was previously

nonattainment for a criteria air pollutant but has since been redesignated as attainment. These areas have demonstrated through modeling that they have sufficient controls in place to meet and maintain the NAAQS.

El Dorado County’s attainment status for the criteria pollutants with respect to the federal and state standards is summarized in **Table 4.2-3**. The County is considered a federal non-attainment area for 8-hour ozone and PM_{2.5} standards.

**TABLE 4.2-3
 EL DORADO COUNTY ATTAINMENT STATUS**

Pollutant and Averaging Time	Designation/Classification	
	State Standards	Federal Standards
Ozone (1-hour)	Nonattainment (majority of western portion up to Tahoe), Serious Nonattainment (western portion up to about Cameron Park)	No Federal Standard
Ozone (8-hour)	Nonattainment (western portion up to Tahoe)	Severe Nonattainment (western portion up to Tahoe)
Carbon Monoxide (CO)	Unclassified	Unclassified/Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO ₂)	Attainment	Unclassified/Attainment
Respirable Particulate Matter (PM ₁₀)	Nonattainment	Unclassified
Fine Particulate Matter (PM _{2.5})	Unclassified	Nonattainment (western portion up to Pollock Pines)
Lead	Attainment	Attainment
Visibility Reducing Particles	Unclassified	No Federal Standard
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Vinyl Chloride	--	No Federal Standard

NOTES:

CARB makes area designations for ten criteria pollutants (ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, lead, visibility reducing particles, sulfates, and hydrogen sulfide). CARB does not designate areas according to the vinyl chloride standard.

-- Information not available

SOURCES: CARB, 2018; Correspondence with EDCAQMD, 2020.

The federal CAA requires each state to prepare an air quality control plan, referred to as a State Implementation Plan (SIP). The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by the agencies with jurisdiction over them. The U.S. EPA has responsibility of reviewing all state SIPs to determine if they conform to the mandates of the federal CAA and will achieve air quality goals when implemented.

Hazardous Air Pollutants

Federal laws use the term “Hazardous Air Pollutants” (HAPs) to refer to the same types of compounds that are referred to as TACs under State law. Currently, 187 substances are regulated as HAPs. The federal CAA requires the U.S. EPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare. NESHAPs potentially applicable to the project include the National Emission Standard for Asbestos (40 CFR 61, Subpart M).

Greenhouse Gases

United States Environmental Protection Agency “Endangerment” and “Cause or Contribute” Findings

The U.S. Supreme Court has held that the U.S. 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 U.S. EPA to regulate GHGs as pollutants under the CAA (127 S. Ct. 1438 (2007)). The Supreme Court ruled that GHGs fit within the CAA’s definition of a pollutant and the U.S. EPA had the authority to regulate GHGs.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the federal CAA (U.S. EPA, 2016):

- **Endangerment Finding:** The current and projected concentrations of the six key GHGs—CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Corporate Average Fuel Economy Standards

In 2014, the U.S. EPA and the Department of Transportation’s National Highway Traffic Safety Administration established a program that reduces GHG emissions and improves fuel economy for all new cars and trucks sold in the U.S. The program requires manufacturers to build a fleet that meets all federal and state requirements with an end target fuel economy of 54.5 miles per gallon by model year 2025. In January 2017, U.S. EPA issued its Mid-Term Evaluation of the GHG emissions standards, finding that it would be practical and feasible for automakers to meet the 2025 standards in model year 2022 vehicles through a number of existing technologies.

In August 2018, the U.S. EPA revised its 2017 determination, and issued a proposed rule that maintains the 2020 Corporate Average Fuel Economy (CAFE) and CO₂ standards for model years 2021 through 2026 (83 Fed. Reg. 42986). The estimated CAFE and CO₂ standards for model year 2020 are 43.7 miles per gallon (mpg) and 204 grams of CO₂ per mile for passenger cars and 31.3 mpg and 284 grams of CO₂ per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. On May 1, 2018, California, joined by 16 other states and the District of Columbia, filed a petition challenging the U.S. EPA’s proposed rule to revise the vehicle emissions standards, arguing that the U.S. EPA had reached

erroneous conclusions about the feasibility of meeting the existing standards. On October 25, 2019, the D.C. Circuit dismissed the challenges, concluding that it did not have jurisdiction to consider the U.S. EPA's withdrawal of the Obama administration's mid-term determination that model year 2022 to 2025 GHG emission standards promulgated in 2012 remained appropriate. The court noted that the withdrawal did not itself change the emission standards established in 2012 but only created the possibility that the standards could be modified in the future, similar to an agency's grant of a petition for reconsideration of a rule.² Accordingly, due to the uncertainty of future federal regulations, this analysis assumes that the existing CAFE standards will remain in place.

State

Criteria Air Pollutants

At the State level, CARB oversees air quality policies and regulations for air quality regulation in California. California has adopted its own air quality standards (California Ambient Air Quality Standards, or CAAQS) as shown in Table 4.2-2. California's ambient standards are at least as protective as the NAAQS and are often more stringent.

In 1988, California passed the California CAA (California Health and Safety Code Sections 39600 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or nonattainment based on state ambient air quality standards rather than the federal standards. The California CAA requires each air district, in which state air quality standards are exceeded, to prepare a plan that documents reasonable progress towards attainment. If an air basin (or portion thereof) exceeds the CAAQS for a particular criteria air pollutant, it is considered to be nonattainment for that criteria air pollutant until the area can demonstrate compliance. As indicated in Table 4.2-3, El Dorado County is classified as nonattainment for the state 1-hour and 8-hour ozone standards, as well as the state PM₁₀ standard.

Toxic Air Contaminants

The Toxic Air Contaminant Identification and Control Act was established in 1983 under AB 1807. A total of 243 substances have been designated TACs under California law; they include the 187 (federal) HAPs adopted in accordance with state law. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify, quantify, and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. Further regulations of diesel emissions by the CARB include the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Offroad Diesel Vehicle Regulation, and the New Offroad Compression Ignition Diesel Engines and Equipment Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment.

² The State of California's May 1, 2018 petition, the October 25, 2019 decision by the U.S. Court of Appeals for the D.C. Circuit, and other materials in the docket for Case No. 18-1114 are available online: <http://climatecasechart.com/case/california-v-epa-4>. Accessed May 15, 2020.

In 2004, CARB adopted a measure to limit idling of diesel-fueled commercial motor vehicles. Heavy-duty diesel vehicles with a Gross Vehicle Weight Rating of 10,000 lbs. or heavier are prohibited from idling for more than 5 minutes within California's borders. Exemptions to the rule apply for certain circumstances.

Title 24 – California Building Code Standards

The Building Code Standards for Residential and Nonresidential Buildings specified in Title 24, Part 6 of the California Code of Regulations were established in 1978 in response to a legislative mandate to reduce California's energy consumption and make for development of healthier, energy efficient buildings. The standards are updated approximately every 3 years to allow for consideration and possible incorporation of new energy-efficiency technologies and cleaner building methods.

The current 2019 Title 24 standards became effective on January 1, 2020 and requires that all new residential construction now install MERV 13 filters to reduce particulate impacts to indoor air quality. This regulation will greatly reduce PM_{2.5} and DPM concentrations in all indoor areas within the project site.

Greenhouse Gases

In California, the legal framework for GHG emission reduction has come about through an incremental set of Governors' Executive Orders, legislation, and regulations put in place since 2002. The major components of California's climate change initiative are identified below.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency, guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. The California Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the Natural Resources Agency adopted amendments to the State CEQA Guidelines, as required by SB 97. These State CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective March 18, 2010.

California Environmental Quality Act (CEQA)

The State CEQA Guidelines are embodied in the California Code of Regulations (CCR), Public Resources Code, Division 13, starting with Section 21000. State CEQA Guidelines section 15064.4 specifically addresses the significance of GHG emissions, requiring a lead agency to make a "good-faith effort" to "describe, calculate or estimate" GHG emissions in CEQA environmental documents. State CEQA Guidelines Section 15064.4 further states that the analysis of GHG impacts should include consideration of (1) the extent to which the project may increase or reduce GHG emissions, (2) whether the project emissions would exceed a locally applicable threshold of significance, and (3) the extent to which the project would comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the

reduction or mitigation of GHG emissions.” The CEQA Guidelines also state that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (State CEQA Guidelines Section 15064(h)(3)). The State CEQA Guidelines do not, however, set a numerical threshold of significance for GHG emissions.

The CEQA Guidelines also include the following direction on measures to mitigate GHG emissions, when such emissions are found to be significant:

Consistent with Section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency’s decision;
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project’s emissions;
- (4) Measures that sequester greenhouse gases; and
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.³

Assembly Bill 1493

In 2002, Governor Gray Davis signed AB 1493. AB 1493, also known as the “Pavley” regulations (named for the bill’s author, State Senator Fran Pavley), required CARB to develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the state.”

To meet the requirements of AB 1493, in 2004 CARB approved amendments to the CCR, adding GHG emissions standards to California’s existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1), require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross

³ State CEQA Guidelines section 15126.4(a).

vehicle weight rating of less than 10,000 pounds and that is designed primarily for the transportation of persons), beginning with model year 2009. For passenger cars and light-duty trucks with a loaded vehicle weight of 3,750 pounds or less, the GHG emission limits for model year 2016 are approximately 37 percent lower than the limits for the first year of the regulations, model year 2009. For light-duty trucks with a loaded vehicle weight of 3,751 pounds to a gross vehicle weight of 8,500 pounds, as well as for medium-duty passenger vehicles, GHG emissions were reduced approximately 24 percent between 2009 and 2016.

Because the Pavley regulations would impose stricter standards than those under the federal CAA, California applied to the U.S. EPA for a waiver under the federal CAA; this waiver was initially denied in 2008. In 2009, however, the U.S. EPA granted the waiver.

Advanced Clean Cars Program

In January 2012, the CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into standards for vehicle model years 2017 through 2025. The program strengthens the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state.

The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (CARB, 2017a).

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Arnold Schwarzenegger established Executive Order S-3-05, which set forth the following target dates by which statewide GHG emissions would be progressively reduced: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. As discussed below, the 2020 reduction target was codified in 2006 as AB 32. However, the 2050 reduction target has not been codified and the California Supreme Court has ruled that CEQA lead agencies are not required to use it as a significance threshold. *Cleveland National Forest Foundation v. San Diego Association of Governments* (2017) 3 Cal.5th 497.

Assembly Bill 32 and The Global Warming Solutions Act

In 2006, the California legislature passed AB 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq.), also known as the Global Warming Solutions Act. AB 32 required CARB to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels

by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipated that the GHG reduction goals will be met, in part, through local government actions. CARB identified a GHG reduction target of 15 percent from current levels for local governments (municipal and community-wide) and noted that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. The initial AB 32 emissions reduction limit was achieved in 2017, 3 years prior to the 2020 goal.

Executive Order B-30-15

In 2015, Governor Brown issued Executive Order B-30-15, establishing a GHG reduction target of 40 percent below 1990 levels by 2030. This goal was set to make it possible to reach the ultimate goal of AB 32 to reduce GHG emissions by 80 percent under 1990 levels by 2050. Specifically, the Executive Order directed CARB to update the Scoping Plan to express this 2030 target in metric tons. As discussed below, on September 8, 2016, Governor Jerry Brown signed SB 32, which codified the 2030 reduction target called for in Executive Order B-30-15. CARB's 2017 Scoping Plan update addresses the 2030 target.

Senate Bill 32 and Assembly Bill 197

Signed into law on September 8, 2016, SB 32 (Amendments to California Global Warming Solutions Act of 2006: Emission Limit) amended HSC Division 25.5 and codifies the 2030 target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The 2030 target is intended to ensure that California remains on track to achieve the goal set forth by Executive Order B-30-15 to reduce statewide GHG emissions by 2050 to 80 percent below 1990 levels. SB 32 states the intent of the legislature to continue to reduce GHGs for the protection of all areas of the state and especially the state's most disadvantaged communities, which are disproportionately impacted by the deleterious effects of climate change on public health. The law amended HSC Division 25.5 and established a new climate pollution reduction target of 40 percent below 1990 levels by 2030, while AB 197 included provisions to ensure the benefits of State climate policies include disadvantaged communities.

Climate Change Scoping Plan

Pursuant to AB 32, CARB adopted a *Climate Change Scoping Plan* in December 2008 (re-approved by CARB on August 24, 2011) outlining measures to meet the 2020 GHG reduction goals (CARB, 2008). In order to meet these goals, California had to reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from 2008 levels. The Scoping Plan relied on the requirements of SB 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions.

The Scoping Plan is required by AB 32 to be updated at least every 5 years. The *First Update to the Climate Change Scoping Plan* describes progress made to meet near-term emissions goals of AB 32, defines California's climate change priorities and activities for the next few years, and describes the issues facing the State as it establishes a framework for achieving air quality and climate goals beyond the year 2020. On December 14, 2017, CARB approved the final version of California's *2017 Climate Change Scoping Plan* (2017 Scoping Plan Update), which outlines the

proposed framework of action for achieving the 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels (CARB, 2017b). The 2017 Scoping Plan Update identifies key sectors of the implementation strategy, which includes improvements in low carbon energy industry, transportation sustainability, natural and working lands, waste management, and water. CARB determined that the target Statewide 2030 emissions limit is 260 MMTCO_{2e}, and that further commitments will need to be made to achieve an additional reduction of 50 MMTCO_{2e} beyond current policies and programs. The cornerstone of the 2017 Scoping Plan Update is an expansion of the Cap-and-Trade program to meet the aggressive 2030 GHG emissions goal represented by SB 32 and ensure achievement of the 2050 limit set forth by EO B-30-15.

SB 375 and the Metropolitan Transportation Plan/Sustainable Communities Strategy

In 2008 the legislature passed SB 375, which provides for regional coordination in land use and transportation planning and funding to help meet the AB 32 GHG reduction goals. SB 375 aligns regional transportation planning efforts, regional GHG emissions reduction targets, land use and housing allocations. SB 375 requires Regional Transportation Plans developed by the state's 18 metropolitan planning organizations to incorporate a "sustainable communities strategy" (SCS) that will achieve GHG emission reduction targets set by CARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects, such as transit-oriented development. The Sacramento Area Council of Government's (SACOG) serves as the metropolitan planning organization (MPO) for Placer, Sacramento, El Dorado, Yuba, Sutter, and Yolo counties and SACOG's 2020 MTP/SCS would be applicable to the Project. For the 2020 MTP/SCS, the CARB assigned SACOG a 19 percent GHG reduction target. Specifically, this target is the percent reduction in passenger vehicle GHG emissions per capita, compared to year 2005. Primary factors related to policies and actions of the MTP/SCS to achieve this goal include shortened vehicle trips; increased transit, bike and walk trips; express lanes and pay-as-you-go fees; implementing intelligent transportation systems and transportation system management; and use of electric vehicles (SACOG, 2019).

Executive Order B-16-12

In 2012, Governor Brown issued Executive Order B-16-12, ordering that California's State vehicle fleet increase the number of zero-emission vehicles through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles be zero-emission by 2015 and 25 percent of fleet purchases of light-duty vehicles be zero-emission by 2020. The executive order also requires that California target for 2050 a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels.

California Renewables Portfolio Standard

SB 1078 established the Renewables Portfolio Standard (RPS) in 2002, which required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from eligible renewable sources by 2017. SB 107 changed the target date to 2010. In November 2008, Executive Order S-14-08 expanded the state's RPS goal to 33 percent renewable power by 2020. In September 2009, Executive Order S-21-09 directed CARB (under its AB 32 authority) to enact regulations to help the state meet the 2020 goal of 33 percent renewable energy. The 33 percent by 2020 RPS goal was codified in April 2011 with SB X1-2. The updated RPS applies to all electricity retailers in the state,

including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. SB 350, discussed below, was signed in October 2015 and requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Most recently, SB 100, signed by Governor Brown on September 10, 2018, increases the RPS requirement to 60 percent eligible renewables by 2030 and 100 percent by 2045.

Senate Bill 350

SB 350 (Clean Energy and Pollution Reduction Act of 2015) was signed into law on October 7, 2015, establishing new goals for clean energy, clean air, and GHG reduction goals for 2030 and beyond. SB 350 requires the following:

- Increase California’s renewable electricity procurement goal under the RPS from 33 percent by 2020 to 50 percent by 2030,
- Double existing building energy efficiency by 2030; and
- Facilitate the growth of renewable energy markets within the western U.S. by reorganizing the California Independent System Operator.

California Building Energy Efficiency Standards

California’s Energy Efficiency Standards for Residential and Nonresidential Buildings were established by the California Energy Commission (CEC) in Title 24, Part 6 of the CCR. These standards mandate a reduction in California’s energy consumption and are updated on a 3-year cycle to allow for innovation and incorporation of new energy efficient technologies and methods. Buildings for which an application for a building permit is submitted on or after January 1, 2017, must follow the 2016 standards (CEC, 2015). Applications for building permits after January 1, 2020 would have to be compliant with the 2019 standards which went into effect on January 1, 2020. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

California Green Building Standards Code

In January 2010, the State of California adopted the California Green Building Standards Code (CALGreen) that established new sustainable building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels. This Code went into effect as part of local jurisdictions’ building codes on January 1, 2011, and was most recently updated as the 2019 California Green Building Standards Code, which became effective January 1, 2020 (California Building Standards Commission, 2019).

For new multifamily dwellings, the 2019 CalGreen Code mandates that “if residential parking is available, ten percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE [electric vehicle supply equipment] (California Building Standards Commission, 2019).”

These provisions are an important part of the State’s approach to encouraging and facilitating forms of commuting that are less GHG intensive and GHG-free in this case (California Building Standards Commission, 2019).

Low Carbon Fuel Standard

In January 2007, Governor Brown enacted Executive Order S-01-07, which mandates the following: (1) establish a statewide goal to reduce the carbon intensity of California’s transportation fuels by at least 10 percent by 2020; and (2) adopt a Low Carbon Fuel Standard for transportation fuels in California. The overall goal of the low carbon fuel standard is to lower the carbon intensity of California transportation fuel. With adoption of the 2017 Scoping Plan Update, the standard has been changed to a reduction in fuel carbon intensity of at least 18 percent by 2030.

Local

El Dorado County Air Quality Management District

The EDCAQMD is the regional agency responsible for air quality regulation within El Dorado County. The agency regulates air quality through its planning and review activities and has permit authority over most types of stationary emission sources of criteria air pollutants and TACs.

EDCAQMD – Guide to Air Quality Assessment

The EDCAQMD published the Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts under the California Environmental Quality Act in February 2002 (EDCAQMD, 2002). This guide outlines qualitative and quantitative significance criteria, methodologies for the estimation of construction and operational emissions, and mitigation measures to reduce such impacts. The qualitative significance criteria include a description of types of land uses conflicts that should be avoided for sensitive receptors, and how to reduce and/or avoid offensive odors from new development. The quantitative significance criteria include thresholds of significance for the ozone precursors ROG (82 pounds/day) and NO_x (82 pounds/day). There are no quantitative significance criteria for other criteria pollutants, but a project is considered to have a significant impact on air quality if it will cause or contribute significantly to a violation of the applicable national or state ambient air quality standards. The quantitative and qualitative significance criteria are similar to the criteria for and developed in coordination with the surrounding air quality districts. To reduce NO_x, ROG, and PM₁₀ emissions from off-road diesel construction equipment, the EDCAQMD recommends measures to reduce visible dust and emissions associated with construction vehicles, including off-road vehicles, and equipment.

EDCAQMD Clean Air Plans

All areas designated as nonattainment are required to prepare plans describing the measures that would be implemented to meet the air quality standards by its attainment dates. Air quality planning for the western portion of the MCAB including the project site, is included as part of the Sacramento region which includes all of Sacramento and Yolo counties and portions of Placer, El Dorado, Solano, and Sutter counties. Therefore, the project area is subject to Sacramento Regional 8-Hour Ozone Attainment and Regional Further Progress Plan (Plan). The Sacramento

region has attained the PM_{2.5} standards in 2015; therefore, the PM_{2.5} Maintenance Plan and Redesignation Request applies to the project area.

EDCAQMD Rules and Regulations

The construction of the proposed project would be applicable to EDCAQMD rules and regulations with regard to construction equipment, PM generation, architectural coating, and paving materials. The project would be subject to the following applicable requirements established by the EDCAQMD:

Rule 202 (Visible Emissions). Limits the discharge pollutants darker in color than shade No. 1 on the Ringlemann Chart or that obscure a human observers view.

Rule 205 (Nuisance). Prohibits emissions of contaminants that are a nuisance or cause harm to the public.

Rule 207 (Particulate Matter). Limits emissions of PM to 0.1 grains per cubic foot of dry exhaust gas.

Rule 215 (Architectural Coatings). Imposes limits on the VOC content of architectural coatings within the EDCAQMD. The Rule also includes regulations for painting practices, thinning, container labeling and reporting.

Rule 223 (Fugitive Dust – General Requirements). Limits emissions of fugitive dust darker than No. 0 on the Ringlemann Chart or in excess of 0 percent opacity beyond the boundary line of the emissions source. Limits 24-hour average emissions of PM₁₀ to 50 micrograms per cubic meter.

Rule 223.1 (Fugitive Dust – Construction, Bulk Material Handling, Blasting, Other Earthmoving Trackout Prevention). Limits visible emissions to shade No. 0 on the Ringlemann Chart or 0 percent opacity at 50 feet from the point of origin; limits visible emissions to shade No. 1 on the Ringlemann Chart or 20 percent opacity at the point of origin. Requires application of Best Management Practices, imposes vehicle speed limitations, and includes requirements for trackout management.

Rule 224 (Cutback and Emulsified Asphalt Paving Materials). Prohibits the use of rapid or medium cure cutback asphalt and certain slow cure cutback asphalt. This rule also prohibits the use of certain emulsified asphalt containing organic compounds that evaporate at 260 degrees Celsius.

Rule 300 (Open Burning). Prescribes procedures, conditions and permit requirements for open burning of vegetation and agricultural waste.

Environmental Vision for El Dorado County Resolution No. 29-2008

In 2008, the El Dorado County Board of Supervisors passed the Environmental Vision for El Dorado County Resolution No. 29-2008 to address the issue of GHG emissions and climate change. The resolution describes goals to reduce the County's contributions to climate change from various sectors including transportation, planning and construction, waste, energy, and

agriculture through measures that promote air quality, water quality, education, outreach, and awareness (El Dorado County, 2008).

El Dorado County General Plan

The El Dorado County General Plan (General Plan; El Dorado County, 2019) includes various goals, policies, objectives, and measures to guide the development within the County. The General Plan does not specifically include policies to reduce GHG emissions, however, it does include strategies that could indirectly reduce GHG emissions. Most of the policies and measures fall under the responsibility of either the County or the EDCAQMD. The Land Use; Transportation and Circulation; Public Services and Utilities; and Public Health, Safety, and Noise elements of the General Plan include the following goals and policies that may impact air quality and/or GHGs.

Public Services and Utilities Element

Goal 5.6: Sufficient utility service availability consistent with the needs of a growing community.

Objective 5.6.2: Encourage development of energy-efficient buildings, subdivisions, development, and landscape designs.

Policy 5.6.2.1: Require energy conserving landscaping plans for all projects requiring design review or other discretionary approval.

Policy 5.6.2.2: All new subdivisions should include design components that take advantage of passive or natural summer cooling and/or winter solar access, or both, when possible.

Public Health, Safety, and Noise Element

Goal 6.7: Strive to achieve and maintain ambient air quality standards established by the U.S. Environmental Protection Agency and the California Air Resources Board; and minimize public exposure to toxic or hazardous air pollutants and air pollutants that create unpleasant odors.

Objective 6.7.1: Adopt and enforce Air Quality standards to reduce the health impacts caused by harmful emissions.

Policy 6.7.1.1: Improve air quality through land use planning decisions.

Policy 6.7.1.2: Support local and regional air quality improvement efforts.

Objective 6.7.4: Encourage project design that protects air quality and minimizes direct and indirect emissions of air contaminants.

Policy 6.7.4.1: Reduce automobile dependency by permitting mixed land use patterns which locate services such as banks, child care facilities, schools, shopping centers, and restaurants in close proximity to employment centers and residential neighborhoods.

Policy 6.7.4.2: Promote the development of new residential uses within walking or bicycling distance to the County's larger employment centers.

Policy 6.7.4.4: All discretionary development applications shall be reviewed to determine the need for pedestrian/bike paths connecting to adjacent development and to common service facilities (e.g., clustered mail boxes, bus stops, etc.).

Policy 6.7.4.5: Specific plans submitted to the County shall provide for the implementation of all policies contained under Objective 6.7.4 herein.

Policy 6.7.4.6: The County shall regulate wood-burning fireplaces and stoves in all new development. Environmental Protection Agency (EPA)-approved stoves and fireplaces burning natural gas or propane are allowed. The County shall discourage the use of non-certified wood heaters and fireplaces during periods of unhealthy air quality.

Objective 6.7.6: Separate air pollution sensitive land uses from significant sources of air pollution.

Policy 6.7.6.1: Ensure that new facilities in which sensitive receptors are located (e.g., schools, child care centers, playgrounds, retirement homes, and hospitals) are sited away from significant sources of air pollution.

Policy 6.7.6.2: New facilities in which sensitive receptors are located (e.g. residential subdivisions, schools, childcare centers, playgrounds, retirement homes, and hospitals) shall be sited away from significant sources of air pollution.

Objective 6.7.7: Reduce construction related, short-term emissions by adopting regulations which minimize their adverse effects.

Policy 6.7.7.1: The County shall consider air quality when planning the land uses and transportation systems to accommodate expected growth, and shall use the recommendations in the most recent version of the El Dorado County Air Quality Management (AQMD) Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act, to analyze potential air quality impacts (e.g., short-term construction, long-term operations, toxic and odor-related emissions) and to require feasible mitigation requirements for such impacts. The County shall also consider any new information or technology that becomes available prior to periodic updates of the Guide. The County shall encourage actions (e.g., use of light-colored roofs and retention of trees) to help mitigate heat island effects on air quality.

4.2.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

Consistent with Appendix G of the CEQA Guidelines, air quality and climate change-related impacts are considered significant if implementation of the project under consideration would result in any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard.

- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

As stated in Appendix G of the State CEQA Guidelines, the significance criteria established by the applicable air districts may be relied on to make the above determinations. The significance thresholds used for project impact analyses are based on the EDCAQMD's CEQA Guide to Air Quality Assessment and are detailed below. Applicability of significance criteria from the neighboring Placer County Air Pollution Control District (PCAPCD) is also included.

Construction Impacts

Ozone Precursors

Ozone precursor emissions of ROG and NO_x are considered to be significant impact if construction of the project would generate emissions exceeding 82 pounds per day (lbs/day) of ROG or NO_x (EDCAQMD 2002: Table 3.2).

Particulate Matter and Fugitive Dust Emissions

EDCAQMD does not have adopted quantitative thresholds for PM₁₀ and PM_{2.5}. The EDCAQMD CEQA guide states:

“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 project property lines, in compliance with Rule 403 of the South Coast AQMD [SCAQMD].”

The PCAPCD, for the portion of the district located in MCAB, considers PM₁₀ emissions significant if implementation (construction and operation) of the project would generate emissions exceeding 82 lbs/day of PM₁₀ (PCAPCD, 2017). PM_{2.5} is a subset of PM₁₀ emissions; therefore, if PM₁₀ emissions are below the applicable threshold, an exceedance for PM_{2.5} would not be expected. Although no portion of the project is within Placer County, this numerical threshold can provide a useful and appropriate benchmark for analysis since it was developed for an area that is geographically similar to the project site.

Therefore, fugitive dust particulate matter emissions from project construction would be considered significant if the project:

- would not include measures designed to prevent visible dust emissions beyond the property lines of the project site, as set forth in SCAQMD's Rule 403; and
- would generate PM₁₀ emissions exceeding 82 lbs/day.

Health Risk Impacts from Toxic Air Contaminants (Diesel Particulate Matter)

For toxic air contaminants, or TACs, EDCAQMD applies the following two alternative significance criteria. Impacts from exposure to DPM emissions from project construction would lead to a significant impact if:

1. The lifetime probability of contracting cancer would exceed ten in one million with T-BACT applied; or
2. The ground-level concentration of non-carcinogenic toxic air contaminants would result in a Hazard Index of greater than 1.

Operation

Ozone precursor emissions of ROG and NO_x are considered to result in a significant impact if project operation would generate emissions exceeding 82 pounds per day (lbs/day) of ROG or NO_x (EDCAQMD 2002: Table 3.2).

EDCAQMD does not have recommended significance thresholds for PM₁₀ and PM_{2.5} emissions. According to Chapter 6 of the EDCAQMD CEQA guide, for land development projects primarily associated with indirect emissions from gasoline-powered vehicles, PM₁₀ may be assumed to be less than significant if ROG and NO_x emissions are less than significant, as the same measures that limit vehicular ROG and NO_x emissions to de minimis levels for such projects will assure that PM₁₀ emissions are de minimis as well.

Thus, for this project, PM₁₀ emissions (and PM_{2.5}, which is a subset of PM₁₀) would be considered significant if:

- vehicular ROG and NO_x emissions exceed EDCAQMD thresholds, provided that the development does not generate diesel-powered activity greater than the average roadway fleet mix.

Health Impacts from Criteria Air Pollutants

The health risk impacts of criteria air pollutant emissions on sensitive receptors are harder to quantify. ROG and NO_x are precursors of ozone react which through a series of complex photochemical reactions in the presence of sunlight to form ozone in the atmosphere. Many factors affect the formation of ozone including the presence of sunlight, dispersion from wind, and topography that affects wind patterns. Therefore, the impacts of ozone are typically considered on a basin-wide or regional basis instead of a localized basis. The health-based ambient air quality standards for ozone therefore are as concentrations of ozone and not as tonnages of their precursor pollutants (i.e., NO_x and ROG). It is not necessarily the amount of precursor pollutants emitted that causes human health effects, but the concentration of resulting ozone or particulate matter. Because of the complexity of ozone formation and the non-linear relationship of ozone concentration with its precursor pollutants, and given the state of environmental science modeling in use at this time, it is infeasible to convert specific project level emissions of NO_x or ROG emitted in a particular area to concentration of ozone in that area. Meteorology, the presence of sunlight, seasonal impacts, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone (SCAQMD, 2014; SJVAPCD, 2014).

Notwithstanding these scientific constraints, the disconnect between project level NO_x emissions and ozone-related health impact cannot be bridged at this time.

Greenhouse Gases

The CARB has not established specific GHG thresholds or recommended a method for setting a threshold for project-level analysis. However, as provided in the latest version of the CARB's Scoping Plan (*California's 2017 Climate Change Scoping Plan*), absent conformity with an adequate geographically-specific GHG reduction plan, the CARB describes that lead agencies have the discretion to develop evidence based numeric thresholds (mass emissions, per capita, or per service population) consistent with the Scoping Plan, the State's long-term GHG goals, and climate change science.

There is no GHG reduction plan or threshold of significance for GHG emissions adopted for El Dorado County. When this is the case, the CARB recommends that lead agencies select a threshold of significance for GHG emissions related to compliance with California's climate change legislation (i.e. AB 32 and SB 32). In compliance with AB 32, SB 32, and the latest Scoping Plan, a quantitative GHG analysis should be performed to demonstrate that a project would promote sustainability and implement operational GHG emission reduction strategies in order to reduce the project's GHG emissions.

Various air districts within the Sacramento region have recently updated their thresholds for evaluating the significance of a project's GHG emissions. The EDCAQMD recommends that GHG emissions thresholds from nearby air districts, such as the PCAPCD be utilized in the environmental review of projects in El Dorado County. The PCAPCD thresholds were updated in 2016 with the justification for the thresholds provided in the *PCAPCD CEQA Thresholds of Significance Justification Report* in October 2016. As noted in the justification report, these thresholds were developed by PCAPCD following a review of the GHG significance thresholds adopted by other air districts; a review of land development projects in the County over a previous thirteen-year period (2003-2015); a consideration of the statewide GHG emission reduction goal by 2030; and the special geographic features of Placer County. Due to similarities between Placer and El Dorado Counties in their geographies and growth trends, and because PCAPCD thresholds appropriately consider the State-targeted reduction of 40 percent below 1990 levels by 2030, El Dorado County AQMD has determined that these thresholds are appropriate to use in order to evaluate the significance of GHG emissions of projects proposed in El Dorado County.

Therefore, this analysis utilizes the recently updated GHG thresholds from the nearby PCAPCD for the purposes of GHG emissions analysis. The PCAPCD provides the following significance thresholds for evaluating a project's GHG impacts:

- Bright-Line Threshold of 10,000 MT CO_{2e} per year for the construction and operational phases of land use projects and stationary source projects;
- Efficiency Matrix for the operational phase of land use development projects when emissions exceed the De Minimis Level; and
- De Minimis Level for the operational phases of 1,100 MT CO_{2e}/year.

GHG emissions from projects that exceed the Bright-Line Threshold of 10,000 MT CO_{2e}/year would be deemed to have a cumulatively considerable contribution to climate change. The De Minimis Level for the operational phases of 1,100 MT CO_{2e}/year represents an emissions level that can be considered less than cumulatively considerable and be excluded from further impact analysis. Projects with GHG emissions that exceed the De Minimis Level of 1,100 MT CO_{2e} per year, but are less than 10,000 MT CO_{2e} per year can still be found less than cumulatively considerable when the result of project-related efficiency analysis would meet one of the conditions in the efficiency matrix for the applicable land use setting and land use type provided.

The efficiency matrix provides the following per capita thresholds as follows: for urban residential projects, 4.5 MT CO_{2e}/capita/year; for rural residential projects, 5.5 MT CO_{2e}/capita/year; for urban non-residential projects, 26.5 MT CO_{2e}/capita/year; for rural non-residential projects, 27.3 MT CO_{2e}/capita/year.

Impacts and Mitigation Measures

Impacts

Impact 4.2-1: Construction activities associated with the project could result in a short-term emissions increase of NO_x, PM₁₀, and PM_{2.5}, for which the project region is non-attainment under an applicable federal or state ambient air quality standard. (*Less than Significant Impact, with Mitigation*)

The emissions generated from construction activities include:

- Exhaust emissions from fuel combustion in heavy-duty construction equipment, truck trips and construction worker vehicles traveling to and from the project site;
- Particulate matter from soil disturbance during site preparation and grading activities (also known as fugitive dust); and
- Evaporative emissions of ROG from paving activity and the application of architectural coatings.

Construction emissions for the project were estimated using guidance contained in the EDCAQMD's *Guide to Air Quality Assessment*. Emissions associated with the construction of the Dorado Oaks residential subdivision were estimated using the latest version of the California Emissions Estimator Model (CalEEMod) version 2016.3.2. Project-specific inputs to the model included types and sizes of land uses proposed for construction, site area, project schedule and phasing, infill and offhaul volumes, construction equipment needs, and worker and truck trips associated with each phase. CalEEMod defaults were used when project-specific information was not available. While the rate of construction of homes would be dictated by market conditions, for this analysis, construction is expected to occur over four years starting in May 2022.

Construction emissions associated with the other two components of the project, the SR-49 Intersection Area improvements and the Optional Fowler Lane Improvement Area improvements were estimated using the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Roadway Construction Emissions Model (RCEM). Project-specific model inputs included area of construction, construction schedule and import/export volumes of soil and

asphalt. Emissions were estimated for both options of the SR-49 intersections improvements under consideration. Option A would include more construction activity including demolition of existing structures and a slightly larger construction area than Option B; hence, the larger emissions inventory for Option A are presented here in this analysis.

Construction-related emissions, though short-term in duration, can represent a significant, adverse impact on air quality. Construction activities associated with the project would include site grading, excavation for infrastructure and foundations, building construction, paving, interior and exterior finishing, and landscaping installation. Construction activities associated with the roadway components would include grubbing/land clearing, grading and excavation, installation of drainage, utilities and sub-grade followed by paving.

Estimated unmitigated emissions of ROG, NO_x, PM₁₀ and PM_{2.5} are presented in **Table 4.2-4**. The table also compares the estimated emissions to EDCAQMD’s thresholds for ROG and NO_x. EDCAQMD does not have thresholds for PM emissions. However, short-term construction-generated emissions would not exceed the PCAPCD’s significance threshold of 82 lbs/day for PM₁₀. Because construction-generated PM₁₀ emissions would be less than the applicable threshold of 82 lbs/day, and because PM_{2.5} is a subset of PM₁₀, it is not anticipated that construction activity would result in concentrations of PM_{2.5} that would violate or substantially contribute to a violation of the ambient air quality standards for PM_{2.5}.

**TABLE 4.2-4
 UNMITIGATED PROJECT CONSTRUCTION EMISSIONS**

Project Component	Average Daily Emissions (lbs/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Dorado Oaks Subdivision ^a	17.3	21.7	2.6	1.2
SR-49 Intersection Improvements (Option A) ^{b,c}	2.2	23.1	8.0	2.3
Optional Fowler Lane Improvement ^s	1.2	14.5	2.4	1.2
Project Total ^d	20.8	59.3	13.0	4.7
EDCAQMD Threshold	82	82	82 ^e	--
Significant?	No	No	No	No

NOTES:

- a. Emissions estimated using CalEEMod version 2013.2. See Appendix B1 for model outputs and more detailed assumptions.
- b. Emissions estimated using SMAQMD’s RCEM. See Appendix B1 for model outputs and more detailed assumptions.
- c. Emissions for Option A were higher than Option B
- d. Values in bold are in excess of the applicable significance threshold.
- e. PCAPCD threshold of significance is used for PM₁₀ in the absence of an adopted threshold for EDCAQMD.

SOURCE: Appendix B1

EDCAQMD considers fugitive dust emissions from the project to be significant if it would not include measures designed to prevent visible dust emissions beyond the property lines of the project site, as set forth in SCAQMD’s Rule 403. As the project does not include these measures by design, without mitigation requiring these measures, the project’s impact from fugitive dust emissions would be considered **significant**.

Mitigation Measures

Mitigation Measure 4.2-1(a): During construction, implement SCAQMD's Best Available Fugitive Dust Control Measures required by SCAQMD Rule 403, as adopted by the EDCAQMD and presented below.

During construction, implement SCAQMD's Best Available Fugitive Dust Control Measures and Best Available Fugitive Dust Control Measures for High Wind Conditions as adopted by EDCAQMD and presented below.

Earth-moving (except construction cutting and filling areas, and mining operations)

- 1a. Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the District; two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
- 1a-1. For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.

Earth-moving – construction fill areas

- 1b. Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the District; for areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM method 1557 or other equivalent method approved by the District, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content; two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Earth-moving – construction cut areas and mining operations

- 1c. Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining areas unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.

Disturbed surface areas (except completed grading areas)

- 2a/b. Apply dust suppression in a sufficient quantity and frequency to maintain a stabilized surface; any areas which cannot be stabilized, as evidenced by wind driven dust, must have an application of water at least twice per day to at least 80 percent of the unstabilized area.

Disturbed surface areas completed grading areas

- 2c. Apply chemical stabilizers within 5 working days or grading completion; OR
- 2d. Take action 3a or 3c specified for inactive disturbed surface areas.

Inactive disturbed surface areas

- 3a. Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible due to excessive slope or other safety conditions; OR
- 3b. Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
- 3c. Establish a vegetative ground cover within 21 days after active operations have ceased; ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
- 3d. Utilize any combination of control actions 3a, 3b and 3c such that, in total, they apply to all inactive disturbed surface areas.

Unpaved Roads

- 4a. Water all roads used for any vehicular traffic at least once per every two hours of active operations; OR
- 4b. Water all roads used for any vehicular traffic once daily and restrict vehicle speed to 15 mph; OR
- 4c. Apply chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.

Open storage piles

- 5a. Apply chemical stabilizers; OR
- 5b. Apply water to at least 80 percent of the surface areas of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
- 5c. Install a three-sided enclosure with walls with no more than 50 percent porosity that extend, at a minimum, to the top of the pile.

Track-out control

- 6a. Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and width of at least 20 feet; OR
- 6b. Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved

surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device.

All Categories

7a. Any other control measures approved by the District.

Mitigation Measure 4.2-1(b): During high wind conditions during construction with gusts exceeding 20 miles per hour, implement SCAQMD's Best Available Fugitive Dust Control Measures for High Wind Conditions required by SCAQMD Rule 403, as adopted by the EDCAQMD and presented below.

Earth moving

- 1A. Cease all active operations, OR
- 2A. Apply water to soil not more than 15 minutes prior to moving such soil.

Disturbed surface areas

- 0B. On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR
- 1B. Apply chemical stabilizers prior to a wind event; OR
- 2B. Apply water to all unstabilized disturbed areas 3 times per day; if there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR
- 3B. Take the actions specified in Table B.6, Item 3c; OR
- 4B. Utilize any combination of control actions specified in Table 1, Items 1B, 2B and 3B, such that, in total, they apply to all disturbed surfaced areas.

Unpaved Roads

- 1C. Apply chemical stabilizers prior to a wind event; OR 2C. Apply water twice per hour during active operation; OR 3C. Stop all vehicular traffic

Open storage piles

- 1D. Apply water twice per hour; OR 2D. Install temporary coverings.

Paved road track-out

- 1E. Cover all haul vehicles; OR 2E. Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for operation on both public and private roads.

All categories

- 1F. Any other control measures approved by the District.

Significance After Mitigation

Implementation of dust control measures listed in SCAQMD Rule 403 and included as **Mitigation Measure 4.2-1(a) and 4.2-1(b)**, would reduce this impact to a less than significant level.

Impact 4.2-2: Operation of the project would not result in a long-term emissions increase of NO_x, PM₁₀, and PM_{2.5}, for which the project region is non-attainment under an applicable federal or state ambient air quality standard. (*Less than Significant Impact*)

Analysis of operational impacts follow EDCAQMD's guidance as detailed in its *Guide to Air Quality Assessment*. Operation of the proposed project would increase emissions of ozone precursors (ROG and NO_x), PM₁₀, and PM_{2.5}, from vehicle trips, and area sources (e.g., landscape maintenance, fireplaces, use of consumer products such as hairsprays, deodorants, cleaning products, etc.). The project would not generate any air pollutant emissions on site from energy sources for space and water heating as the electricity would be used for these uses due to the unavailability of natural gas service to the project area. The analysis uses the default number of fireplaces in CalEEMod to be fueled by propane, based on information provided by the applicant.

Operational emissions upon buildout of the Dorado Oaks subdivision were estimated using CalEEMod based on the proposed land uses and trip generation rates provided by the traffic study for the project. Default trip generation rates in CalEEMod were adjusted to reflect project-specific traffic data. While default trip lengths in the model were maintained as part of the CalEEMod run, an adjustment factor was applied as part of the post processing of the model run to match the total VMT generated by the project (as estimated in CalEEMod) to the VMT analysis conducted for the project (Fehr & Peers, 2021). Estimated annual operational emissions for the first full year of operation (2027) are presented in **Table 4.2-5** and compared to the EDCAQMD significance thresholds for operation.

As shown in Table 4.2-5, emissions resulting from operation of the proposed project would be well below EDCAQMD significance thresholds of 82 lbs/day for ROG and NO_x. In addition, EDCAQMD considers operational PM₁₀ and PM_{2.5} emissions to be less than significant if vehicular ROG and NO_x emissions do not exceed EDCAQMD thresholds. Given that operational emissions are not expected to exceed EDCAQMD thresholds, operation of the project would not be expected to contribute to concentrations that exceed the NAAQS or CAAQS. In addition, emission rates of vehicles in California are anticipated to improve each year as older vehicles are retired and newer, lower emission vehicles are added. For this reason, emission levels associated with operation of the project are expected to decrease over time. Based on the estimates shown in Table 4.2-5, the operational impact of the proposed project, at full buildout, would be **less than significant**.

**TABLE 4.2-5
 PROJECT OPERATIONAL EMISSIONS**

Pollutant	EDCAQMD Thresholds	Year 2027 Build-out Operation Emissions (average pounds per day) ¹			
		Area Sources	Mobile Sources ²	Total Emissions	Significant?
					(Yes or No)
ROG	82	18.1	3.7	19.6	No
NOx	82	2.5	11.9	7.1	No
PM ₁₀	--	3.4	16.2	9.7	No
PM _{2.5}	--	3.4	4.4	5.1	No

NOTES:

1. Average daily operational emissions based on annual output from CalEEMod 2013.2.2. See Appendix B1 for details.
2. The default trip rates in CalEEMod were adjusted to match the traffic data provided by Prism Engineering.

SOURCE: Appendix B1

Mitigation Measures

None required.

Impact 4.2-3: Construction and operation of the project would not conflict with or obstruct implementation of the applicable air quality plan. (*Less than Significant Impact*)

The MCAB is currently non-attainment for ozone (state and federal ambient standards) and PM₁₀ (state ambient standard). In addition, the western portion of El Dorado County, which contains the project site, is in non-attainment for PM_{2.5} under the federal standard.

While an air quality plan for the area exists for ozone, currently there is none for particulate matter. The Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Plan) was developed for application within the Sacramento region which includes the MCAB portion of El Dorado County. The Plan outlines how the Sacramento Federal Nonattainment Area (SFNA), including the western portions of El Dorado County, will meet the 2008 ozone NAAQS by July 20, 2027. If a project can demonstrate consistency with the Plan for ROG and NOx emissions, it would be determined that it would not have a significant cumulative impact with respect to ozone.

The EDCAQMD considers projects consistent with the Plan if the project satisfies the following criteria. Compliance of the proposed project with each of these criteria is also discussed below.

1. The project does not require a change in the existing land use designation (i.e., general plan amendment, rezone), and projected emissions of ROG and NOx from the proposed project are equal to or less than the emissions anticipated for the site if developed under the existing land use designation.

The project would be consistent with the land use designations for the area in the County General Plan and would not require a General Plan Amendment or rezoning. The emissions

inventories used to develop a region's air quality attainment plans are based primarily on projected population growth and VMT for the region, which are based, in part, on the planned growth identified in regional and community plans. Therefore, projects that would result in increases in population or employment growth beyond that projected in regional or community plans could result in increases in VMT above that planned in the attainment plan. The resulting excess emissions could conflict with a region's air quality planning efforts. Increases in VMT beyond that projected in area plans generally would be considered to have a significant adverse incremental effect on the region's ability to attain or maintain state and federal ambient air quality standards.

The proposed project is consistent with the County's general plan land use designation (see Section 4.9 *Land Use and Planning*, for a more detailed discussion.) Because the proposed project would be consistent with the amount and type of development projected in the El Dorado County General Plan, it would be consistent with the population growth and VMT projections contained in Plan, which is based on general plan projections.

2. The project does not exceed "project alone" significance criteria in the EDCAQMD CEQA Guide.

As detailed under Impacts 4.2-1 and 4.2-2, the project's construction and operational emissions would be less than the project-level significance thresholds identified by the EDCAQMD. Therefore, the proposed project does not exceed the "project alone" significance criteria.

3. The lead agency for the project requires the project to implement any applicable emission reduction measures contained in and/or derived from the Air Quality Attainment Plan (AQAP).

The Plan contains control measures aimed at reducing air pollution in the Sacramento region. The Plan relies on many existing federal, state, and local control programs to achieve reductions of ozone precursors. Additionally, the CARB, SFNA air districts, and the SACOG continue to enforce existing strategies and implement TCMs. These measures include:

- The CARB maintains the most stringent mobile source emissions control program in the nation. The CARB has adopted numerous regulations aimed at reducing exposure to diesel particulate matter (DPM) and oxides of nitrogen (e.g. NO₂). Further, the CARB and the SFNA air district staff work closely on identifying and distributing incentive funds to accelerate cleanup of engines. Key incentive programs include the Carl Moyer Program, the Goods Movement Program, the Lower-Emission School Bus Program and the Air Quality Improvement Program (AQIP).
- The CARB maintains a long-standing light-duty mobile source program. The CARB estimates that light-duty vehicle NO_x emissions will be reduced by about 60 percent in 2024 when compared to 2017. Key light-duty programs include Advanced Clean Cars (ACC); On-Board Diagnostics; Reformulated Gasoline; Incentive Programs; and the Enhanced Smog Check Program.
- The CARB also maintains a long-standing heavy-duty mobile source program. Heavy-duty NO_x emissions are expected to be reduced by about 50 percent in 2024 when compared to 2017. Key programs include Heavy-Duty Engine Standards, Clean Diesel Fuel, Truck and Bus Regulation and Incentive Programs.
- The CARB and U.S. EPA maintain long-standing programs to reduce emissions from off-road sources. Off-road NO_x emissions will be reduced by about 25 percent in 2024 when

compared to 2017. Key programs include Off-Road Engine Standards, Locomotive Engine Standards, Clean Greenhouse Gases Diesel Fuel, Cleaner In-Use Off-Road Regulation, and In-Use Large Spark Ignition (LSI) Fleet Regulation.

- SACOG provides transportation planning and funding for the greater Sacramento region and has worked with local governments to develop and implement transportation related policies and measures. For example, one of the TCMs previously developed is the Spare the Air program. The current 2020 MTP/SCS aims to reduce VMT through transportation policies and implementing actions that foster the next generation of mobility solutions, modernize funding for transportation infrastructure and build and maintain a safe, reliable, and multimodal transportation (SACOG, 2019).

As these measures are primarily implemented at the state and regional level, the proposed project does not conflict with any of these control measures.

4. The project complies with all applicable district rules and regulations.

The EDCAQMD maintains a list of current rules and regulations. Rules and regulations applicable to the project are summarized in Section 4.2.3, Regulatory Setting. The proposed project does not include any components that conflict with applicable rules and regulations and will be required to comply with them as permit conditions of approval.

The proposed project is consistent with the EDCAQMD's standards for determination of compliance with the Plan. Thus, the proposed project would be consistent with the air quality plan for the region and would not conflict with or obstruct implementation of the applicable air quality plan. This impact would be **less than significant**.

Mitigation Measures

None required.

Impact 4.2-4: Construction and operation of the project would not expose sensitive receptors to substantial pollutant concentrations. (*Less than Significant Impact*)

Construction

A health risk assessment (HRA) was completed to evaluate the risks to nearby receptors from exposure to TACs associated with the project. The HRA focused on emissions from construction of the project, which is considered a new but temporary source. The construction HRA focused on cancer risks and chronic health hazards at surrounding residences located near the project area. Since construction emissions associated with the project would represent a new emissions source, the potential health risk and hazard impacts are analyzed at the receptor that would be exposed to the maximum risk and hazard.

For construction activities, DPM exposure represents the primary health hazard. Again, DPM is a complex mixture of chemicals and particulate matter identified by the State as a TAC with potential cancer and chronic non-cancer effects. DPM emissions would be generated by the operation of off-road construction equipment (e.g., excavators, loaders, cranes, graders) and on-road diesel-fueled heavy-duty vehicles. Although other exposure pathways exist (i.e., ingestion, dermal contact), the inhalation pathway is the dominant exposure pathway from DPM for both

cancer risk and chronic non-cancer health effects. Consequently, this HRA only evaluates the inhalation cancer and chronic non-cancer effects of DPM.

A three-step process was used to estimate cancer risks and chronic health hazards of DPM exposure. The first step involved using CalEEMod and RCEM to estimate average annual diesel exhaust emissions associated with construction of the three project components. The second step involved using the U.S. EPA's AERMOD (version 18081) dispersion model to convert construction DPM emissions derived from CalEEMod and RCEM to maximum annual DPM concentrations. The dispersion modeling used the average annual DPM emissions, sensitive receptor grid surrounding the project area, construction emission sources, and meteorological data collected from SMAQMD's Tools: Models, Calculators & Data Files for Sacramento International Airport (SMAQMD, 2019).

The three project components (Dorado Oaks Subdivision, SR-49 Intersection Improvements, and the Optional Fowler Lane Improvements) were modeled as three separate area sources in the dispersion modeling:

- A conservative representation of the on-site construction equipment within the Dorado Oaks Subdivision site modeled as a polygon area source with an internal vertical dimension of 1.5 meters and release height of 5 meters.
- A conservative representation of the construction area for the SR-49 Intersection Improvements modeled as a polygon area source with an internal vertical dimension of 1.5 meters and release height of 5 meters.
- A conservative representation of the section of the Optional Fowler Lane Improvements modeled as a line area source with the same internal vertical dimension and release height as above.

The three sources were modeled with a unit emission rate of one gram per second each to determine the worst-case scenario from DPM emissions occurring at each project's receptor grid that covers all sensitive receptors in the vicinity of the project areas. The maximum impact or maximum exposed individual (MEI) was determined and its annual PM_{10} concentration resulting from the model was applied to the yearly DPM averages determined from CalEEMod to represent the "worst-case" exposure scenario. Modeling inputs and assumptions of AERMOD can be found in **Appendix B2**. The third, and final step, was to apply the calculated DPM concentration at the MEI for each construction year and source to the Office of Environmental Health Hazard Assessment (OEHHA) unit risk methodologies (OEHHA, 2015) to calculate the potential cancer risk from the project's construction activities associated with the three components over the construction duration. OEHHA equations and the health impact calculations are detailed in Appendix B2.

The key drivers to exposure sensitivity are concentration of pollutants and duration of exposure. Existing sensitive receptors in the vicinity of the three project areas are detailed earlier in this section. Residential receptors are located all around the project areas and would be exposed to DPM emissions from construction activities associated with the proposed project. Exposure of sensitive receptors to DPM emissions from construction activities is the primary factor used to

determine health risk. Exposure is a function of the concentration of a substance or substances in the environment and the extent of exposure. According to OEHHA, health risk assessments should be based on a 30-year exposure period (OEHHA, 2015). However, such assessments should be limited to the period/duration of activities associated with the project.

Health Risks to Existing Receptors

The nearest residential receptor to any of the project sites is the residential receptor at 461 Pleasant Valley Road to the north of SR-49, and was found to experience maximum combined health risks from construction activities associated with the three components of the project. Unmitigated cancer risk at this residential receptor was estimated to be 9.26 in a million. **Table 4.2-6** summarizes the increase in lifetime cancer risk and non-cancer hazard index at this receptor. EDCAQMD specifies a significance threshold of one in a million for uncontrolled emissions and 10 in a million when Best Available Control Technology for Toxics (T-BACT) is used. The EDCAQMD established significance criteria for construction fleet with respect to the anticipated impact the fleet would have on emissions of diesel exhaust particulate matter in 2002, when the thresholds were developed. At that time, T-BACT included the use of 1996 and later model year engines in all diesel construction equipment. The importance of 1996 is that it was the year in which “Tier 1” emission control standards applied to many construction equipment engines. The use of Tier 2 construction equipment (2003 or later) would further reduce emissions by approximately 39.1 percent from Tier 1 (1996 or later) construction equipment. Use of Tier 3 construction equipment (2007 or later) would reduce emissions by approximately 62.3 percent from Tier 1 (1996 or later) construction equipment. The current default construction equipment fleet mix for El Dorado county in CalEEMod assumes a mix if the different Tiers of equipment including the most recent Tier 4 equipment. The current default construction fleet (without T-BACT) would generate emissions and associated health risks well below construction equipment with T-BACT back in 2002. Therefore, if the uncontrolled project emissions (without needing the implementation of TBACT) would result in an incremental lifetime cancer risk of less than 10 in a million, the impact can be considered less than significant. This threshold of 10 in a million is also consistent with most other major air districts that specify health risk thresholds.

**TABLE 4.2-6
 PROJECT CONSTRUCTION HEALTH RISK AT MEI¹**

Source	Maximum Residential Health Risk
Increase in Lifetime Cancer Risk, per million	9.26
Hazard Index	0.03
EDCAQMD Thresholds	
Cancer Risk, per million	10
Hazard Index	1
Significant (Yes or No)?	No

NOTES:

1. Project construction emissions estimates were made using CalEEMod version 2016.3.2, RCEM, AERMOD version 18081, and OEHHA cancer risk calculation methodologies. See Appendix B1 and B2 for model outputs and more detailed assumptions.

SOURCE: Appendix B2

As shown in Table 4.2-6, project construction would not exceed the EDCAQMD significance thresholds for both increase in lifetime cancer risk and hazard index at the MEI. Therefore, project construction would not expose existing sensitive receptors to substantial concentrations of TACs. This impact would be **less than significant**.

Health Risks to Future On-site Receptors

New receptors introduced to the project area during the earlier stages of development would be exposed to DPM emissions from construction activities associated with the later phases of development. However, their exposure duration to these emissions would be less than 4 years and therefore the potential health risk would be less than the maximum residential health risk shown in Table 4.2-6. Therefore, the health risk impact to the new receptors introduced by the project would be considered to be **less than significant**.

Operation

The project would generate minimal operational TAC emissions from vehicle trips generated. These emissions would be negligible and therefore, the associated operational health risk impact associated with the proposed project would be less than significant.

Mitigation Measures

None required.

Impact 4.2-5: Construction and operation of the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (*Less than Significant Impact*)

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the odor source; wind speed and direction; and the presence of sensitive receptors. Land uses such as landfills, wastewater treatment plants, composting facilities are considered major sources of objectionable odor. Although offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

An odor analysis typically evaluates the potential for a project to generate odors and for the project to be affected by odors from nearby sources. Residential land uses and roadway improvements proposed to be developed under the project would not include any features or facilities known to produce objectionable odors nor would any component of the project be located in the vicinity of any existing odor sources.

Odor from diesel exhaust from the use of onsite construction equipment would be localized, intermittent and temporary, and would dissipate rapidly from the source with an increase in distance. Thus, neither construction nor operation of the project would create objectionable odors affecting a substantial number of people. This impact would be **less than significant**.

Mitigation Measures

None required.

Impact 4.2-6: Implementation of the proposed Project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (*Less than Significant Impact*)

The project would generate GHG emissions from direct and indirect sources during construction and operation. Emissions from project construction, project's vehicle trip generation and area sources are considered direct emissions while emissions from offsite electrical generation, solid waste disposal, and water and wastewater conveyance and treatment are considered indirect emissions. The following activities associated with the proposed project could contribute to the generation of GHG emissions:

- **Construction Activities.** Construction equipment and vehicles typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and N₂O. CH₄ is also emitted during the fueling of heavy equipment.
- **Motor Vehicle Use.** Transportation associated with the project would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips.
- **Solid Waste Disposal Emissions.** Solid waste disposal in landfills results in the generation of indirect GHG emissions. Landfills emit anthropogenic methane from the anaerobic breakdown of material.
- **Electricity and Water Use.** Electricity use can result in GHG production if the electricity is generated by combustion of fossil fuel. Treatment and transport of water supplied to and wastewater generated at the project residences requires electricity which would generate GHG emissions and is also included in the analysis below.
- **Area Sources.** Combustion of fuel in landscaping equipment used at project residences and open space areas would generate GHG emissions.

Construction

Construction activities associated with the proposed project are expected to occur over a 4-year period from May 2022 to July 2026 with the first full year of operation in 2027. Construction GHG emissions were derived from the CalEEMod run used to estimate air quality emissions. **Table 4.2-7** presents the total GHG emissions associated with construction of the project over the duration of the construction schedule.

**TABLE 4.2-7
 PROJECT CONSTRUCTION GREENHOUSE GAS EMISSIONS**

Construction Emissions	CO ₂ e (MT/year)
Residential Subdivision	
2022	760
2023	614
2024	611
2025	602
2026	198
Total Subdivision Construction GHG Emissions	2785
SR-49 Intersection Improvements	
2022	232
Emergency Vehicle Access Options	
2022	52
Total Construction GHG Emissions	3070

SOURCE: see Appendix B1

As discussed earlier, the EDCAQMD recommends that GHG emissions thresholds from nearby PCAPCD be utilized in the environmental review of projects in El Dorado County. For the construction phase of all projects, PCAPCD uses a bright-line threshold of 10,000 MT CO₂e. The project’s total construction emissions would be 3,070 MT CO₂e, which would be below the bright-line threshold of 10,000 MT CO₂e. Therefore, the project’s construction emissions would not either directly or indirectly have a significant impact on the environment. This impact would be **less than significant**.

Operation

Only the Dorado Oaks Subdivision component of the project would generate operational emissions beyond that which would already occur without the project. Operational GHG emissions from the subdivision project would come from a variety of emissions sources such as indirect emissions from electricity consumption and direct emissions from mobile on-road sources and landscape maintenance equipment. Operational emissions were also calculated using the CalEEMod land use emissions model. **Table 4.2-8** presents the total annual GHG emissions associated with the project by source for the first year of operation upon full buildout (2027).

The project would generate 1,906 MT CO₂e per year during its operational phase. This would exceed the de minimus level of 1,100 MT CO₂e per year at which the PCAPCD considers operational impacts of projects to be less than cumulatively considerable, but would be less than the bright-line threshold of 10,000 MT CO₂e at which PCAPCD considers project operational impacts to be cumulatively considerable.

**TABLE 4.2-8
 ANNUAL GREENHOUSE GAS EMISSIONS FROM PROJECT OPERATIONS**

Source	CO₂e (MT/year)
Area	412
Energy	349
Mobile	978
Solid Waste ¹	111
Water ¹	55
Total Operational GHG Emissions	1,906
Project Population	978
Annual Operational GHG emissions per capita	1.95
PCAPCD de minimus Threshold	1,100
PCAPCD Bright-line Threshold	10,000
PCAPCD Efficiency Metric Threshold for Urban Residential Projects	4.5

NOTES:

1. GHG emissions from water and solid waste disposal estimated for a service population of 978 estimated based on the Department of Finance population factor for El Dorado County of 2.56 persons per household.

SOURCE: see Appendix B1

As the project would generate operational GHG emissions between 1,100 and 10,000 MT CO₂e per year, the annual emissions per capita has been calculated for comparison with the efficiency matrix. For urban residential uses, PCAPCD’s efficiency matrix provides a per capita threshold of 4.5 MT CO₂e/capita/year. As shown in Table 4.2-8, operational GHG emissions per capita of project population would be 1.95 MT CO₂e per year, less than the applicable efficiency matrix threshold.

The most relevant legislative standard establishing a GHG reduction target is SB 32. In effect, SB 32 requires a reduction of 40 percent in statewide GHG emissions from 1990 levels by 2030. As PCAPCD’s GHG significance thresholds take into account the reductions needed to achieve this goal, if the project’s GHG emissions would be less than the appropriate PCAPCD GHG thresholds, the project would be considered to be consistent with the state’s GHG reduction goals. Therefore, the project would not, either directly or indirectly, have a significant impact on the environment or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be **less than significant**.

Mitigation Measures

None required.

Cumulative Impacts

Impact 4.2-7: The project, in combination with past, present, and probable future projects in the project area, would not result in significant adverse cumulative air quality or greenhouse gas impacts. (*Less than Significant Impact*)

Air Quality

The contribution of an individual project's air emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from past, present, and reasonably foreseeable future projects in the region also have or will contribute to adverse regional air quality impacts on a cumulative basis, resulting in a potentially significant cumulative air quality impact. No single project by itself would be sufficient in size to result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality conditions.

EDCAQMD's primary criterion for determining whether a project has significant cumulative impacts is whether the project is consistent with an approved plan or mitigation program of District-wide or regional application in place for the pollutants emitted by the project. This criterion is applicable to both the construction and operation phases of the project.

With respect to ozone, the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan was developed to bring the region (including MCAB) into attainment as required by the federal and California Clean Air Acts. The Plan shows the region is meeting the requirements under the Clean Air Act in demonstrating reasonable further progress and attainment of the standards. The Plan includes an updated emissions inventory, analyzes air quality trends and evaluates photochemical modeling results. This Plan also establishes new motor vehicle emission budgets for transportation conformity purposes. In addition, the Plan also documents the region's reasonably available control measure (RACM) analysis and vehicle miles traveled offset demonstration.

If a project can demonstrate consistency with the Plan for ROG and NO_x emissions, it can be categorized as not having a significant cumulative air quality impact with respect to ozone. As discussed under Impact 3.2-4, the proposed project is consistent with the Plan based on EDCAQMD's evaluation criteria. As such, the proposed project's contribution to the cumulative air quality impact of the region with respect to ozone would be less than significant.

For other pollutants such as CO, PM₁₀ (including PM_{2.5}), SO₂, and NO₂, there is no applicable air quality plan containing growth elements. Accordingly, the EDCAQMD applies the following pollutant-specific criteria for determining the significance of cumulative impacts:

- **CO:** CO is an attainment pollutant in El Dorado County, and the EDCAQMD does not consider CO to be an area-wide or regional pollutant that is likely to have cumulative effects. As a result, CO emissions for a project will ordinarily be considered not cumulatively significant as "project alone" emissions are not significant.
- **PM₁₀, SO₂, and NO₂:** The MCAB is nonattainment for the state 24-hour PM₁₀ standard, which dictates the use of a relatively sensitive criterion for identifying cumulative effects on PM₁₀ ambient concentrations. The County is in attainment for the SO₂ and NO₂ ambient air quality

standards, but SO₂ and NO₂ can also contribute to area-wide PM₁₀ impacts through their transformation into sulfate and nitrate particulate aerosols. There is no readily available model for predicting the combined ambient effects of directly emitted PM₁₀, SO₂ and NO₂ emissions from individual impacts. The EDCAQMD has determined that a project will be considered not significant for cumulative impacts of PM₁₀, SO₂ and NO₂ if the following conditions are met:

- a. The project is not significant for “project alone” emissions of these pollutants;
- b. The project complies with all applicable rules and regulations of the District; and
- c. The project is not cumulatively significant for ROG, NO_x, and CO based on the criteria set forth above.

As shown under Impacts 4.2-1 and 4.2-2, the proposed project would not have a significant impact for “project alone” emissions. Additionally, the project complies with all applicable rules and regulations of the EDCAQMD. Lastly, the project was shown to not have a cumulatively significant impact for ROG, NO_x, or CO based on the discussions above. As such, the proposed project would have a less than cumulatively considerable impact for other pollutants.

Toxic Air Contaminants

Emissions of TACs are typically localized and not region-wide. Except in cases where there is information indicating the possible comingling of TACs from projects that are contiguous or nearby, EDCAQMD considers implementation of the “project alone” mitigation requirements, and compliance with all applicable emission limits and mitigation measures required by EPA, CARB, EDCAQMD rules and regulations, and local ordinances, sufficient for a finding of not significant for cumulative impacts of TACs.

The project would result in less than significant impacts with respect to exposure of sensitive receptors to TACS during both construction and operation. In addition, none of the cumulative projects are identified are in close proximity to the project area to contribute to TAC concentrations and health risks at the project’s receptors. Therefore, the project’s contribution to the cumulative health risk impacts from exposure to TACs would be *less than significant*.

Greenhouse Gases

Climate change is a global problem and, therefore, GHG emissions are considered pollutants of global concern, and the geographic context within which the project’s contribution to GHG impacts is considered is global. While pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately one day), GHGs have long atmospheric lifetimes (one year to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Therefore, the effects of GHGs are also experienced globally. The atmospheric concentration of GHGs determines the intensity of climate change, with current levels already leading to increases in global temperatures, sea level rise, severe weather, and other environmental impacts. The continued increase in atmospheric GHG concentrations will only worsen the severity and intensity of climate change, leading to irrevocable environmental changes. Therefore, from the standpoint of CEQA, GHG impacts on global climate change are inherently cumulative. No single project could generate enough GHG emissions to contribute

noticeably to a change in the global average temperature. However, 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.

As discussed under Impact 4.2-6, GHG emissions from the construction and operation of the project would be less than significant. Also as noted in the discussion of Impact 4.2-6, the project would comply with the goals and actions of applicable GHG reduction plans at the state and local levels that aim to achieve the 2030 target established by SB 32 for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. Other cumulative projects proposed and being developed in the project would also be required to make this determination and implement to comply. Therefore, because the project's construction and operation emissions of greenhouse gases would be less than levels identified by the EDCAQMD as significant, and because these project emissions would not impede attainment of the state's GHG reduction goals for 2030, the project's incremental contribution to greenhouse gases would not be cumulatively considerable, and the impact would be less than significant.

Mitigation Measures

None required.

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4.3 Biological Resources

4.3.1 Introduction

This section examines the potential impacts of the implementation of the proposed project on biological resources and identifies mitigation measures to avoid or reduce those impacts. The discussion includes a summary of the current regulatory status relevant to biological resources potentially present within and near the project.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Relevant comments expressed concern with potential project impacts to wildlife, oak trees, and wetlands in the project area.

The information and analysis presented in this section is focused on special-status species,¹ wildlife habitats, vegetation communities, and jurisdictional waters of the United States (U.S.) and of the state that occur or have the potential to occur within the project site. The results of the assessment presented in this section are based upon literature review and queries of the California Department of Fish and Wildlife's (CDFW) Natural Diversity Database (CNDDDB), the U.S. Fish and Wildlife Service (USFWS) list of federal endangered and threatened species, and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, as well as surveys conducted at the project site.

Information for this section is also based on the following technical reports, all of which are included in **Appendix C** of this EIR:

- Biological Resources Assessment for the +/-139-acre Stonehenge Study Area (North Fork Associates, 2009);
- Aquatic Resources Delineation Report for Stonehenge Springs (Sycamore Environmental, 2018a);
- Biological Resources Evaluation and Botanical Survey for the Stonehenge Springs Project (Sycamore Environmental, 2018b);
- Arborist Report (California Tree and Landscape Consulting, Inc., 2018).

4.3.2 Environmental Setting

Regional Setting

The project is in Diamond Springs, an unincorporated community in the foothills of the Sierra Nevada Mountains. The project is on the Placerville U.S. Geological Survey topographic quad (T10N, R10E, Section 25 and 36; T10N, R11E, Section 30 and 31), and is in the Upper

¹ Species that are regulated pursuant to Federal or State endangered species laws, or have been designated as Species of Special Concern by the CDFW, or species that are not included on any agency listing but meet the definition of rare, endangered or threatened species of the CEQA Guidelines section 15380(b), are collectively referred to as "special-status species."

Cosumnes hydrologic unit (18040013). The elevation ranges from approximately 1,620 to 1,840 feet above mean sea level. Most of the site is characterized by oak woodland, with ponderosa pine common in some areas. A substantial area (roughly 25 acres) in the northern portion of the tentative subdivision site was graded in the 1980's. There are two intermittent channels and several ephemeral channels in the project area. The area surrounding the project consists of areas developed to residential and commercial uses, and undeveloped land with similar vegetation as the project site.

Natural Communities

Dorado Oaks Tentative Subdivision Map Site

Natural communities are defined by species composition and relative abundance. **Appendix C** contains a map of the natural communities identified in the Dorado Oaks Subdivision Site map site by Sycamore Environmental (2018b). The natural communities correspond to those defined by CDFW (2019) at the alliance level.

California Black Oak Woodland

California black oaks (*Quercus kelloggii*) are dominant in the woodland at the south end of the site. Other common trees in this community include interior live oak (*Q. wislizeni*), valley oak (*Q. lobata*), and foothill pine (*Pinus sabiniana*). The canopy is mostly closed, although some small open patches occur. The understory shrub layer is patchy, and where present is dominated by poison oak (*Toxicodendron diversilobum*), and chamise (*Adenostoma fasciculatum*) in more open areas. The herb layer is dominated by native and nonnative grasses, and mostly native forbs.

California Annual Grassland

California annual grassland is an upland, herbaceous community dominated by nonnative grasses including wild oat (*Avena* sp.), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and medusa-head (*Elymus caput-medusae*). Trees and shrubs are sparse and widely spaced.

Young Ponderosa Pine Woodland – Disturbed

This community encompasses most of an area that was graded for development in the 1980's. Since that time substantial woody vegetation has grown back in much of the area, although some of the area remains mostly unvegetated. Tree cover is dominated by ponderosa pine (*Pinus ponderosa*), with interior live oak in lesser abundance. Nearly all of the trees are young and have grown back since the grading. Shrubs are sporadic and consist mostly of coyote brush (*Baccharis pilularis*) and manzanita (*Arctostaphylos viscida* ssp. *viscida*). Herbs consist mostly of nonnative grasses and forbs similar to the California annual grassland, with patches of rye grass (*Festuca perennis*) present in some areas.

Valley Oak – Interior Oak Woodland

This community is dominated by valley oak and interior live oak. In the tentative subdivision map site, the canopy is mostly closed, although some open areas of with low vegetation similar to the California annual grassland occur. The shrub layer is patchy, and where present is dominated by poison oak. Other common shrubs include buckbrush (*Ceanothus cuneatus*), California coffee berry (*Frangula californica* ssp. *tomentella*), and hollyleaf redberry (*Rhamnus ilicifolia*).

Valley Oak Woodland

This community is dominated almost entirely by valley oak trees. In most places the trees are well spaced and are large. The canopy is partially open. Shrubs are relatively sparse in this community and where present are dominated by poison oak. Herbaceous vegetation similar to California annual grassland is present in most areas.

Ponderosa Pine – Interior Live Oak Woodland

This community has a nearly closed canopy of ponderosa pine, with interior live oak subdominant. Some of this area was graded for development prior to 1993, but has since grown back with thick woody vegetation. The shrub layer is patchy and dominated by poison oak where present. Much of this community has deep shade at ground level and the herbaceous layer is sparse. Some more open areas have herbaceous vegetation similar to California annual grassland, with more Baltic rush (*Juncus balticus*) present.

Canyon Live Oak Woodland

This community has a nearly closed canopy dominated by canyon live oak (*Quercus chrysolepis*). Interior live oak is also common. The shrub layer is patchy and generally sparse. Where present it is dominated by poison oak. Much of this community has deep shade at ground level and the herbaceous layer is sparse.

Sandbar Willow Scrub

This upland community is along two small drainages in the northern end of the tentative subdivision map site. It is dominated by sandbar willow (*Salix exigua*) and the nonnative invasive Himalayan blackberry (*Rubus armeniacus*). The herb layer is mostly absent, and where present is dominated by nonnative annual grasses.

State Route 49 Improvement Area

Roads and Development

The SR- 49 Improvement Area is comprised of paved roads, buildings, and adjacent highly disturbed areas. Some ornamental trees lie alongside the roadway, particularly along the roadway's northern side.

Optional Fowler Lane Improvement Area

The biological resources evaluation (Sycamore Environmental, 2018b) included a portion of Fowler Lane in the survey area. This area includes paved roads and adjacent highly disturbed areas, with occasional oak and pine trees alongside the roadway.

State and Federal Regulated Wetlands and Waters

Dorado Oaks Tentative Subdivision Map Site

An aquatic resources delineation report (ARDR) was prepared for the Dorado Oaks subdivision site (Sycamore Environmental, 2018a; **Appendix C.2**). The ARDR identified approximately 2.48 acres of channels, wetlands, and a seasonal pond on the subdivision site. An approved jurisdictional determination was requested from the USACE in 2018 and the USACE conducted a field review of the site. Revisions were made to the aquatic resources map at the request of

USACE. Some features were added, some were removed, and some boundaries were changed. The revised map contained approximately 2.21 acres of channels, wetlands, and a seasonal pond. The USACE has not issued a verification of the revised map. All or some of the features may qualify as waters of the U.S. and waters of the State. Conditions in the aquatic features are discussed in more detail below under sensitive natural communities.

State Route 49 Improvement Area

The ARDR did not include all of the off-site areas. Additional aquatic resources were estimated in the off-site areas using aerial and street-level photographs (Google, Inc. 2020.), site topography from the ARDR that extends into some of the off-site areas, U.S. Geological survey topographic maps, and the USFWS National Wetlands Inventory (NWI). Much of the State Route 49 area is urbanized. There are an estimated 300 linear feet of roadside ditches that may meet USACE or State criteria for waters or wetlands. On the far western boundary of the area a culvert and ditch under Route 49 may be a realigned segment of a naturally-occurring channel. Other than the bottoms of some of the ditches, there are no areas that appear to meet wetlands criteria.

Optional Fowler Lane Improvement Area

As stated previously, the ARDR did not include all of the off-site areas. Additional aquatic resources were estimated in the off-site areas using aerial and street-level photographs (Google, Inc. 2020.), site topography from the ARDR that extends into some of the off-site areas, U.S. Geological survey topographic maps, and the USFWS National Wetlands Inventory (NWI). Much of the Fowler Lane improvement area is steep and hence an unlikely landscape position for wetlands. No wetlands were observed in aerial or street-level photographs, none are shown on the NWI, and none were identified in the ARDR for the portion of this area that was included. Two channels identified in the ARDR are culverted under Fowler Lane in the optional improvement area, intermittent channel 2 and ephemeral channel 10. One other ephemeral channel may begin near the Optional Fowler Lane Improvement Area based on topography. Overall, there are an estimated 100 feet of intermittent channel and 150 feet of ephemeral channel in the Fowler widening area, including existing culverts.

Special-Status Species

This discussion relates only to the Dorado Oaks Subdivision Site. The SR-49 Improvement Area is a thoroughly disturbed area comprised of pavement and buildings that adjoin other highly disturbed areas. No habitat for any special status species is present. Similarly, the Optional Fowler Lane Improvement Area is comprised of a paved roadway and adjoining shoulder areas, with no habitat for special status species present.

Special-status species are regulated under the state and federal Endangered Species Acts or other regulations, or are species that are considered sufficiently rare by the scientific community to qualify for such listing. These species are in the following categories:

1. Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA) (50 Code of Federal regulations [CFR] 17.12 [listed plants], 17.11 [listed animals] and various notices in the Federal Register [FR] [proposed species]);
2. Species that are candidates for possible future listing as threatened or endangered under FESA (61 FR 40, February 28, 1996);

3. Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations [CCR] 670.5);
4. Plants listed as rare or endangered under the California Native Plant Protection Act (NPPA) (California Fish and Game Code, Section 1900 et seq.);
5. Animal species of special concern to CDFW;
6. Animals fully protected under Fish and Game Code (California Fish and Game Code, Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]);
7. Species that meet the definitions of rare and endangered under CEQA. CEQA Section 15380 provides that a plant or animal species may be treated as “rare or endangered” even if not on one of the official lists (state CEQA Guidelines, Section 15380); and
8. Plants considered under the CDFW and CNPS to be “rare, threatened or endangered in California” (California Rare Plant Rank [CRPR] 1A, 1B, and 2).

A list of special-status species that have the potential to occur within the vicinity of the project site was compiled based on data in the CNDDDB;² the USFWS list of Federal Endangered and Threatened Species that may occur within the project area, and/or may be affected by the proposed project;³ and the CNPS Inventory of Rare and Endangered Plants (see **Appendix C.3**).⁴ A list of special-status species, their general habitat requirements, and an assessment of their potential to occur within the project site is provided below in **Table 4.3-1**.

The “Potential for Occurrence” category is defined as follows:

- **Unlikely:** The project site and/or surrounding area do not support suitable habitat for a particular species, or the project site is outside of the species known range, or a survey has been conducted according to agency protocol and the species was not found;
- **Low Potential:** The project site and/or immediate area provide only limited amounts and low quality habitat for a particular species. In addition, the known range for a particular species may be outside of the immediate project site;
- **Medium Potential:** The project site and/or immediate area provide suitable habitat for a particular species; and
- **High Potential:** The project site and/or immediate area provide ideal habitat conditions for a particular species and/or known populations occur in immediate area and/or within the project site.

² California Department of Fish and Wildlife, 2020. California Natural Diversity Database RareFind 5 personal computer program (ver. 5.2.14). Available: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>. Accessed May 6, 2020.

³ U.S. Fish and Wildlife Service, 2020. List of Threatened and Endangered Species that May Occur in the Proposed Project Location, and/or May be Affected by the Proposed Project. Available: <https://ecos.fws.gov/ipac/>. Accessed May 6, 2020.

⁴ California Native Plant Society, 2020. Rare Plant Program. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). California Native Plant Society. Sacramento, CA. Available: <http://rareplants.cnps.org/>. Accessed May 1, 2020.

**TABLE 4.3-1
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT SITE**

Scientific Name	Common Name	Listing Status:		Habitat Description	Potential for Occurrence
		Federal/State/Other			
Reptiles					
<i>Emys marmorata</i>	Western pond turtle	--/CSC/--		A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat for egg-laying.	Medium. The nearest CNDDDB record for this species is approximately 2.0 miles northeast of the project site (Occurrence Number 567). The pond on the project site provides marginal habitat for western pond turtle.
<i>Phrynosoma blainvillii</i>	Coast horned lizard	--/CSC/--		Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Low. The nearest CNDDDB record for this species is approximately 7.6 miles west of the project site (Occurrence Number 684). Local occurrence records for coast horned lizard are all located west of the project site in northern gabbroic mixed chaparral habitat not found on the project site.
Amphibians					
<i>Rana draytonii</i>	California red-legged frog	FT/CSC/--		Lowlands and foothills in or near sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Unlikely. Intermittent channels within project site do not provide suitable breeding habitat. The pond along the western border of the site contains large numbers of bullfrogs. No recorded occurrence records are within dispersal distance of the project Site.
<i>Rana boylei</i>	Foothill yellow-legged frog	--/CT,CSC/--		Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Unlikely. Intermittent channels within project site do not provide the sufficient hydroperiod for foothill yellow-legged frog reproduction.
Birds					
<i>Accipiter gentilis</i>	northern goshawk	--/CSC/--		Within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites. Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.	Unlikely. The project site is below the nesting elevation range and does not contain dense conifer groves..

**TABLE 4.3-1
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT SITE**

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence
<i>Agelaius tricolor</i>	tricolored blackbird	--/ST/--	Highly colonial species, most numerous in the Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging areas with insect prey within a few kilometers of the colony.	Low. The pond located on the west side of the project site provides low quality nesting habitat. Local CNDDB records are historical or from extirpated populations. The closest CNDDB record of a nesting colony is located approximately 5 miles north of the project site (Occurrence Number 103). This is a historical record from an unknown date. No birds were observed during multiple resurvey efforts of the area between 1992 and 2011.
<i>Riparia riparia</i>	bank swallow	--/ST/--	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Unlikely. No suitable nesting habitat within project site.
Fish				
<i>Hypomesus transpacificus</i>	Delta smelt	FT/CE/--	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait & San Pablo Bay.	Unlikely. No suitable habitat is present within the project site. The project site is outside the species range and is not in Critical Habitat.
Invertebrates				
<i>Bombus occidentalis</i>	Western bumble bee	--/SC/--	Formerly found in much of California, the Western bumble bee is now much reduced in abundance and mostly restricted to high elevation meadows or coastal environments. The species has declined precipitously from central CA to southern B.C., perhaps from disease. Western bumble bees nest, forage, and overwinter in meadows and grasslands with abundant floral resources. Like all bumble bees, this species requires floral resources, and undisturbed nest sites and overwintering sites. ^a	Low. The oak woodland and oak savannah that dominate the project site provide low quality habitat for this species. The closest CNDDB record is located approximately 14 miles northwest of the project site in the Pilot Hill area and is over 40 years old (Occurrence Number 149).
Mammals				
<i>Lasionycteris noctivagans</i>	silver-haired bat	--/--/--	Primarily a coastal and montane forest dweller feeding over streams, ponds, and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks.	Medium. The nearest CNDDB record for this species is approximately 1.7 miles north of the project site (Occurrence Number 35).
<i>Myotis yumanensis</i>	Yuma myotis	--/--/--	Optimal habitats are open forests and woodlands with sources of water over which to feed. Wide variety of habitats below 8,000-foot elevation. Known to use a diversity of roost sites, primarily crevices, but may roost in trees as well.	Medium. The nearest CNDDB record for this species is approximately 5 miles northeast of the project site (Occurrence Number 16).

**TABLE 4.3-1
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT SITE**

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence
<i>Antrozous pallidus</i>	Pallid bat	--/CSC/--	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in foliage of riparian forests and other broadleaf woodlands associated with creeks and drainages. Also roosts in buildings, caves, tree hollows, crevices, mines, and bridges. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Medium. The nearest CNDDDB record for this species is approximately 9.2 miles northwest of the project site (Occurrence Number 430).
Plants				
<i>Allium jepsonii</i>	Jepson's onion	--/--/1B	A perennial bulbiferous herb found on serpentine or volcanic soils in chaparral, lower montane coniferous forest, and cismontane woodland from 980 to 4,350 feet. Known from the northern and central Sierra Nevada foothill. Blooms April through August (CNPS 2020).	Unlikely. There are no suitable soils on the site.
<i>Arctostaphylos nissenana</i>	Nissenan manzanita	--/--/1B	A perennial evergreen shrub found on highly acidic rocky (slate and shale) soils. Often associated with closed-cone conifer forest and chaparral from 1,450 to 3,600 feet. Known from approximately 15 occurrences in El Dorado, Placer, and Tuolumne counties. Blooms February through March (USFS, 2009; CNPS, 2020).	High. Documented on the site in 2008 and 2018.
<i>Calochortus clavatus</i> var. <i>avius</i>	Pleasant Valley mariposa lily	--/--/1B	A perennial bulbiferous herb found in lower montane coniferous forest on Josephine silt loam and volcanic soils from 1,000 to 5,900 feet. Grows on rocky extrusive-volcanic areas (such as the Josephine series) and serpentine (Fiedler and Zebell, 2002). Known from the northern Sierra Nevada foothills. Blooms May through July (CNPS, 2020).	Unlikely. There are no suitable soils on the site.
<i>Calystegia stebbinsii</i>	Stebbins' morning-glory	FE/CE/1B	A perennial rhizomatous herb found in openings of chaparral and cismontane woodland on gabbro or serpentine soils from 600 to 3,600 feet. Known from El Dorado and Nevada counties. Blooms April through July (CNPS, 2020).	Unlikely. There are no suitable soils on the site.
<i>Calystegia vanzuukiae</i>	Van Zuuk's morning-glory	--/--/1B	A perennial rhizomatous herb found in gabbro or serpentine soils in chaparral or cismontane woodland from 1,640 to 3,900 feet. Known from El Dorado and Placer counties. Blooms May through August (CNPS, 2020).	Unlikely. There are no suitable soils on the site.
<i>Carex cyrtostachya</i>	Sierra arching sedge	--/--/1B	A perennial herb found in mesic lower montane coniferous forest, meadows and seeps, marshes and swamps, and riparian forest margins from 2,000 to 4,500 feet. Known from the northern foothills and high Sierra Nevada. Blooms May through August (CNPS, 2020).	Unlikely. Sierra arching sedge was not found during botanical surveys in 2008 and 2018.

**TABLE 4.3-1
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT SITE**

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence
<i>Carex xerophila</i>	Chaparral sedge	--/--/1B	A perennial herb found on serpentine or gabbro soils in chaparral, cismontane woodland, and lower montane coniferous forest from 1,450 to 2,550 feet. Known from the northern foothills and high Sierra Nevada. Blooms March through June (CNPS, 2020).	Unlikely. There are no suitable soils on the site.
<i>Ceanothus roderickii</i>	Pine Hill ceanothus	FE/SR/1B	A perennial evergreen shrub found on serpentine or gabbro soils in chaparral and cismontane woodland from 800 to 3,600 feet. Known from El Dorado County. Blooms April through June (CNPS, 2020).	Unlikely. There are no suitable soils on the site.
<i>Chlorogalum grandiflorum</i>	Red Hills soaproot	--/--/1B	A perennial bulbiferous herb found in chaparral, cismontane woodland, or lower montane coniferous forest on gabbro or serpentine soils from 800 to 4,100 feet. Known from the northern and central Sierra Nevada foothills. Blooms May through June (CNPS, 2020).	Unlikely. There are no suitable soils on the site.
<i>Erigeron miser</i>	Starved daisy	--/--/1B	A perennial herb found on rocky soils in upper montane coniferous forest from 6,000 to 8,600 feet. Known from the northern high Sierra Nevada. Blooms June through October (CNPS, 2020).	Unlikely. The project site is below the elevation range and there is no habitat.
<i>Fremontodendron decumbens</i>	Pine Hill flannelbush	FE/SR/1B	A perennial evergreen shrub found in chaparral and cismontane woodland on rocky gabbro or serpentine soils from 1,400 to 2,500 feet. Known from limited areas in the northern Sierra Nevada foothills. Blooms April through July (CNPS, 2020).	Unlikely. There are no suitable soils on the site.
<i>Galium californicum</i> ssp. <i>sierrae</i>	El Dorado bedstraw	FE/SR/1B	A perennial herb found on gabbro soil in chaparral, cismontane woodland, and lower montane coniferous forest from 300 to 1,950 feet. Known from El Dorado County. Blooms May through June (CNPS, 2020).	Unlikely. There are no suitable soils on the site.
<i>Horkelia parryi</i>	Parry's Horkelia	--/--/1B	A perennial herb found on lone formation and other soils in chaparral and cismontane woodland from 250 to 3,500 feet. Known from the northern and central Sierra Nevada foothills. Blooms April through September (CNPS, 2020).	Unlikely. Parry's horkelia was not found during botanical surveys in 2008 and 2018.
<i>Packera</i> (=Senecio) <i>layneae</i>	Layne's butterweed	FT/SR/1B	A perennial herb found on rocky serpentine or gabbro soil in cismontane woodland or chaparral from 650 to 3,600 feet. Known from the northern and central Sierra Nevada foothills. Blooms April through August (CNPS, 2020).	Unlikely. There are no suitable soils on the site.

**TABLE 4.3-1
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR IN THE DORADO OAKS TENTATIVE SUBDIVISION MAP PROJECT SITE**

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence
<i>Viburnum ellipticum</i>	Oval-leaved viburnum	--/--/2B	A perennial deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forest from 700 to 4,600 feet. Known from the north coast, Klamath and north coast ranges, Bay Area, and northern and central Sierra Nevada foothills. Blooms May through June (CNPS, 2020).	Unlikely. Oval-leaved viburnum was not found during botanical surveys in 2008 and 2018.
<i>Wyethia reticulata</i>	El Dorado County mule ears	--/--/1B	A perennial rhizomatous herb found on clay or gabbro soil in chaparral, cismontane woodland, and lower montane coniferous forest from 600 to 2,100 feet. Known from El Dorado and Yuba counties. Blooms April through August (CNPS, 2020).	Unlikely. There are no suitable soils on the site.

KEY:

Federal: (USFWS)

FE = Listed as Endangered by the Federal Government
FT = Listed as Threatened by the Federal Government
FC = Candidate for listing by the Federal Government

State: (CDFW)

SE = Listed as Endangered by the State of California
ST = Listed as Threatened by the State of California
SR = Listed as Rare by the State of California (plants only)
SC = Candidate for listing by the State of California
CSC = California Species of Special Concern
FP = CDFW Fully Protected Species
WL = Species on the CDFW Watch List

CRPR: (California Rare Plant Rank)

Rank 1A = Plants presumed extinct in California
Rank 1B = Plants rare, threatened, or endangered in California and elsewhere
Rank 2 = Plants rare, threatened, or endangered in California but more common elsewhere
Rank 3 = Need more information
Rank 4 = Limited distribution – a watch list
0.1 = Seriously endangered in California
0.2 = Fairly endangered in California
0.3 = Not very endangered in California
 – = No Listing

SOURCES: California Department of Fish and Wildlife, 2020. California Natural Diversity Database RareFind 5 personal computer program (ver. 5.2.14). Available: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>. Accessed May 6, 2020; California Native Plant Society, 2019. Rare Plant Program. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). California Native Plant Society. Sacramento, CA. Available: <http://rareplants.cnps.org/>. Accessed May 6, 2020; and U.S. Fish and Wildlife Service, 2020. List of Threatened and Endangered Species that May Occur in the Proposed Project Location, and/or May be Affected by the Proposed Project. Available: <https://ecos.fws.gov/ipac/>. Accessed May 6, 2020.

a California Department of Fish and Wildlife, 2019. Report to the Fish and Game Commission: Evaluation of the Petition from the Xerces Society, Defenders of Wildlife, and the Center for Food Safety to List Four Species of Bumble Bees as Endangered under the California Endangered Species Act. State of California Resources Agency, Department of Fish and Game. Sacramento, CA. 50 pp.

Conclusions regarding habitat suitability and species occurrence are based on the analysis of existing literature and databases described previously and known habitats occurring within the project site and regionally, and results of surveys. Species with an unlikely or low potential for occurrence are discussed in Table 4.3-1 only. Species with a medium or high potential for occurrence are discussed further below.

Reptiles

Western Pond Turtle

Western pond turtle is a California Species of Special Concern. It inhabits a wide variety of water bodies, including ponds, marshes, rivers, streams, and irrigation canals. Adjacent terrestrial habitat is also critical for oviposition,⁵ winter refuge, and dispersal. Western pond turtle females migrate away from water bodies into surrounding uplands, where they construct underground nests and lay eggs from April to August. Most nests are within 325 feet of water (CDFW, 2020b).

There are 7 CNDDDB records in the 9-quad area centered on the project site. The nearest record is approximately two miles northeast of the project site in habitat described as a freshwater pond, dominated by cattails; surrounded by willows, blackberry vines, rushes, native grasses, and toyon (Occurrence Number 567).

The pond on the subdivision site provides potential habitat for western pond turtle. The pond has large seasonal variations in water level and may dry out completely in some years based on aerial photographs. However, western pond turtles could estivate⁶ by burying themselves in the bottom of the pond during dry periods. The pond is not along a channel or ditch that provides connectivity to other western pond turtle habitat. Western pond turtle was not observed during biological field surveys conducted in 2008 and 2018 (North Fork Associates, 2009; Sycamore Environmental Consultants, Inc., 2018b). The channels on the subdivision site are too small to provide habitat for western pond turtle.

Birds

Common Bird-of-Prey Species

Common bird-of-prey species, such as the red-tailed hawk (*Buteo jamaicensis*), are not considered special-status species because they do not meet any of the criteria above. However, nests of these species are regulated under the Migratory Bird Treaty Act (MBTA) and Section 3503.5 of the California Fish and Game Code. Common bird-of-prey species may nest in large trees located within the subdivision site. Birds-of-prey include members of the orders Falconiformes and Strigiformes.

MBTA-listed Birds

Most bird species, migratory or not, are regulated under the MBTA. Examples of common MBTA-listed species that known from the subdivision site include acorn woodpecker (*Melanerpes formicivorus*), California scrub jay (*Aphelocoma californica*), and northern mockingbird (*Mimus polyglottos*). Active nests are regulated under the MBTA. In addition, under

⁵ The process of laying eggs by certain animals.

⁶ Spend a hot or dry period in a prolonged state of torpor or dormancy

Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Code or any regulation made pursuant thereto. Non-game birds are regulated under Section 3800, while other specified birds are regulated under Section 3505.

Mammals

Special Status Bat Species

Special-status bat species with the potential to occur within the project site include the pallid bat (*Antrozous pallidus*), a California Species of Special Concern, the silver-haired bat (*Lasionycteris noctivagans*), ranked as a Medium Priority species in Region 5 by the Western Bat Working Group (WBWG) and Yuma Myotis (*Myotis yumanensis*), ranked a Low Priority species in Region 5 by the WBWG.⁷

The pallid bat is a locally common species of low elevations in California and occupies a wide variety of habitats including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. This species roosts in foliage of riparian forests and other broadleaf woodlands, buildings, caves, tree hollows, crevices, mines, and bridges.

The silver-haired bat is found in coastal and montane forests and is restricted to mesic environments with water sources. During spring and fall migrations the silver-haired bat may be found anywhere in California. Summer habitats include coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats. This species generally roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. It can also be found in caves and buildings.

The Yuma myotis is common and widespread in California and can be found in a wide variety of habitats ranging from sea level to 11,000 feet. Optimal habitats are open forests and woodlands with sources of water over which to feed. The Yuma myotis roosts in buildings, mines, caves, or crevices. The species also has been seen roosting in abandoned swallow nests and under bridges.

Roosting and foraging habitat for these bat species is present within the subdivision site. The closest CNDDDB occurrence record for the pallid bat is approximately 9.2 miles northwest of the project site (Occurrence Number 430), while the closest record for the silver-haired bat is approximately 1.7 miles north of the project site (Occurrence Number 35), and 5 miles northeast of the project site (Occurrence Number 16) for Yuma myotis.

Plants

Nissenan manzanita

Nissenan manzanita is a perennial evergreen shrub that grows on highly acidic rocky (slate and shale) soils, often on ridges. It is often associated with closed-cone conifer forest and chaparral

⁷ Western Bat Working Group Species Matrix. <http://wbwg.org/matrices/species-matrix/>

habitats and has been reported from about 1,450 to 3,600 feet in elevation, and possibly up to about 5,400 feet (USFS, 2009; CNPS, 2020; Jepson, 2020).

Nissenan manzanita has a geographically limited natural range with reports from El Dorado, Placer, and Tuolumne counties (Jepson, 2020; Parker *et al.*, 2009). There are 13 occurrences reported in CNDDDB, of which 12 are in El Dorado County. The subdivision site (about 1,620 to 1,840 feet in elevation) is near the lower elevations of reported occurrences. A substantial CNDDDB occurrence (#1) mapped in six separate parts begins about 600 feet southeast of the subdivision site. Occurrence #1 is noted as occurring on south-facing slopes. The areas of chaparral habitat are clearly evident on steep slopes on both sides of Martinez Creek southeast of the tentative subdivision site (Google, Inc., 2020).

Fieldwork for botanical surveys was conducted in the on-site subdivision area in 2006–2009 (North Fork Associates, 2009) and 2017 (Sycamore Environmental, 2018b). Both surveys found Nissenan manzanita growing in the same general areas of the project site. The 2006–2009 surveys counted 62 Nissenan manzanita shrubs and the 2017 survey counted 88.

Most of the off-site improvement areas (the State Route 49 Intersection Area and the Fowler Lane Improvement Area) were not included in the botanical surveys. The Highway 49 Intersection Area is unlikely to contain Nissenan manzanita because it consists mostly of existing development and an open field that is grazed by livestock. The Fowler Lane Improvement Area consists largely of dense oak woodland with a tree canopy that is mostly closed. Nissenan manzanita was not found in such dense oak woodland elsewhere on the subdivision site.

Much of the northern end of the subdivision site was graded for development prior to June 1987 (UCSB, 2020). In a June 17, 1987 aerial photograph the graded area may be clearly discerned and there is almost no vegetation visible within the grading limits where almost all of the Nissenan manzanita now grows. That development never proceeded beyond rough grading. Level-graded building pads and some of the previously intended street locations may still be discerned on the ground and were observed during the 2017 fieldwork. Many of the graded areas contain very dense compacted soils or bedrock at or near the surface. Nearly all of the Nissenan manzanita observed were found in the previously graded areas. Only the three southernmost Nissenan manzanita shrubs found are not in or along the edge of the previous grading (Sycamore Environmental, 2018b).

Nissenan manzanita does not form burls (Jepson, 2020). Some other manzanita species form burls from which resprouting may occur after ecological disturbance, such as fire. Manzanitas that do not form burls generally reproduce from seed, accumulating a seed bank in the soil with substantial germination following fire. At the subdivision site, the areas containing Nissenan manzanita also have abundant whiteleaf manzanita (*Arctostaphylos viscida* ssp. *viscida*), which also does not form burls and reproduces generally from seed.

A 1962 aerial photograph of the subdivision site indicates the area currently occupied by Nissenan and whiteleaf manzanita was mostly grassland and oak woodland prior to grading. A substantial manzanita seed bank at the location was unlikely. The areas to the southeast where most of the nearby occurrences of Nissenan manzanita grow are visible as relatively low-growing

chaparral in the aerial photograph. The subdivision site areas which now support Nissenan manzanita did not have similar habitat in 1962, prior to the grading disturbance. It is possible, and even likely, that the subdivision site currently supports more Nissenan manzanita than it did prior to the grading disturbance that occurred in the 1980's. Many species of mammals and birds are consumers and dispersers of manzanita seeds (USDA, 2020), and may have spread both Nissenan and whiteleaf manzanita into the area that was graded in the 1980's.

Manzanita's are susceptible to *Phytophthora*, a genus of serious plant pathogens. A similar edaphically-restricted manzanita (Ione manzanita [*Arctostaphylos myrtifolia*]) has experienced substantial and ongoing dieback from *Phytophthora* (Swiecki and Bernhardt, 2003). CNDDDB notes that Nissenan manzanita near the end of Fowler Lane have died back with *Phytophthora* suspected. A common source of *Phytophthora* introduction into natural communities is from nearby plantings from commercial nurseries. Once introduced *Phytophthora* may spread through soil moisture (Swiecki *et al.*, 2009). The "Working Group for *Phytophthoras* in Native Habitats" (2016) has developed guidelines for nurseries to prevent the spread.

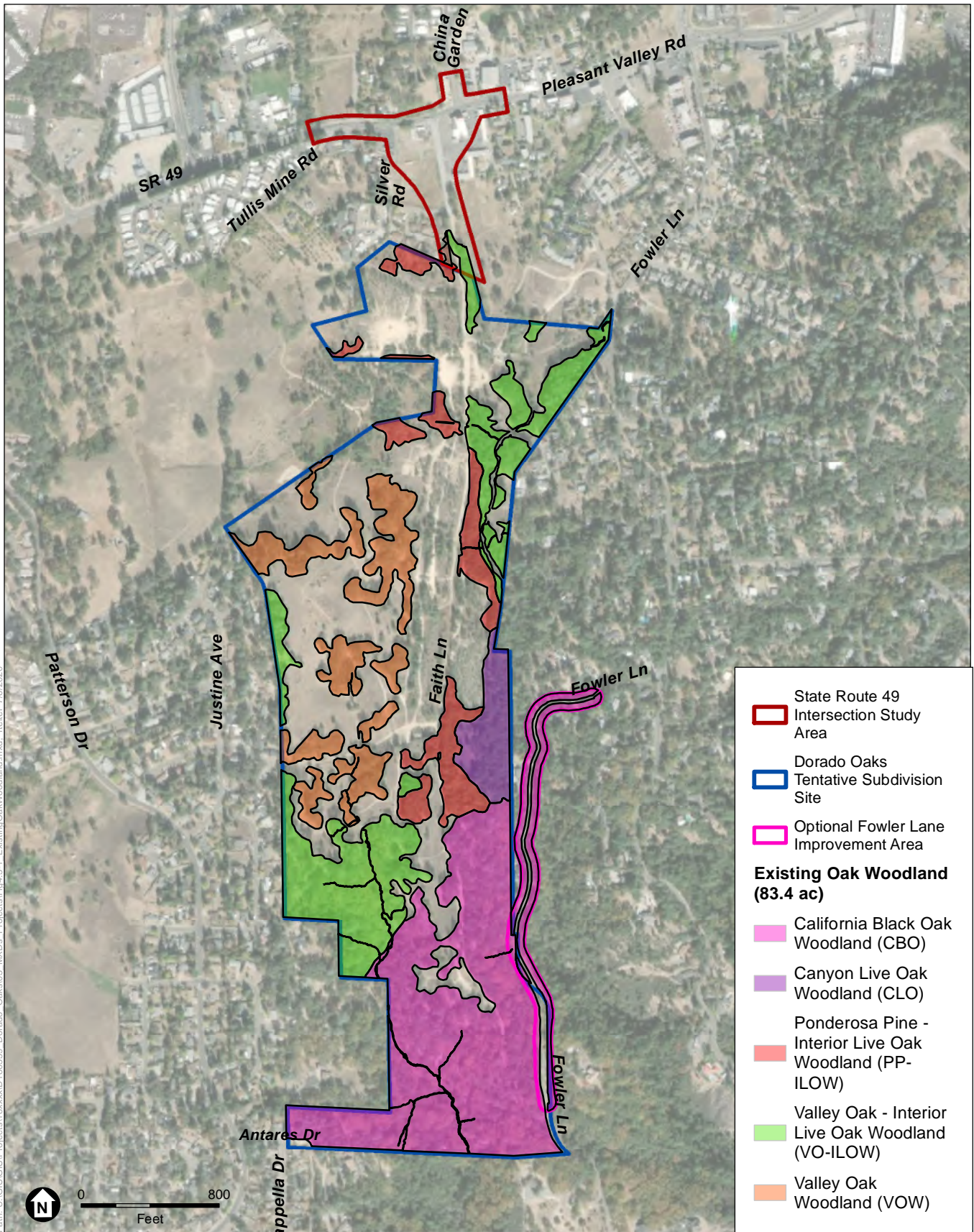
Sensitive Natural Communities

Oak Woodlands and Oak Trees

The County Oak Resources Management Plan (ORMP; El Dorado County, 2017b) regulates oak woodlands, individual oak trees outside of oak woodlands, and heritage trees. Oak woodlands, areas with at least 10% cover of oak canopy, are regulated by acreage. Individual oak trees outside oak woodlands, of at least six inches diameter at breast height (dbh), are regulated by size. Heritage oaks, of at least 36 inches dbh, are regulated by size at a higher mitigation ratio, both inside and outside of oak woodlands. Mitigation may occur by on-site replacement, off-site replacement or preservation, or payment of an in-lieu fee. The provisions of the ORMP have been incorporated into the El Dorado County Zoning Code (§130.39 *et seq.*).

Oak woodlands and tree resources were quantified for the tentative subdivision site in an arborist report (**Appendix C.4**; California Tree and Landscape Consulting, Inc., 2018). The oak woodland boundaries in the arborist report were incorporated from the biological report (Sycamore Environmental, 2018b). The previous biological documentation for the project did not include the entirety of the off-site areas (State Route 49 Improvement Area and the Optional Fowler Lane Improvement Area) as those were not part of the project at the time. There have also been minor changes to the tentative subdivision map design since 2018.

A map of existing oak woodland that incorporates the project's off-site areas is shown in **Figure 4.3-1**. There are about 83.4 acres of oak woodland on the project including the off-site areas. The State Route 49 intersection improvements area contains little oak woodland, as it consists mostly of paved areas, adjoining shoulder areas, and buildings. The Optional Fowler Lane Improvement Area consists mostly of oak woodland, except for the paved road itself. Of the overall oak woodlands, about 33.05 acres are valley oak woodland, which is classified as sensitive habitat in the El Dorado County General Plan EIR (2004b) and the ORMP. The ORMP mitigates for valley oak woodlands at the same ratios as other oak woodlands, but most exemptions in the ORMP do not apply to valley oak woodlands.



SOURCE: 22 June 2018 Aerial Photograph, USDA; Sycamore Environmental, 2018

Dorado Oaks Tentative Subdivision Map Project

Figure 4.3-1
Existing Oak Woodlands

The ORMP also regulates individual oak trees outside of oak woodlands that are at least 6 inches dbh. California Tree and Landscape Consulting, Inc. (2018) counted 24 individual oak trees meeting that criteria (four heritage trees growing outside of oak woodland are discussed below). An additional 21 individual oak trees of at least 6 inches dbh (exclusive of heritage trees) are estimated to occur in the State Route 49 intersection improvements area. These additional trees were estimated using both aerial and street-level photographs (Google, Inc., 2020). In sum, there are an estimated 45 oaks that meet the ORMP definition of individual oak trees in the overall project area.

The ORMP further regulates heritage oak trees of at least 36 inches dbh both inside and outside of oak woodlands. California Tree and Landscape Consulting, Inc. (2018) counted 253 heritage oak trees, of which 202 were determined to be in poor or worse condition. An additional 13 heritage oak trees are estimated to occur in the State Route 49 intersection improvements and Fowler Lane widening areas. These additional trees were estimated using street-level photographs (Google, Inc. 2020.). In sum, there are an estimated 266 oaks that meet the ORMP definition of heritage tree in the overall project area.

California Tree and Landscape Consulting, Inc. (2018) also report the number of trees exceeding 24 inches dbh. While this data is collected by the County during the process of issuing an oak removal permit, it does not affect the mitigation required by the County. The County may use the additional data collected to change the definition of heritage trees in the future.

Waters and Wetlands (Including Sacramento-San Joaquin foothill/valley ephemeral stream)

Most of the channels in the subdivision site are ephemeral and flow only for brief periods of up to a few days after storm events. The ephemeral channel beds consist mostly of scoured soil and there is no riparian vegetation community or aquatic wildlife. The lower reaches of two channels (channels 1 and 2) are small intermittent channels. They have a groundwater component to flow and contain water into the spring and summer, although they are dry throughout most of the summer and autumn. Scattered riparian vegetation is present in the intermittent streambeds or along the immediate streambanks. Many areas of the intermittent streams in the tentative subdivision map site are dominated by the nonnative invasive weed Himalayan blackberry (*Rubus armeniacus*), which inhibits wildlife movement and access to water (Cal-IPC, 2020).

The sensitive natural community known as “Sacramento-San Joaquin foothill/valley ephemeral stream” appears on the CNDDDB query in Appendix C.3. CNDDDB classifies “ephemeral” streams differently than the USACE (see discussion in Sycamore Environmental [2018a]). A stream defined by CNDDDB as “ephemeral” would be classified as “intermittent” or even “perennial” under the USACE definition. The streams labeled “ephemeral” in the ARDR follow the USACE classification and hence do not meet the criteria of a Sacramento-San Joaquin foothill/valley ephemeral stream. The intermittent streams in the ARDR, portions of Channels 1 and 2, do meet the definition.

A seasonal pond is along the boundary of the tentative subdivision map site. It is partially in, but mostly outside of the site. The pond may completely dry out in dry years, but retain some standing water in the deepest parts in wet years. The pond is the result of an off-site impoundment of a wetland swale (Sycamore Environmental, 2018a, b).

Wetlands in the tentative subdivision map site have seasonal hydrology and are dominated by herbaceous hydrophytic vegetation capable of withstanding the summer dry season. Some of the wetlands are not naturally occurring, but have formed in low spots in previously graded areas or dirt roads. These wetlands have substantial cover of bare soil (Sycamore Environmental 2018a, b).

The ARDR did not include all of the off-site areas. Additional aquatic resources were estimated in the off-site areas using aerial and street-level photographs (Google, Inc. 2020.), site topography from the ARDR that extends into some of the off-site areas, U.S. Geological survey topographic maps, and the USFWS National Wetlands Inventory (NWI). Much of the State Route 49 area is urbanized. There are an estimated 300 linear feet of roadside ditches that may meet USACE or State criteria for waters or wetlands. On the far western boundary of the area a culvert and ditch under Route 49 may be a realigned segment of a naturally-occurring channel. Other than the bottoms of some of the ditches, there are no areas that appear to meet wetlands criteria.

Much of the Optional Fowler Lane Improvement Area is steep and hence an unlikely landscape position for wetlands. No wetlands were observed in aerial or street-level photographs, none are shown on the NWI, and none were identified in the ARDR for the portion of this area that was included. Two channels identified in the ARDR are culverted under Fowler Lane in the optional improvement area, intermittent channel 2 and ephemeral channel 10. One other ephemeral channel may begin near the Optional Fowler Lane Improvement Area based on topography. Overall, there are an estimated 100 feet of intermittent channel and 150 feet of ephemeral channel in the Fowler widening area, including existing culverts.

Sandbar Willow Scrub

There is approximately 0.58 acre of sandbar willow scrub in the tentative subdivision site. The sandbar willow scrub does not meet wetland criteria, but is a riparian community that generally occurs along or near channels. The sandbar willow scrub in the tentative subdivision site is classified as valley foothill riparian, a sensitive habitat in the El Dorado County General Plan EIR (2004b).

Wildlife Movement Corridors

Terms such as habitat corridors, linkages, crossings, and travel routes are used to describe physical connections that allow wildlife to move between patches of suitable habitat in undisturbed landscapes, as well as environments fragmented by urban development. Wildlife movement corridors are considered an important ecological resource by CDFW and USFWS and under CEQA. Movement corridors may provide favorable locations for wildlife to travel between different habitat areas such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors allowing animals to move between various locations within their range. Topography and other natural factors, in combination with urbanization, can fragment or separate large open-space areas. Areas of human disturbance or urban development can fragment wildlife habitats and impede wildlife movement between areas of suitable habitat. This fragmentation creates isolated “islands” of vegetation that may not provide sufficient area to accommodate sustainable populations, and can adversely affect genetic and species diversity. Movement corridors mitigate the effects of this fragmentation by

allowing animals to move between remaining habitats, which in turn allows depleted populations to be replenished and promotes genetic exchange between separate populations.

The project site is located outside the El Dorado County Important Biological Corridor (IBC), Priority Conservation Areas (PCA), and Ecological Preserve (EP) overlay areas (El Dorado County, 2004b). It is also located outside of Important Habitat for Migratory Deer Herds (El Dorado County, 2010). The project site is mostly surrounded by existing single-family residential development, or fragmented multi-family or commercial development on the west, north, and east sides. Wildlife could move through a corridor of mostly natural communities and little development south of the project along Martinez Creek. While natural communities on the project site are continuous with that corridor, there is no substantial natural area north of the project site for wildlife to move to due to existing development. Hence the project site does not constitute a significant wildlife movement corridor.

4.3.3 Regulatory Setting

Federal

Federal Endangered Species Act

The federal Endangered Species Act (FESA) regulates candidate, threatened, and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal pathways, both of which require consultation with the USFWS, which administers the FESA for all terrestrial species. The first pathway, Section 10(a) incidental take permit, applies to situations where a non-federal government entity must resolve potential adverse impacts to species regulated under the FESA. The second pathway, Section 7 consultation, applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) enacts the provisions of treaties between the U.S., Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and regulates migratory birds, their occupied nests, and their eggs. Most actions that result in a taking or in permanent or temporary possession of a regulated species constitute violations of the MBTA. Examples of permitted actions that do not violate the MBTA are the possession of a hunting license to pursue specific game birds, legitimate research activities, display in zoological gardens, bird banding, and other similar activities. USFWS is responsible for overseeing compliance with the MBTA.

Clean Water Act

The federal Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the U.S. The CWA serves as the primary federal law regulating the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

Section 404

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the U.S. Waters of the U.S. refers to oceans, bays, rivers, streams, lakes, ponds, and wetlands. Applicants must obtain a permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the U.S., including wetlands, before proceeding with a proposed activity. Waters of the U.S. are under the jurisdiction of the USACE and the Environmental Protection Agency (EPA).

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. The USACE cannot issue an individual permit or verify the use of a general nationwide permit until the requirements of FESA and the National Historic Preservation Act (NHPA) have been met. In addition, the USACE cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

Section 401

Under CWA Section 401, applicants for a federal license or permit to conduct activities which may result in the discharge of a pollutant into waters of the U.S. must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

State

Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) (together “Boards”) are the principal state agencies with primary responsibility for the coordination and control of water quality. In the Porter-Cologne Water Quality Control Act (Porter-Cologne), the Legislature declared that the “state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation...” (California Water Code section 13000).

Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the state. Waters of the state determined to be jurisdictional would require, if impacted, waste discharge permitting and/or a CWA Section 401 certification (in the case of a required USACE permit under Section 404). The enforcement of the state's water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., the CDFW under Section 5650 of the California Fish and Game Code) have the authority to enforce certain water quality provisions in state law.

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFW has the responsibility for maintaining a list of endangered and threatened species.⁸ Sections 2050 through 2098 of the

⁸ Section 2070 of the California Fish and Game Code.

California Fish and Game Code outline the protection provided to California's rare, endangered, and threatened species. Section 2080 of the California Fish and Game Code prohibits the taking of plants and animals listed under the CESA. Section 2081 established an incidental take permit program for state-listed species. CDFW maintains a list of "candidate species" which are species that CDFW formally notices as being under review for addition to the list of endangered or threatened species.

Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present within the project site and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. Under Section 86 the California Fish and Game Code "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill". "Take" of listed species incidental to otherwise lawful management activities may be authorized under California Fish and Game Code Section 206.591. Authorization from CDFW would be in the form of an Incidental Take Permit.

California Fish and Game Code

Fully Protected Species

Certain species are considered *fully protected*, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals.

It is possible for a species to be protected under California Fish and Game Code, but not fully protected. For instance, mountain lion (*Puma concolor*) is protected under Section 4800 et seq., but is not a fully protected species.

Birds and Their Nests

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code or any regulation made pursuant thereto. Section 3503.5 of the California Fish and Game Code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Non-game birds are regulated under Section 3800, while other specified birds are regulated under CGFC Section 3505.

Streams and Lakes

CDFW has regulatory authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Sections 1600 et seq. through administration of lake or streambed alteration agreements. Such an agreement is not a permit, but rather a mutual accord between CDFW and a project proponent. Under Sections 1600 et seq. of the California Fish and Game Code, CDFW has the authority to regulate work that will

“substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river lake or stream.” CDFW enters into a lake or streambed alteration agreement with the project proponent and can impose conditions in the agreement to minimize and mitigate impacts to fish and wildlife resources. Because CDFW includes under its regulatory authority streamside habitats that may not qualify as wetlands under the federal CWA definition, CDFW regulatory authority may be broader than USACE jurisdiction.

Pursuant to the California Fish and Game Code, a project proponent must submit a notification of lake or streambed alteration to CDFW before construction. The notification requires an application fee for a lake or streambed alteration agreement, with a specific fee schedule to be determined by CDFW. CDFW can enter into programmatic agreements that cover recurring operation and maintenance activities and regional plans. These agreements are sometimes referred to as Master Streambed Alteration Agreements (MSAAs).

Under Fish and Game Code Section 1602 (Streambed Alteration Agreements), CDFW takes regulatory authority over the stream zone which is defined as the top of bank or outside extent of riparian vegetation, whichever is the greatest. Within the stream zone, waters of the State of California are typically delineated to include the streambed to the top of the bank and adjacent areas that would meet any one of the three wetland parameters in the USACE definition (vegetation, hydrology, and/or soils). Whereas federal jurisdiction requires meeting all three parameters, in practice meeting one parameter, or even the presence (rather than dominance) of wetland plants in an area associated with a streambed would qualify an area as waters of the State of California. CDFW regulatory authority is not limited to navigable waters or tributaries to navigable waters, however, isolated wetlands and wetlands not associated with a streambed are not subject to CDFW regulatory authority.

Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed the CDFW to carry out the legislature’s intent to “preserve, protect, and enhance endangered plants in this state.” The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. CESA expanded on the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered.

California Rare Plant Ranking System

CDFW works in collaboration with the CNPS to maintain a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. These species are categorized by rarity in the California Rare Plant Ranking (CRPR) system. This information is published in the Inventory of Rare and Endangered

Vascular Plants of California.⁹ Potential impacts to populations of CRPR species may receive consideration under CEQA review. The following identifies the definitions of the CRPR:

- Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.
- Rank 2A: Plants presumed extirpated in California, but more common elsewhere.
- Rank 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere.
- Rank 3: Plants about which more information is needed - A Review List.
- Rank 4: Plants of limited distribution - A Watch List.

Local

County of El Dorado General Plan

The following goals and policies from the General Plan are relevant to biological resources at a project level. These policies guide the location, design, and quality of development to protect biological resources such as wildlife habitat, open space corridors, and ecosystems.

Goal 7.3: Water Quality and Quantity. Conserve, enhance, and manage water resources and protect their quality from degradation.

Objective 7.3.3: Wetlands: Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.

Policy 7.3.3.1: For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual.

Policy 7.3.3.3: The County shall develop a database of important surface water features, including lake, river, stream, pond, and wetland resources.

Policy 7.3.3.4: The Zoning Ordinance shall be amended to provide buffers and special setbacks for the protection of riparian areas and wetlands. The County shall encourage the incorporation of protected areas into conservation easements or natural resource protection areas.

Exceptions to riparian and wetland buffer and setback requirements shall be provided to permit necessary road and bridge repair and construction, trail construction, and other recreational access structures such as docks and piers, or where such buffers deny reasonable use of the property, but only when appropriate mitigation measures and Best Management Practices are incorporated into the project. Exceptions shall

⁹ California Native Plant Society, 2017. Inventory of Rare and Endangered Plants (online edition, v8-03). California Native Plant Society, Sacramento, CA. Accessed April 12, 2017.

also be provided for horticultural and grazing activities on agriculturally zoned lands that utilize “best management practices (BMPs)” as recommended by the County Agricultural Commission and adopted by the Board of Supervisors.

Until standards for buffers and special setbacks are established in the Zoning Ordinance, the County shall apply a minimum setback of 100 feet from all perennial streams, rivers, lakes, and 50 feet from intermittent streams and wetlands. These interim standards may be modified in a particular instance if more detailed information relating to slope, soil stability, vegetation, habitat, or other site- or project-specific conditions supplied as part of the review for a specific project demonstrates that a different setback is necessary or would be sufficient to protect the particular riparian area at issue.

For projects where the County allows an exception to wetland and riparian buffers, development in or immediately adjacent to such features shall be planned so that impacts on the resources are minimized. If avoidance and minimization are not feasible, the County shall make findings, based on documentation provided by the project proponent, that avoidance and minimization are infeasible.

Policy 7.3.3.5: Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.

Goal 7.4: Wildlife and Vegetation Resources. Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

Objective 7.4.1: Pine Hill Rare Plant Species: The County shall protect Pine Hill rare plant species and their habitats consistent with Federal and State laws.

Policy 7.4.1.1: The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment and management of ecological preserves consistent with County Code Chapter 130.71 and the USFWS’s Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan (USFWS 2002).

Policy 7.4.1.2: Private land for Pine Hill rare plant preserve sites will be purchased only from willing sellers.

Policy 7.4.1.3: Limit land uses within established Pine Hill rare plant preserve areas to activities deemed compatible. Such uses may include passive recreation, research and scientific study, and education. In conjunction with use as passive recreational areas, develop a rare plant educational and interpretive program.

Policy 7.4.1.4: The Pine Hill Preserves, as approved by the County Board of Supervisors, shall be designated Ecological Preserve (-EP) overlay on the General Plan land use map.

Objective 7.4.4: Forest, Oak Woodland, and Tree Resources. Protect and conserve forest, oak woodland, and tree resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.

Policy 7.4.4.1: The Natural Resource land use designation shall be used to protect important forest resources from uses incompatible with timber harvesting.

Policy 7.4.4.2: Through the review of discretionary projects, the County, consistent with any limitations imposed by State law, shall encourage the conservation protection, planting, restoration, and regeneration of native trees in new developments and within existing communities.

Policy 7.4.4.3: Encourage the clustering of development to retain the largest contiguous areas of forests and oak woodlands possible.

Policy 7.4.4.4: For all new development projects or actions that result in impacts to oak woodlands and/or individual native oak trees, including Heritage Trees, the County shall require mitigation as outlined in the El Dorado County Oak Resources Management Plan (ORMP). The ORMP functions as the oak resources component of the County's biological resources mitigation program, identified in Policy 7.4.2.8.

4.3.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

For purposes of this EIR and consistent with the criteria presented in Appendix G of the State CEQA Guidelines, impacts to biological resources may be considered significant if implementation of the proposed project would:

- 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 Wildlife or U.S. Fish and Wildlife Service;
- 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 Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, 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; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Approach to Analysis

The impact analysis is based on the resources, references, and data collection methods identified above. This section assesses the potential for the proposed project to adversely change biological resources in or around the project area. In the impact analysis, three principal factors were

considered: (1) magnitude of the impact (e.g., substantial/not substantial); (2) uniqueness of the affected resource (i.e., rarity of the resource); and (3) susceptibility of the affected resource to perturbation (i.e., sensitivity of the resource). The evaluation of the significance considered the interrelationship of these three factors. For example, a relatively small magnitude impact to a state or federally listed species would be considered significant if the species is exceptionally rare or believed to be highly susceptible to disturbance. Conversely, a plant community such as annual grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be necessary to result in a significant impact. The project's potential impacts on biological resources are analyzed below according to the above-listed CEQA criteria.

The project area is not a part of a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, there would be no project-related impacts associated with this issue, and it is not discussed further.

Impacts and Mitigation Measures

Impact 4.3-1: The project would not 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 Wildlife or U.S. Fish and Wildlife Service. (*Less than Significant Impact, with Mitigation*)

Western pond turtle

The seasonal pond located on the project site could support western pond turtles although none have been observed there. Most construction will be about 100 feet or more away from the pond. A pedestrian trail would be closer to the pond, about 30 feet away in most places, but would require much less disruptive construction. The project is unlikely to result in direct injury or mortality of adult turtles due to avoidance of the pond. project construction could destroy western pond turtle nests if any were near the pond. The destruction of nests would be a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 4.3-1: Avoidance and Minimization Measures for Western Pond Turtle

Preconstruction surveys for western pond turtle nests shall be conducted by a qualified biologist prior to vegetation removal, equipment staging or other off pavement construction-related activity within 325 feet of the seasonal pond, as specified below:

1. A preconstruction survey shall be conducted within 5 days prior to vegetation removal or grading to identify any western pond turtle nests.
2. If an active nest is identified, the biologist shall establish a minimum 100-foot no-disturbance buffer zone around each nest using temporary orange construction fencing. The buffer zone shall include a minimum 100-foot wide swath from the nest to the seasonal pond, to allow a path without any construction for hatchlings to move from the nest to the seasonal pond. The buffer zones and fencing shall remain in place until the young have left the nest, as determined by the qualified biologist.

Significance After Mitigation

Implementation of Mitigation Measure 4.3-1 would reduce potential impacts to western pond turtle to a **less-than-significant** level by avoiding any nests and allowing young to hatch and move to the seasonal pond.

Special-Status Bat Species

Special-status bat species potentially present in the project site include silver-haired bat (*Lasionycteris noctivagans*), pallid bat (*Antrozous pallida*), and Yuma myotis (*Myotis yumanensis*). Roosting and foraging habitat for tree-roosting species is present within the project site.

This analysis examines the potential to impact maternity roosting special-status bats as well as regionally occurring bat species such as the Mexican free-tailed bat (*Tadarida brasiliensis*) and the big brown bat (*Eptesicus fuscus*) as a result of development in the project site. Removal or disturbance (resulting in abandonment) of a roost containing a maternity colony (special-status or common) could result in loss of a large number of individuals, which is considered a significant impact due to the magnitude of the loss.

Mature trees at the project site provide potential tree-roosting habitat. Removal of trees, or construction-related disturbance associated with the project, could result in the loss of a tree-roosting bat maternity colony. This impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 4.3-2: Special-status bat species

In advance of tree or structure removal, a preconstruction survey for bats shall be conducted by a qualified biologist to identify any active roost sites. If active roosts are found the following shall be implemented:

1. Removal of trees and structures shall occur when bats are active, between the periods of March 1 to April 15 and August 15 to October 15, and outside of bat maternity roosting season (approximately April 15 – August 15) and outside of months of winter torpor (approximately October 15 – February 28), to the extent feasible.
2. If removal of trees and structures during the periods above is not feasible and active bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the project site where tree and structure removal is planned, a no-disturbance buffer of 100 feet shall be established around these roost sites until they are determined to be no longer active by the qualified biologist or until the periods above.
3. The qualified biologist shall be present during tree and structure removal if active bat roosts, which are not being used for maternity or hibernation purposes, are present. Trees and structures with active roosts shall be removed only when no rain is occurring or is forecast to occur for three days and when daytime temperatures are at least 50°F.

4. Removal of trees with active or potentially active roost sites shall follow a two-step removal process:
 - a) On the first day of tree removal and under supervision of the qualified biologist, branches and limbs not containing cavities or fissures in which bats could roost, shall be cut only using chainsaws.
 - b) On the following day and under the supervision of the qualified biologist, the remainder of the tree may be removed, either using chainsaws or other equipment (e.g. excavator or backhoe).
5. Removal of structures containing or suspected to contain active bat roosts, which are not being used for maternity or hibernation purposes, shall be dismantled under the supervision of the qualified biologist in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost.

Significance After Mitigation

Implementation of Mitigation Measure 4.3-2 would minimize potential direct and indirect impacts on maternity roosting bats by requiring preconstruction surveys to identify any maternity roosting sites within 100 feet of project activities, and if found, observance of buffers around those sites. This would reduce impacts to maternity colonies to a **less-than-significant** level.

Nissenan manzanita

Grading for the project will result in the removal of all, or nearly all, of the 88 Nissenan manzanita shrubs that occur on the site. A relatively small number of the shrubs ($\approx 10-20$) are near the grading boundaries and might be preserved in place, although grading will be close nearby. Most of the Nissenan manzanita shrubs are growing on the flattest, most level areas of the site that were previously graded for a separate project approximately 35 years ago. The previously graded, level areas are the most feasible for residential development in part because they require less grading. The graded areas are also mostly in the northern end of the subdivision site, nearest existing urban development and infrastructure.

Nissenan manzanita is recognized as a special-status species by CDFW (2020) and has a limited geographic range and habitat niche. The project's removal of all or most of the Nissenan manzanita at the site may have a substantial adverse effect on the species through 1) direct mortality of individual plants, and 2) the loss of a population occurrence. This impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 4.3-3a: Avoidance of Nissenan manzanita.

If the final site clearing and grading plans avoid any Nissenan manzanita plants, the plans shall include locations to install temporary fencing between clearing and grading and the avoided Nissenan manzanita plants. The fencing shall be installed prior to the initiation of any vegetation clearing. El Dorado County shall verify that the plans include the temporary fencing if any Nissenan manzanita plants are avoided.

Mitigation Measure 4.3-3b: Compensatory mitigation for Nissenan manzanita.

The project proponent shall either:

- Prepare a mitigation plan for Nissenan manzanita on-site. The mitigation plan shall include success criteria that require the replacement of at least as many Nissenan manzanita plants as are removed by the project. If replacement utilizes an off-site plant nursery, the nursery shall follow the current version of the *Guidelines to Minimize Phytophthora Pathogens in Restoration Nurseries* by the Working Group for *Phytophthoras* in Native Habitats. The mitigation plan shall require that if the success criteria are not met, then the off-site preservation option below shall be implemented. The mitigation plan shall be approved by El Dorado County, in coordination with CDFW, prior to the removal of any Nissenan manzanita plants.

The mitigation plan may make use of graded areas around the margin of the subdivision for replacement. The mitigation plan may use various methods for the propagation of Nissenan manzanita, including by seed (such as either direct seeding or use of an off-site nursery) or transplantation.

Or:

- Preserve an off-site area containing at least as many Nissenan manzanita as are removed by the project. The off-site area shall be preserved via a method acceptable to El Dorado County. The off-site area shall be preserved prior to the removal of any Nissenan manzanita plants at the project site.

The project proponent may utilize a third-party acceptable to El Dorado County, in coordination with CDFW, to either own or be the beneficiary of a conservation easement for an off-site preserve. A management plan for the off-site area may be required. If required, the management plan shall be approved by El Dorado County, in coordination with CDFW. A financial endowment may be required by a third-party to implement the management plan.

Significance After Mitigation

Mitigation Measure 4.3-3a may result in the avoidance of some of the Nissenan manzanita plants in place, if any are avoided by the final grading design. Mitigation measure 4.3-3b will result in either the replacement of Nissenan manzanita plants on-site, or the preservation off-site of the same or greater number of plants removed.

If an on-site mitigation plan is pursued, it is anticipated to utilize on-site graded areas around the margin of the project for replacement. Such areas are similar to the graded areas that were previously colonized naturally by Nissenan manzanita. Transplantation is unlikely to be utilized for propagation. Transplantation would likely result in severe root damage and poor survival due to the rocky substrate where the plants currently occur.

The propagation method is expected to include on-site seed collection and a scarification treatment of the collected seed to enhance germination. Seed could be planted directly in the mitigation sites, or started in a nursery and then planted. These methods are currently used for the propagation of other native manzanita species. Mitigation measure 4.3-4b requires either the

successful on-site replacement of plants, or off-site preservation. Off-site preservation may be chosen initially by the project proponent, or it will be required if on-site replacement does not meet the success criteria.

Implementation of mitigation measures 4.3-3a and 4.3-3b will result in either on-site replacement of Nissenan manzanita plants removed by the project, or the off-site preservation of an occurrence at least as large as that removed by the project. Implementation of mitigation measures 4.3-3a and 4.3-3b will reduce impacts to Nissenan manzanita to **less-than-significant**.

Nesting birds, including birds-of-prey

The project site is habitat for nesting birds, including birds listed by the MBTA and birds-of-prey. project construction could result in the destruction or disruption of active nests. Disturbance of active nests which results in nest abandonment, loss of young, or the direct removal of vegetation that supports active nests is a **potentially significant** impact.

Mitigation Measures

Mitigation Measure 4.3-4: Avoidance and Minimization Measures for Nesting Birds, including birds-of-prey.

If vegetation removal occurs during the nesting season (February 1 to September 15), a qualified biologist shall conduct a preconstruction survey for active nests within 300 feet of the construction area for nesting birds. The preconstruction survey shall be conducted within 5 days prior to commencement of vegetation removal. If no active nests are found, then a letter shall be submitted to the County within 14 days of the survey and no additional measures are required.

If construction does not commence within five days of the preconstruction survey, or halts for more than five days, an additional preconstruction survey is required. If vegetation removal occurs outside the nesting season, no preconstruction survey is required.

If active nests are found the following shall be implemented:

1. A buffer shall be established and maintained around active nests. The buffer shall be 300 feet for birds-of-prey. For other nesting birds, the buffer shall be established around the active nest upon approval of the County in consultation with CDFW, and the buffer may vary depending on species and site-specific conditions. No construction activities shall be permitted within the buffer except as described below. The buffer shall be maintained until the nest is no longer active.
2. Depending on conditions specific to each nest, and the relative location and type of construction activities, it may be feasible for some construction to occur within the buffer without impacting the nest. In this case (to be determined on a case-by-case basis and upon approval of the County in consultation with CDFW), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If in the opinion of the monitor, the project is impacting the nest, the biologist shall immediately inform the construction manager and the construction manager shall stop construction activities within the buffer until the nest is no longer active.

Significance After Mitigation

Implementation of Mitigation Measure 4.3-2 would reduce potential impacts to nesting birds to **less-than-significant** by requiring preconstruction surveys to identify any active nests, and if found, avoiding disturbances from construction near the nests.

Impact 4.3-2: The project would not 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 Wildlife or U.S. Fish and Wildlife Service. (*Less than Significant Impact, with Mitigation*)

Oak Resources

Impacts to oak woodlands and trees will result primarily from the initial clearing of the subdivision site. A relatively small amount of the overall impact results from the off-site areas (Highway 49 Intersection Improvements and Fowler Lane widening) or on-site emergency access road. El Dorado County specifically considers valley oak woodland to be a sensitive natural community (El Dorado County, 2004b; 2017b). The County ORMP defines these resources for the purposes of impact quantification, permitting thresholds, and mitigation requirements.

Figure 4.3-2 is a map of oak woodland impacts. The project will remove an estimated:

- 36.62 acres of oak woodland, including both the on-site emergency access road (1.5 acres of oak woodland) and the Fowler Lane Widening (4.72 acres of oak woodland),
- 30 individual oak trees outside of oak woodland (9 on-site from the arborist report and 21 from the State Route 49 off-site area), and
- 35 heritage trees requiring mitigation (22 on-site from the arborist report and 13 from the off-site areas; the arborist report determined there were 253 heritage trees on-site but that 202 were in a condition not requiring mitigation).

This impact is **potentially significant**.

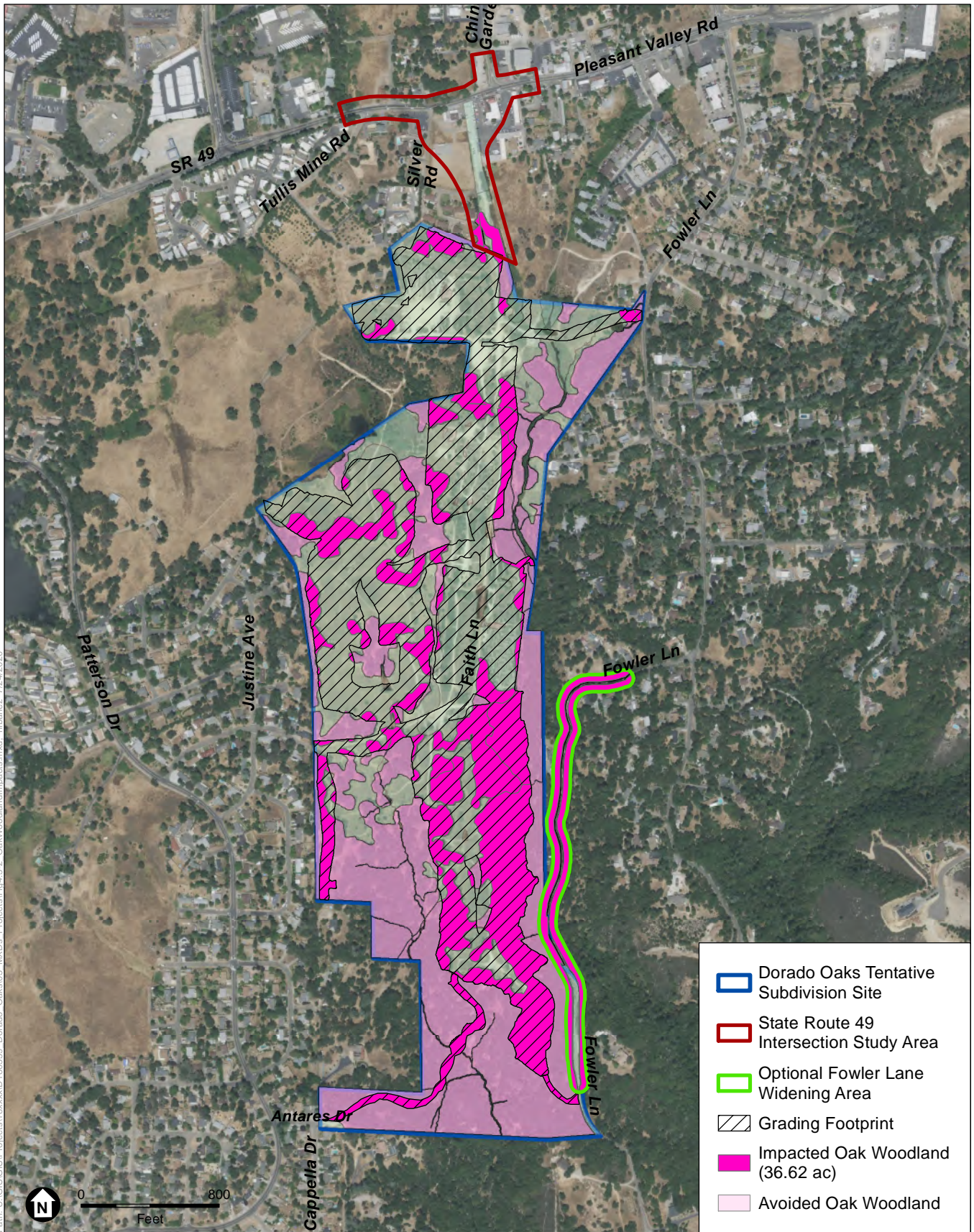
Mitigation Measures

Mitigation Measure 4.3-5a: Avoidance of natural vegetation, including oak resources.

The final site clearing and grading plans shall include locations to install temporary fencing between clearing and grading and retained natural vegetation, including oak woodland, individual oak trees, and heritage trees. The fencing shall be installed prior to the initiation of any vegetation clearing. El Dorado County shall verify that the plans include the temporary fencing.

Mitigation Measure 4.3-5b: Compensatory mitigation for oak resources.

The project proponent shall comply with El Dorado County Zoning Code §130.39 *et seq.*, including the mitigation requirements therein. The zoning code specifies several options for mitigation of oak resources. Consistent with the zoning code, the project proponent shall mitigate for oak resources impacts through either 1) payment of an in-lieu fee, 2) off-site conservation, 3) replacement planting on-site, 4) replacement planting off-site, or 5) a combination of these options.



SOURCE: 22 June 2018 Aerial Photograph, USDA; Sycamore Environmental, 2018; CTA Engineering & Surveying, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.3-2
Oak Woodland Impacts

Significance After Mitigation

The project will avoid about 46.78 acres of on-site oak woodland. Mitigation measure 4.3-5a will result in installation of a temporary fence to prevent impacts to oak woodland retained by the project.

Mitigation measure 4.3-4b will result in either the replacement or preservation of oak woodland in compensation for oak woodland removed consistent with the County ORMP. The ORMP has separately gone through review under the California Environmental Quality Act (El Dorado County, 2017a). Implementation of mitigation measures 4.3-4a and 4.3-4b will reduce impacts to oak resources to **less-than-significant**.

Sandbar willow scrub

The project will result in the removal of approximately 0.22 acre of sandbar willow scrub. Sandbar willow scrub is a type of riparian natural community. Sandbar willow scrub does not meet the criteria of a sensitive natural community under the CDFW ranking system (S4; CDFW 2019), but it is considered a sensitive natural community by the El Dorado County (2004b) General Plan EIR. The removal of sandbar willow scrub is a **potentially significant** impact.

Mitigation Measures

Mitigation Measure 4.3-6: Compensatory mitigation for sandbar willow scrub.

The project proponent shall restore an equal or greater acreage of sandbar willow scrub than the acreage removed. The project proponent shall submit a restoration plan to El Dorado County, and the plan shall be approved prior to the removal of any sandbar willow scrub. The restoration plan shall include as success criteria 1) the minimum acreage, 2) that the restoration occur in close proximity to a channel, pond, or wetland, and 3) a requirement that the restoration area be dominated by sandbar willow (*Salix exigua*) at completion. The restoration area may be on- or off-site.

Significance After Mitigation

The project will avoid about 0.36 acre of on-site sandbar willow scrub. Mitigation measure 4.3-5a will result in installation of a temporary fence to prevent impacts to native vegetation, including sandbar willow scrub, retained by the project. There are several on-site areas that would be suitable for restoration of sandbar willow scrub, including areas near where the removal will occur. The project design includes open space near the removal area that has 2 channels and wetlands. Sandbar willow scrub could be restored in adjacent areas that are currently dominated by nonnative weeds, including Himalayan blackberry. Mitigation measure 4.3-6 will result in the replacement of all sandbar willow scrub removed by the project. Implementation of mitigation measures 4.3-5a and 4.3-6 will reduce impacts to sandbar willow scrub to **less-than-significant**.

Impact 4.3-3: The project would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (*Less than Significant Impact, with Mitigation*)

Permanent fill of some waters and wetlands will result from grading of the subdivision site. Many of the wetlands have formed in the previously graded areas since that work was conducted in the 1980's. As a result, they occur in the most uniformly level areas, and would likely be impacted from any project that utilized the site consistent with its land use designation. Grading for the subdivision is expected to result in fill of approximately 0.53 acre of wetlands and 0.02 acre of ephemeral channel. Grading for the on-site emergency access road would result in the fill of approximately 0.01 acre more of ephemeral channel. The widening of Fowler Lane could result in permanent fill of up to approximately 0.04 acre of intermittent channel and 0.01 acre of ephemeral channel. The State Route 49 intersection improvements could result in permanent fill of up to approximately 0.02 acre of ditches that may qualify as wetlands or other waters of the U.S. or State. This impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 4.3-7a: Avoidance of wetlands and other waters.

The final site clearing and grading plans shall include locations to install temporary fencing between clearing and grading and retained wetlands and waters, and including any setback areas. The fencing shall be installed prior to the initiation of any vegetation clearing, and remain through the completion of ground-disturbing construction. El Dorado County shall verify that the plans include the temporary fencing.

Mitigation Measure 4.3-7b: Compensatory mitigation of wetlands and other waters.

The applicant shall acquire a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (USACE) and a Section 401 water quality certification from the Regional Water Quality Control Board (RWQCB) prior to the fill of any wetlands that qualify as waters of the U.S. or State. The applicant shall acquire a Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) prior to work in any channels. El Dorado County shall verify the receipt of these permits prior to the issuance of a grading permit that would result in grading or work in these aquatic resources.

The applicant shall mitigate for impacts to the aquatic resources at a minimum ratio of 1:1. Mitigation required by the permitting agencies above may be used to meet the 1:1 requirement.

Significance After Mitigation

The project will avoid approximately 1.65 acres of wetlands and waters on the subdivision site. Mitigation measure 4.3-7a will result in installation of a temporary fence to prevent impacts to these retained aquatic resources, as well as some setbacks to them, by the project.

Mitigation Measure 4.3-7b will result in at least 1:1 mitigation for the filled aquatic resources. USACE and RWQCB together require at least 1:1 mitigation for their permitting programs. Streambed Alteration Agreement conditions are at the discretion of CDFW, but generally require either minimum 1:1 mitigation for permanent impacts, and restoration of pre-project conditions

for any temporary impacts. Implementation of mitigation measures 4.3-7a and 4.3-7b will reduce impacts to waters of the U.S. and State, including wetlands, to **less-than-significant**.

Impact 4.3-4: The project would not 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. (*Less than Significant Impact*)

As discussed in section 4.3.2 *Environmental Setting*, the project site is located outside the El Dorado County IBCs, PCAs, and EP overlay areas. It is also located outside of Important Habitat for Migratory Deer Herds. The project site is mostly surrounded by fragmented development on the west, north, and east sides, making it of low value as a wildlife movement corridor. The largest areas of preserved natural communities are on the south end of the project, nearest the off-site Martinez Creek corridor where there is much less development. The project preserves the largest areas of on-site natural habitat adjacent to the largest area of off-site habitat. The project would result in a **less-than-significant** impact to movement of wildlife.

Mitigation Measures

None required.

Impact 4.3-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (*Less than Significant Impact*)

El Dorado County General Plan Policy 7.3.3.4 specifies setbacks for wetlands and some waters until similar setbacks are included in an updated zoning ordinance. The zoning code was updated in 2018 to include setbacks. Zoning Code §130.30.050(G) describes setbacks for wetlands, and most naturally-occurring waters, except for ephemeral channels. The Code requires new discretionary development to avoid and minimize impacts to wetlands and waters to the maximum extent practicable. The Code includes specific setbacks for some major water bodies in the County, but none of those features are in the project site. For discretionary development the Code requires recommendations in a biological report for the avoidance of riparian impacts. The project biological report (Sycamore Environmental 2018b) recommended setbacks of 25 feet for the intermittent channels and seasonal pond on the site to avoid patches of adjacent riparian vegetation. The project includes setbacks of 50 feet almost everywhere for these features, and in some places more. There is no riparian vegetation adjacent to the seasonal wetlands and no setbacks were recommended. Nonetheless, the project includes substantial setbacks around most of the retained seasonal wetlands. This impact is **less-than-significant**.

Mitigation Measures

None required.

Cumulative Impacts

Cumulative impacts were considered for currently active residential and commercial projects in the Diamond Springs Community Region, as described in Chapter 4.0.

Impact 4.3-6 Cumulative impacts to special status species (*Less than Significant Impact, with Mitigation*)

Western Pond Turtle

The project avoids direct mortality of adult western pond turtles, but could result in destruction of nests if any were present in uplands around the seasonal pond. Other projects in the Diamond Springs Community Region have similar potential upland impacts, and could also result in some fill of aquatic habitat. There is a potential cumulative impact to western pond turtle. The project's contribution is cumulatively considerable because the incremental effects of the project alone are significant. The cumulative impact to western pond turtle is **potentially significant**.

Implement Mitigation Measure 4.3-1.

Significance After Mitigation

The mitigation measure will result in the avoidance of impacts to any western pond turtle nests present around the seasonal pond until young have hatched. The mitigation measure would reduce the project's contribution of impacts to a **less-than-significant** level.

Special-status bat species

Roosting habitat for bat species has been lost due to natural habitats being converted to urban uses. Other projects in the Diamond Springs Community Region will remove similar habitat. The loss of potential roosting habitat for bats is a potential cumulative impact. The project's contribution is cumulatively considerable because the incremental effects of the project alone are significant. The cumulative impact to bat habitat is **potentially significant**.

Implement Mitigation Measure 4.3-2.

Significance After Mitigation

Implementation of Mitigation Measure 4.3-2 would minimize potential direct and indirect impacts on maternity roosting bats by requiring preconstruction surveys to identify any maternity roosting sites within 100 feet of project activities, and if found, observance of buffers around those sites. This would reduce the project's contribution of impacts to maternity colonies to a **less-than-significant** level.

Nissenan manzanita

The project will result in the removal of all, or nearly all, of the Nissenan manzanita shrubs that occur on the site. Other projects in the Diamond Springs Community Region will not impact Nissenan manzanita. There is a potential cumulative impact to Nissenan manzanita. The project's contribution is cumulatively considerable because the incremental effects of the project alone are significant. The cumulative impact to Nissenan manzanita is **potentially significant**.

Implement Mitigation Measures 4.3-3a and 4.3-3b.

Significance After Mitigation

The mitigation measures may result in the avoidance of some Nissenan manzanita, and will result in either the on-site replacement of Nissenan manzanita or off-site preservation. The mitigation measure reduces the project's contribution of impacts to a **less-than-significant** level.

Nesting birds, including birds-of-prey

Historic and ongoing loss of natural habitats suitable for nesting birds has occurred as natural habitats have been converted to urban and agricultural development. Other projects in the Diamond Springs Community Region will remove similar habitat. projects will be required to comply with local ordinances and policies, in addition to CESA, FESA, CWA, Fish and Game Code, and other relevant regulations permits and requirements. Nevertheless, the loss of natural habitats for nesting birds and birds-of-prey is a potential cumulative impact. The project's contribution is cumulatively considerable because the incremental effects of the project alone are significant. The cumulative impact to nesting birds is **potentially significant**.

Implement Mitigation Measure 4.3-4.

Significance After Mitigation

Implementation of Mitigation Measure 4.3-2 would reduce potential impacts to nesting birds to **less-than-significant** by requiring preconstruction surveys to identify any active nests, and if found, avoiding disturbances from construction near the nests. The mitigation measure would reduce the project's contribution of impacts to a **less-than-significant** level.

Impact 4.3-7: Cumulative impacts to protected habitats (*Less than Significant Impact, with Mitigation*)

Oak Resources

Historic and ongoing loss of oak resources has occurred as natural habitats have been converted to urban and agricultural development. Other projects in the Diamond Springs Community Region will remove similar oak resources. The loss of oak resources is a potential cumulative impact. The project's contribution is cumulatively considerable because the incremental effects of the project alone are significant. The cumulative impact to oak resources is **potentially significant**.

Implement Mitigation Measure 4.3-5a and 4.3-5b.

Significance After Mitigation

The Dorado Oaks project will require mitigation consistent with the ORMP. The other projects considered in the cumulative analysis will also need to comply with the ORMP. Compliance with the ORMP will result in replacement or preservation of oak resources removed. The mitigation measure reduces the project's contribution of impacts to a **less-than-significant** level.

Sandbar willow scrub

Other projects in the Diamond Springs Community Region may also remove sandbar willow scrub. The loss of sandbar willow scrub is a potential cumulative impact. The project's contribution is cumulatively considerable because the incremental effects of the project alone are significant. The cumulative impact to sandbar willow scrub is **potentially significant**.

Implement Mitigation Measure 4.3-6.

Significance After Mitigation

The mitigation measure will result in the replacement of all sandbar willow scrub removed by the project. The mitigation measure reduces the project's contribution of impacts to a less-than-significant **level**.

Impact 4.3-8: Cumulative impacts to waters of the U.S. and State, including wetlands. (*Less than Significant Impact, with Mitigation*)

Other projects in the Diamond Springs Community Region will also result in impacts to waters of the U.S. and State. The loss of waters of the U.S. and State is a potential cumulative impact. The project's contribution is cumulatively considerable because the incremental effects of the project alone are significant. The cumulative impact to waters of the U.S. and State, including wetlands, is **potentially significant**.

Implement Mitigation Measures 4.3-7a and 4.3-7b.

Significance After Mitigation

The mitigation measure will result in the replacement of all waters of the U.S. and State removed by the project. The mitigation measure reduces the project's contribution of impacts to a **less-than-significant** level.

Impact 4.3-9: Cumulative impacts to movement of resident or migratory wildlife. (*Less than Significant Impact*)

Neither the project, nor the other projects in the Diamond Springs Community Region are located in the El Dorado County IBCs, PCAs, or EP overlay areas. They are also located outside of Important Habitat for Migratory Deer Herds. All of the projects are mostly surrounded by fragmented development and are near or adjacent to major roads, making them of low value as wildlife movement corridors. The cumulative impact of the projects on wildlife movement is **less than significant**.

Mitigation Measures

None required.

Impact 4.3-10: Cumulative impacts to local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (*Less than Significant Impact*)

County Zoning Code §130.30.050(G) describes setbacks for wetlands, and most naturally-occurring waters, except for ephemeral channels. The project largely observes the setbacks, and in most instances has setbacks substantially larger than those recommended in the biological report. Other projects in the Diamond Springs Community Region will also mostly observe setbacks to waters and wetlands consistent with the zoning code. Nevertheless, overall the projects in the Diamond Springs Community Region could result in a potential cumulative impact.

The project's contribution would be less than cumulatively considerable because 1) the setbacks overall are substantially larger than recommended in the biological report, 2) setbacks are included for most ephemeral channels even though they are not required by the zoning code, and 3) the setbacks that are provided include the riparian habitat, the avoidance of which is the overall purpose of the setbacks in the zoning code. The cumulative impact is **less than significant**.

Mitigation Measures

None required.

4.3.5 References

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4.4 Cultural Resources

4.4.1 Introduction

This section characterizes and discusses the cultural resources that could be affected by the proposed Project. Cultural resources include historical resources, archaeological resources, and human remains.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Relevant comments expressed concern with potential project impacts to archaeological resources in the project area.

The analysis in this section was developed based on the cultural resources analysis completed by PAR (2008) and ESA (2019, 2020).

4.4.2 Environmental Setting

Definitions

Cultural resource is a term used to describe both archaeological sites (prehistoric and historic) depicting evidence of past human use of the landscape through material culture and the built environment.

Historic-era architectural resources include buildings, structures, objects, and historic districts. Historic-era architectural resources that are listed in or are eligible for listing in the National Register of Historic Places (National Register) are considered “historic properties.” Historic-era architectural resources that are listed in or are eligible for listing in the California Register of Historical Resources (California Register) are considered “historical resources.”

Archaeological resources consist of prehistoric or historic-era archaeological resources. Prehistoric archaeological materials might include: obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, milling slabs). Historic-era archaeological materials (not associated with military installations or activities) might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Similar to historic-era architectural resources, archaeological resources that are listed in or are eligible for listing in the National Register are considered “historic properties.” Archaeological resources that are listed in or are eligible for listing in the California Register are considered “historical resources.” In addition, archaeological resources can be considered “unique archaeological resources” under CEQA.

Natural Environment

The proposed project is in the Sierra foothills at elevations ranging from a low of 1,620 feet above mean sea level (amsl) along the southern edge of the project area, to a high of 1,845 feet amsl on a knoll top in the southwest section of the project area. A tributary to Martinez Creek flows north/south along the eastern edge of the project area. Several seasonal drainages are also present in the project area and drain into the Martinez Creek watershed, which flows into the North Fork of the Cosumnes River.

The area is within the historic El Dorado Mining District. This district contained ore deposits characterized by quartz veins confined to slate of the Mariposa Formation, greenstone and schist. Free gold is also contained within the ore. Major mines in the district closest to the project include the Crusader and the Tullis Mines (Clark, 1970).

The project area is characterized by rolling grass covered hills dotted by mixed oak and pine. The overstory is dominated by interior live oak, black oak, blue oak, yellow and grey pine. Chamise, ceanothus and yerba santa are typical understory species, along with small shrubs, grasses and forbes. Deer, coyote, other small mammals, birds and reptiles are common. Many of these plants and animals were of economic importance to the indigenous and early historic-era occupants.

There has been extensive disturbance from heavy earth moving equipment within the project area, including terracing, grading, cutting and filling activities. The majority of this disturbance is in the northwest portion of the project area. The southern portion of the project area has been less altered and is characterized by rolling hills.

Cultural Background

Prehistoric Context

Heizer and Elsasser first formulated a prehistoric cultural sequence for the region in 1953. They concluded that the area had been inhabited since ca. 2000 B.C. and identified two distinct artifact assemblages - the Martis Complex (2000 B.C. to A.D. 500) and the Kings Beach Complex (A.D. 500 to A.D. 1850) (Moratto, 1984). This early sequence was expanded and refined over several decades of research. Much of this work was associated with the proposed construction of Auburn, Sugar Pine, and French Meadows reservoirs along the Middle Fork of the American River. More than 150 prehistoric archaeological sites, including bedrock mortars, lithic scatters, quarries and middens, were recorded. This set the stage for many debates and revision of the cultural sequence for this area (Shapiro and Heipel 1990). The current sequence spans 8,000 years and is summarized in **Table 4.4-1**. These traditions and phases are marked by changes in stone tool and hunting kits, as well as milling techniques. Although large projectile points are found throughout time, the use of smaller points (such as Desert Side-notched) suggests a growing reliance on the bow and arrow.

**TABLE 4.4-1
 NORTHERN SIERRA FOOTHILLS CULTURAL SEQUENCE**

Period Phase	Date	Archaeological Time Markers
Late Kings Beach Phase	Historic Contact to A.D. 1200	Desert Side Notched and Cottonwood Series Points, small chert tools, shallow saucer-shaped house pits
Early Kings Beach Phase	A.D. 500 to 1200	Eastgate and Rose Spring series points, small chert tools, some shallow saucer-shaped house pits
Late Martis Phase	500 B.C. to A.D. 500	Corner Notched and eared points of the Martis and Elko series; large side notched points, basal bifaces and tools; steep-sided house pits
Middle Martis Phase	1500 to 500 B.C.	Steamboat and other point styles in the Elko-Martis series; large basalt bifaces and other tools
Early Martis Phase	2000 to 1500 B.C.	Contracting stem points of the Elko-Martis series; large basalt bifaces and other tools; basalt artifacts
Spooner Phase	5000 to 2000 B.C.	Points in the Pinot and Humboldt series; basalt artifacts
Tahoe Reach Phase	6000 B.C.	Parman-like points (Great Basin Stemmed series)

SOURCE: PAR, 2008

Ethnohistorical Context

The project area is within the traditional territories of the Hill Nisenan or Southern Maidu, a Penutian-speaking central California group. Shipley (1978) identified seven Nisenan dialects; Valley, Clipper Gap, Placerville, Auburn, Colfax, Nevada City and Oregon House. The Nisenan territory included the foothill and mountainous portions of the Yuba, Bear and American river drainages and the lower drainages of the Feather River. The western border was formed by the Sacramento Valley and the crest of the Sierras defined the eastern limit.

Permanent settlements were on ridges separating parallel streams or on crests, knolls, or terraces located partway upslope (Kroeber, 1925). Villages included from 4 to 12 separate dwellings. Several villages were identified by ethnographers in the vicinity of Diamond Springs. These included *Wuhulak*, located northwest of the project, the village of *Ilemo* to the southeast and *Onchoma*, south of Placerville near present day Diamond Springs (Wilson and Towne, 1978). There are no known villages within or adjacent to the project boundaries. In addition to the villages, some high places within the Nisenan territory were considered sacred and played an integral part in the spiritual beliefs of the group. There are no recorded sacred places in the project area or within a 1/4-mile radius.

The Nisenan diet was based on hunting and gathering strategy. Deer and salmon were integral components of the diet. Vegetable resources, particularly acorn, formed the dietary staple for the group. Acorns were gathered and processed in the autumn. The nuts were either dried in their shells and stored whole in granaries or were hulled and ground. Bedrock outcrops or portable stones were used as a grinding surface. The nuts were ground by pounding a heavy stone up and down on bedrock, creating a cup-shaped depression. Several of these bedrock milling stations, with the mortar cup depressions, were recorded in the southern portion of the project area (Lindstrom and Panelli, 1990b). A second concentration of bedrock mortar cups was identified in 1990 as near the eastern boundary of the project area, in an area of the creek now covered with blackberry (Lindstrom and Panelli, 1990a).

The Nisenan lived in the area where gold was first discovered in California and their population underwent many transformations as contact with non-indigenous explorers, trappers and miners increased (Wilson and Towne, 1978). One of the most significant impacts to the Nisenan during this period of exploration was an epidemic (possibly malaria) that occurred in 1833 (Cook, 1955). This epidemic virtually decimated the population of Nisenan in the Sacramento Valley and led to a slight population decline in the foothill and mountain regions. This epidemic was followed by a rapid influx of gold miners in the late 1840s and 1850s. Food resources became scarce during this period as streams became silted from mining and settlers fenced hunting and gathering areas. This resulted in conflicts between the Native inhabitants and non-indigenous settlers. Several treaty negotiations followed in the 1850s and resulted in the Nisenan giving up the rights to their homelands and being placed under the protection of the government. None of the negotiated treaties were ratified by U.S. Congress (Castillo, 1978).

The village of *Mo-lok'epakan* was situated in the vicinity of Diamond Springs. The village may have been visited as early as 1807 by Spanish explorers along the Cosumnes River and again in 1841 during a scientific expedition through the foothills. The area south of Pleasant Valley Road (State Route 49) between Fowler Lane and Diamond Meadows Court was reportedly a large Native American burial ground used as late as 1852 (Hughey, 2001; Peabody, 1992).

By 1856, many of the Nisenan had been sent to reservations in Mendocino County while others remained in the Sierra and found work in agriculture, logging and ranching (Wilson and Towne, 1978). As a result of this separation of communities, the Nisenan are a loosely knit group that has banded back together. The El Dorado Miwok Tribe and El Dorado County Indian Council, located in El Dorado, serves as a center for developing, protecting and disseminating traditional cultural practices among the local Nisenan as well as to educate the public about their history and on-going projects. The Shingle Springs Rancheria, located about 9 miles to the east, is also a local community center and a source of information about Native culture, both past and present.

Historical Context

Located three miles south of Placerville, Diamond Springs' earliest Euroamerican occupation began as a resting stop on the Carson Emigrant Trail. Settlers named the town for a group of natural springs on the north side of Main Street. The town was identified as both Diamond Spring and Diamond Springs until July 1, 1950, when the U.S. Post Office officially added the "s" to the name. Diamond Springs was situated at the nexus of several trails, leading to the mining camps to the north and south, or west to Sacramento and the Central Valley. The springs made the area a popular resting place, and in 1850 a group of 200 settlers from Missouri decided to establish a settlement here due to the mining and farming potential of the area (Nobel, 2012). The Missourian settlers consisted of military veterans and their families, and the presence of women and children differentiated the town from other Gold Rush settlements. In 1850, a 25-pound gold nugget was discovered in the ravines near Diamond Springs, leading to a rapid influx of miners and settlers into Diamond Springs (Anonymous, 1992; Belli, 2005).

During the next year Diamond Springs grew rapidly, adding hotels, mercantiles, saloons, restaurants, schools, and other businesses to support both miners and townspeople. The five carpenters in town resulted in construction of clapboard homes and other permanent structures, with over 100 new homes constructed in 1851. In 1852, 165 new frame buildings had been

constructed, and the Alta California Telegraph Company established an office in the town. The following year, a post office was opened in Diamond Springs. By 1854 the townsite had expanded to 5,000 people, with some counts as high as 8,000. The result of the population surge and economic viability of the town had Diamond Springs coming in third place in the 1856 vote for the El Dorado County Seat, after Coloma and Placerville (Hughey, 2001; Belli, 2005).

The town was the site of the first International Odd Fellows (IOOF) Lodge in the State, with the Diamond Springs Lodge built in 1852. The lodge is still standing and listed in the California Register of Historical Resources. The IOOF, Masons, and Sons of Temperance all provided respectable activities and recreation for the community, and the organizations led community fundraisers that built churches, schools, and assisted destitute families (Belli, 2005; Hughey, 2001).

In August of 1856, a fire began in a local hotel that burned the town to the ground, except for two buildings. Local residents immediately set to rebuild, but another fire in 1859 destroyed the middle portion of town. Following the fires, town residents rebuilt in brick and mortar (Nobel, 2012; Butler, 2005; Belli, 2005).

From 1860-1861, Diamond Springs was a transfer point for riders on the Pony Express. The 1860 census reported 521 residents in Diamond Springs proper, however, not one of them were the original founders (Peabody, 1992; Belli, 2005).

As mining lost its importance, agriculture became the backbone of the town after 1870. The El Dorado Fruit Company alone had 20,000 trees in their orchards. Near the turn of the century, the Stockton Box Factory and the Caldor sawmill added to the town's economy. By 1888, Diamond Springs was linked by railroad to Sacramento and Placerville. The town had electricity by the turn of the century and telephone service by 1909. The California Door Company planning mill and box factory was a major employer, building houses for employees. By 1904, the Diamond and Caldor Railroad supplied logs from the mountain lumber camps to the sawmill in Caldor, and finished lumber, doors, window sashes, shutters, and moldings were shipped from Diamond Springs by the railroad. The railroad ceased operating in the early 1950s (Hughey, 2001; Peabody, 1992; EDC Mobile Home Park Association, Inc., 2001).

Along with agriculture and lumber, lime production was one of the town's more successful industries. During the twentieth century, the town's economy relied on limestone. In 1927, the Diamond Springs Limestone Company built a limestone processing plant in the northern part of town. An aerial tramway brought limestone from the quarry, three miles to the east. The plant was processing 150 tons of limestone a day by 1928. The tramway was discontinued in 1954 and replaced by truck transport of limestone. Following the acquisition of the limestone quarry land for construction of Auburn Dam and Reservoir, the plant was forced to close in the late 1970s (Peabody, 1992; EDC Mobile Home Park Association, Inc., 2001; Nobel, 2012).

Diamond Springs was registered as California State Historical Landmark #487 in 1951. A plaque commemorating the town is located at 501 Pleasant Valley Road. The plaque states: "This town, settled in 1848, derived its name from its crystal clear springs. Among the richest spots in this vicinity, its diggings produced a 25-pound nugget, one of the largest ever found in El Dorado County. Its most thriving period was in 1851 and, through its lumber, lime production, and agriculture, Diamond Springs has retained some of its early importance."

Cultural Resources Inventory and Evaluation

Records Search and Literature Review Methods

PAR completed a record search at the North Central California Information Center (NCIC) at California State University, Sacramento on September 15, 2006 and January 11, 2008.

Environmental Science Associates (ESA) staff completed an updated records search at the NCIC on November 13, 2018 (File No. ELD 18-102). The purpose of the records search was to: 1) determine whether known cultural resources have been recorded within or within a 1/4-mile radius of the project area; 2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby cultural resources; and 3) develop a context for the identification and preliminary evaluation of cultural resources.

The records search consisted of an examination of the following documents:

- **NCIC digitized base maps** (U.S. Geological Survey Placerville 7.5-minute topographic map), to identify recorded cultural resources and studies within or within a 1/4-mile radius of the project area.
- **NCIC digitized base maps** (U.S. Geological Survey Placerville 7.5-minute topographic map), to identify recorded historic-era resources of the built environment (buildings, structures, and objects) within or within a 1/4-mile radius of the project area.
- **Resource Inventories:** *California Inventory of Historical Resources*, *California Historical Landmarks*, *Archaeological Determinations of Eligibility for El Dorado County* (through May 2012), and *Built Environment Resource Directory (BERD)* (through January 2020).

The results of the record search found that the project area has been surveyed for a series of proposed projects between 1984 and 2008 (Peak & Associates, 1984; Snoke, 1984; Stams, 1990a, 1990b; Supemowicz, 1989; Lindstrom, 1990; Historic Resource Associates, 2005, 2006; Peak, 2004; PAR, 2008). Recorded cultural resources are discussed in the Inventory and Evaluation sections below.

Architectural Resources

Survey Methods

ESA architectural historian Kathy Cleveland surveyed portions of the Project site on January 10, 2019. This field survey included the 16 parcels adjacent to or within the proposed improvements along State Route 49 (Pleasant Valley Road), as well as the three parcels with built resources within the subdivision Project area. Resources identified within the Project footprints were recorded through field notes and digital photography. Evaluations were completed for the three newly identified resources determined to potentially be subject to direct impacts through Project construction are included below (DPR forms for these resources are included in **Appendix D** of this EIR). The criterion referred to below relate to eligibility criteria for the National Register of Historic Places and the California Register of Historical Resources, which are described more fully below in Section 4.4.3, *Regulatory Setting*.

Inventory and Evaluation

460 Pleasant Valley Road – Deb’s Frosty

The building at 460 Pleasant Valley Road consists of a small, single story drive-in restaurant dating to 1967 (**Figure 4.4-1**). The building has a square footprint measuring approximately 45 by 45 feet, oriented towards Pleasant Valley Road, and a front gable composite roof. Exterior cladding consists of modern vertical siding with half height decorative brick on the east, north, and west facades. Fenestration consists of vinyl picture windows on the north and west facades, and a primary metal and glass door on the northern façade and secondary flush metal door on the south façade at the rear of the building. A full width metal awning, with a shallow zigzag shape, spans the front of the building, and a secondary structure with the same shallow zigzag shape is located in the parking lot to the west of the building. Both structures are used to provide shade and cover for patrons in automobiles.



SOURCE: ESA, 2019

Figure 4.4-1
460 Pleasant Valley Road, facing southwest

Archival review of 460 Pleasant Valley Road failed to indicate any significant associations between the building and significant events in history (Criterion A/1). The building is a typical example of a mid-twentieth century drive in restaurant providing services for the local community, and does not rise to a level of significance for its commercial use. Archival review also failed to identify any significant associations between the building and persons important to history (Criterion B/2). The building represents a typical mid-20th century restaurant building, and does not embody the distinct characteristics of a type or period, or method of construction, nor does it represent the work of a master or possess high artistic values (Criterion C/3). While the drive-in design is evident, with the building’s orientation towards the parking lot and minimal interior seating, there is little architectural distinction beyond the shallow zigzag awnings and the

used of brick and vinyl siding for the exterior cladding. Finally, there are no known artifacts associated with the building and it does not have the potential to yield information important in history (Criterion D/4).

ESA evaluated the building at 460 Pleasant Valley Road in 2020 under the criteria for the National and California Registers (**Appendix D**). That evaluation revealed no significant associations. It is not associated with the lives of persons import in national or California history, nor does it have distinctive characteristics of a type, period, or method of construction and it does not have the ability to yield information important to history or prehistory. It does not appear eligible to the National or California registers, and would not be considered a historical resource under CEQA.

481 Pleasant Valley Road - Diamond Springs Cemetery

The Diamond Springs Cemetery is natural (non-irrigated or weed-controlled) cemetery covering approximately 0.66 of an acre, and is no longer active (**Figure 4.4-2**). The first burial was in 1850 and title to this property was vested to the County of El Dorado in 1873 by the State of California. The cemetery served the community that grew around the mining region. The County notes that 592 full and cremation burial plots are recorded within the cemetery. In 1992 El Dorado County designated the cemetery a Pioneer Memorial Park (not open to future internments) (El Dorado County, 2007).



SOURCE: Find a Grave, nd

Figure 4.4-2
481 Pleasant Valley Road, facing southeast

Ordinarily cemeteries are not typically considered eligible for the National or California Registers. However, a cemetery may be considered if it “derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from

association with historic events” (National Register Bulletin 41, 1992). Under Criterion A/1 (Significant Events), the events or trends with which the cemetery is associated must be clearly important, and the connection between the burial place and its associated context must be unmistakable. Archival review of the Diamond Springs Cemetery failed to indicate any significant associations between the resource and significant events or individuals in history (Criterion A/1 and B/2, Significant Events and Important Persons, respectively). While the Diamond Springs cemetery dates to the 1850s and includes the burials of many early residents, ten of the thirteen extant El Dorado County cemeteries date to the 1850s (including three from 1850). The Diamond Springs Cemetery reflects the typical creation of cemeteries by early settlers in the region, and does not rise to a level of significance for this association. Under Criterion B/2, the person or group of persons with which the burial place is associated must be of outstanding importance to the community, State, or nation. None of the known burials at Diamond Springs Cemetery appear to rise to a level of outstanding importance. Under Criterion C/3, funerary monuments and their associated buildings, and the landscapes associated with burial places, must be good representatives of their stylistic type or period and methods of construction or fabrication. The Diamond Springs Cemetery does not appear to reflect high artistic value either in the monuments or landscape design (Criterion C/3). Finally, there are no known artifacts associated with the cemetery and it does not have the potential to yield information important in history (Criterion D/4).

The Diamond Springs Cemetery does not appear to reflect any significant associations. It is not associated with the lives of persons important in national or California history, nor does it have distinctive characteristics of a type, period, or method of construction and it does not have the ability to yield information important to history or prehistory. It does not appear eligible to the National or California registers, and would not be considered a historical resource under CEQA.

484 Pleasant Valley Road – C.G. Carpenter House

484 Pleasant Valley Road (**Figure 4.4-3**) is a two-story wood frame brick building with a rectangular footprint measuring 40 by 30 feet, a side gable, metal standing seam roof, and a wraparound porch roof along the north and east facades. The brick exterior shows sign of deterioration, including minor chipping and localized spalling, and replacement of damaged sections around the windows on the northern façade.

The building has modern fenestration, including multi-pane single hung windows with vinyl frames, a decorative window primary door on the first floor, a panel wooden door leading out onto the second floor balcony (no longer extant), and a flush wooden door on the eastern façade and on the northern façade of the second floor. The doors on the northern façade are topped with boarded-over transom lights. The original window openings on the north and south facades include decorative arched brick headers and granite sills, with similar brick arches top the original door openings. While much of the historic fenestration pattern remains, there is evidence along the eastern and western facades of infilled door and window openings.



SOURCE: ESA, 2019

Figure 4.4-3
484 Pleasant Valley Road, facing southwest

A carriage house is located immediately adjacent to the western façade of the residence. The carriage house is a one story rectangular building, oriented perpendicular to the house along Faith Lane. The brick building has a composite gable roof, full width awning along the northern, primary façade, and modern glass and metal primary entrance topped with a fanlight and flanked by sidelights. The primary entrance shape mimics the original brick opening of the carriage house. Evidence of multiple bricked over secondary entrances is present along the western façade, along with a modern raised glass and metal door covered by a wooden gable awning. Portions of the adjoining 1968 strip mall are connected to the southern facades of both the carriage house and the main residence.

The circa 1878 building was originally a single family residence occupied by Caleb Gardner Carpenter. Carpenter (b 1817; d 1891) was born in New York, and in 1838 began traveling westward until he reached Chicago in 1844. In 1851 he married Sarah Payne, and they migrated to California via the Isthmus of Panama, finally settling in Diamond Springs. Carpenter originally worked as a miner until 1856 when he and his wife Sarah opened a brewing business. A 1941 article identifies the adjacent carriage house to the west of the residence as the location of the brewery (El Dorado County Advertiser, 08/21/1941). Three years later he closed the brewery and began growing fruit trees on his property. The 1883 biography of Carpenter in Paolo Sioli's *Historical Souvenir of El Dorado County, California: With Illustrations and Biographical Sketches of Its Prominent Men & Pioneers* described Carpenter's property as "one of the finest orchards in the county, consisting of "2,000 apple, 2,000 pear, 500 peach, 500 plum, 50 apricot, 50 almond trees... and about 125,000 grape vines from which he makes brandy and wine for brandy" (Sioli, 1883). Between 1861 and 1872, Carpenter won multiple state and county fair awards for his fruit and brandies (Sacramento Daily Union, various dates), and between 1864 and

1877 was an acting director of the El Dorado County Agricultural Society (Mountain Democrat, various dates). Sioli notes that in 1878 Carpenter's residence and surroundings were destroyed by fire "but despite it all he labored on and did prosper... and now [1883] has one of the most beautiful and valuable properties in El Dorado county" (Sioli, 1883).

Sioli's 1883 county history includes a sketch of Carpenter's home (**Figure 4.4-4**), which shows the building at 484 Pleasant Valley Road. This sketch shows the window and door patterns, side gable roof, wrap around porch, and presence of the carriage house to the west of the residence. While certain architectural components (the raised porch, the second story balcony, the multiple chimneys, original windows and doors, as well as ancillary buildings and the orchards) have been removed, the modern building is recognizable from the sketch.



SOURCE: Sioli, 1883

Figure 4.4-4
Residence of C.G. Carpenter, Diamond Springs

Following Carpenter's death in 1891 (he and his wife are buried in the Diamond Springs Cemetery, discussed above), the property remained a private residence as late as 1941 (El Dorado County Advertiser, 08/21/1941), but was eventually converted to commercial uses by 1967 (Sacramento Bee, 08/31/1967). Per County assessor data, in 1968 the lot surrounding the building was converted to a strip mall, with portions of the new construction attached to the rear of the Carpenter House and carriage house. The building at 484 Pleasant Valley Road has remained in commercial use since that time.

The building at 484 Pleasant Valley road does not appear to have any associations with important individuals in state or local history (Criterion B/2). While the building was the residence of local

businessman Caleb Carpenter, archival review did not indicate that Carpenter was a significant local person in Diamond Springs. Carpenter was a successful farmer and businessman, winning local and state awards for his brandy and acting as a director of the El Dorado County Agricultural Society. He did not, however, rise to prominence for his professional or personal life, but rather reflects the success of the town itself during the period of change from mining to agriculture and other local industry. As such, 484 Pleasant Valley Road does not appear eligible for listing in the California or National Registers under Criterion B/2 (Important Persons).

The building is an example of a late nineteenth century residence with Colonial Revival elements, but does not embody the distinct characteristics of a type or period, or method of construction, nor does it represent the work of a master or possess high artistic values (Criterion C/3). The house still reflects many of its original Colonial Revival elements (the brick cladding, symmetry, fenestration pattern), but even historically the building was a simpler version of the style with little architectural embellishment. Lost elements include the second story balcony, the chimneys and original roof cladding, the original single hung windows, and the raised wrap around porch. The extant architectural embellishments include the brick window headers and stone window sills. Neither the original design nor the extant building embody the Colonial Revival style, and archival review failed to indicate that the building is the work of a master. As such, 484 Pleasant Valley Road does not appear eligible for listing in the California or National Registers under Criterion C/3 (Architecture).

Finally, there are no known artifacts associated with the building and it does not have the potential to yield information important in history (Criterion D/4).

While the building has been modified since its original 1878 construction, the building retains sufficient physical integrity to reflect its associations with local events from the period of significance (the period from the building's original construction in 1878 through Carpenter's death in 1891). A property that is significant for its historic association is eligible if it retains the essential physical features that made up its character or appearance during the period of its association with the important events. The building at 484 Pleasant Valley Road presents as a large 19th century residence, with character defining features including: massing, roof shape, fenestration pattern, brick headers with granite sills around windows, brick cladding, and association with the carriage house. The retention of these elements results in the building retaining sufficient integrity to reflect its significant associations with the development of Diamond Springs during the period of significance.

The building at 484 Pleasant Valley Road appears to be potentially eligible for listing in the California and National Registers at the local level due to its associations with the development of Diamond Springs in the late 19th century (Criterion A/1). It does not appear to be associated with the lives of persons important in national or California history, nor does it have distinctive characteristics of a type, period, or method of construction and it does not have the ability to yield information important to history or prehistory. The building retains sufficient physical integrity to reflect its associations with significant events during the period of significance (1878-1891), and would be considered a historical resource under CEQA.

Archaeological Resources

Survey Methods

PAR conducted an archaeological survey of the entire Dorado Oaks Tentative Subdivision Map Site in 2006 and 2008 (PAR, 2008). The vast majority of the project area was subject to intensive coverage (parallel pedestrian transects spaced approximately 20 meters apart). Special attention was given to areas of likely higher sensitivity including drainages, hill tops, areas in close proximity to previously recorded resources, and areas where features were depicted on historic maps. Surface visibility was generally fair to good with exceptions. The bottom of the drainage that borders the eastern project area boundary was choked with blackberry, poison oak, and other riparian vegetation. Surveyors were able to penetrate the vegetation in several places, resulting in survey coverage equivalent to 20-meter-wide transects; however, surface visibility was very poor in the creek bottom. An area of slightly less than 10 acres at the southeastern end of the project was subject to general survey coverage, or transects spaced approximately 30 meters apart. Transects were widened to 30 meters due to the steepness of the slope (30 to 40 percent slope) and the dense brush in this area. Due to the slope, this area was considered low sensitivity for prehistoric resources and only low to moderate sensitivity for historic-era resources.

In 2019, ESA conducted a cursory archaeological survey of the project area, focusing on areas of cultural sensitivity and previously recorded cultural resources. In addition, ESA surveyed the State Route 49 Intersection Area in narrow transects (less than 10 meters wide). Surface visibility was generally fair outside of paved areas. The Fowler Lane Improvement Area was not subject to intensive archaeological survey due to access restrictions outside of the existing right-of-way.

All resources more than 50 years of age were recorded on appropriate California Department of Parks and Recreation (DPR) 523 forms (primary, archaeological records, linear feature records and milling station records). The location of each resource was documented in the field on a scaled project map and by GPS data. For previously recorded resources, the previous site record was compared to the existing site condition and any necessary changes were noted in detail.

Inventory and Evaluation

Thirteen cultural resources were located in the project area and three previously recorded resources were revisited as part of the 2006/2008 survey effort. PAR determined that one previously recorded resource (P-09-003146) was mapped incorrectly and was outside of the project area. **Table 4.4-2** lists the recorded resources.

Of the 15 resources in the project area, PAR recommended 12 resources as not eligible for listing in the National Register, California Register, or on a local listing. PAR recommended three resources as potentially eligible for listing. Following the survey and assessment in 2019, ESA has recommended that one of those resources (P-09-004406) is not eligible for listing (see below).

In summary, two archaeological resources in the project area (both prehistoric bedrock mortar outcrops) are recommended eligible for listing in the National and California registers and are considered historical resources for the purposes of CEQA. A description of these resources is provided below.

**TABLE 4.4-2
 ARCHAEOLOGICAL RESOURCES IDENTIFIED AND EVALUATED IN PROJECT AREA**

Site Number	Other Identifier	Site Type	Description	Recorded by, Year	Recommendation **
P-09-001826	CA-ELD-1342	Prehistoric	Bedrock mortar	Linstrom and Panelli, 1990; PAR, 2008	Not relocated; potentially eligible
P-09-001827	CA-ELD-1343	Prehistoric	Bedrock mortar	Linstrom and Panelli, 1990; PAR, 2008	Potentially eligible
P-09-003146	---	Historic	Placer mining site with tailings	PAR, 2008	Not in project area
P-09-004364	S-13	Historic	Placer mining tailings	PAR, 2008	Not eligible
P-09-004397	S-12	Prehistoric	Isolated mano fragment	PAR, 2008	Not eligible
P-09-004398	S-11	Historic	Pit with refuse	PAR, 2008	Not eligible
P-09-004399	S-10	Historic	Earthen ditch	PAR, 2008	Not eligible
P-09-004400	S-9	Prehistoric	Isolated projectile point	PAR, 2008	Not eligible
P-09-004401	S-8	Historic	Pit and refuse	PAR, 2008	Not eligible
P-09-004402	S-7	Historic	Prospecting trench	PAR, 2008	Not eligible
P-09-004403	S-6	Historic	Earthen ditch	PAR, 2008	Not eligible
P-09-004404	S-5	Prehistoric	Isolated obsidian flake	PAR, 2008	Not eligible
P-09-004405	S-4	Historic	Earthen dam	PAR, 2008	Not eligible
P-09-004406	S-3	Historic	Tullis Mine Road	PAR, 2008	PAR recommended potentially eligible; ESA reassessed not eligible
P-09-004407	S-2	Historic	Earthen ditch	PAR, 2008	Not eligible
P-09-004408	S-1	Historic	Earthen dam and stock pond	PAR, 2008	Not eligible

** Not eligible – Evaluation concluded the resource not eligible for federal, state, and/or local listing; no further recommendations.
 Not in Project Area – Mapping inaccurate, resource outside of Project Area
 Potentially eligible – Evaluation concluded the resource potentially eligible for federal, state, and/or local listing. Additional recommendations provided in Section 4.4.4.

P-09-001826 – CA-ELD-1342

CA-ELD-1342 is a prehistoric site with bedrock mortars that was recorded in 1990. The original record documented two bedrock milling stations, containing a minimum of 28 grinding cups, some up to 34 cm in depth. The recorders noted that the mortars were unusually deep and densely packed onto the surface of the bedrock. One feature was partially obscured by a dense thicket of blackberries and additional grinding cups were likely present (Lindstrom and Panelli, 1990a).

In 2006/2008, PAR revisited the site location; however, the area of the drainage where the site is mapped has been completely overgrown by mounds of Himalayan blackberry. Therefore, the site conditions and boundaries could not be confirmed. In 2019, ESA also revisited the site location; the area was again found to be covered in dense blackberries and the site conditions and boundaries could not be confirmed.

While CA-ELD-1342 is now covered with blackberry brambles and is no longer visible, ESA recommends that the resource is eligible for listing in the National Register and California Register under Criteria A/1 and D/4 as a location significant to the history of the indigenous Native American people. This resource is therefore considered a historical resource for the purposes of CEQA.

P-09-001827 – CA-ELD-1343

CA-ELD-1343 consists of two clusters of prehistoric bedrock milling stations (Lindstrom and Panelli, 1990b). The 1990 introductory text describes the site as containing 20 mortar cups; however, the feature descriptions list six cups at Feature 1 and four cups at Feature 2, for a total of 10 mortars at two loci. In 2008, PAR relocated the site and documented a total of 11 cups in two clusters separated by about 30 meters. No artifacts were noted on the surface during either the 1990 or 2008 investigations. An area of historic-era placer mining overlaps this site and was noted and recorded separately as P-09-004364. The stream that runs between Outcrop 1 and Outcrop 2 has been mined, as evidenced by linear tailings piles and missing soil from the creek bed. It is possible that the historic-era mining adversely impacted or destroyed any prehistoric deposit that may have been associated with the milling station. PAR recommended that research potential exists in the number, size and spatial arrangement of the milling stations.

To define the constraints of CA-ELD-1343 in relation to the proposed project, ESA completed a subsurface investigation to determine whether subsurface cultural materials are located in the vicinity of the bedrock outcrops with milling features. On June 22, 2020, an ESA Registered Professional Archaeologist excavated a series of 14 auger holes along two parallel transects approximately 5 feet and 10 feet to the east of the eastern-most bedrock milling feature of CA-ELD-1343. Augers met resistance after the first 10-inch push due to the dense rocky subsoil. All excavated soil was run through a ¼-inch mesh screen to identify any potential cultural materials such as lithic fragments or shell/faunal remains. No cultural materials or other evidence of past human use or occupation, including midden soil, was identified. Soil was all medium brown sandy loam with small angular gravels. The results of the subsurface investigation provide defined boundaries of the resource area, which is limited to the bedrock outcroppings themselves with a narrow, 5-foot-wide protective margin.

Despite the negative results of the subsurface investigation, ESA agrees with PAR's recommendation that CA-ELD-1343 is eligible for listing in the National Register and California Register under Criteria A/1 as a location significant to the history of the indigenous Native American people. This resource is therefore considered a historical resource for the purposes of CEQA.

P-09-004406 – Tullis Mine Road

This resource represents segments of the historic-era Tullis Mine Road.¹ PAR recorded two segments in the project area in 2006/2008. The dirt road trends north-south along the western edge of the project area and follows the historic route shown on the 1870 General Land Office (GLO) map of Township 10 North, Range 10 East. The route also appears on historic maps drawn

¹ Different maps and records present various spellings of this roadway. This EIR uses the current spelling of "Tullis Mine Road."

by the U.S. Geological Survey (USGS) (1893, 1949). The road is about 8 to 9 feet wide and the road cut is up to 4 feet deep in places. Parts of the road are worn down to the bedrock (PAR noted this as wagon ruts). A barbed wire fence and mature, large diameter oak trees lined both sides of Segment 1 (along the west edge of the middle portion of the project area). In at least one place, the tree had grown over the fencing so that the barbed wire ran through the middle of the large oak. The road cut was also bordered by stone alignments in a few places. One post was found along Segment 2. Segment 1 was recorded as 1,200 feet long. The northern end of Segment 1 terminated at the current Tullis Mine Road, a modern paved road, which appears to have been partially constructed on the historic route depicted on the historic GLO and USGS maps. Segment 2 was recorded as about 300 feet long in the far southwestern corner of the project area and extends outside of the project area. The two segments are separated by approximately 2,000 feet, during which the road alignment passes over private property and was likely destroyed by residential development.

The 2008 evaluation indicated the road may meet National Register/California Register Criterion A/1 as an early transportation route important to the development of Diamond Springs and Tullis Mine, and Criterion C/3 as a representative example of an unaltered nineteenth-century road. The 2008 evaluation indicated that the road retained integrity of feeling, as neither segment had been widened or improved. Visible stone walls and ruts from wagons or tires were noted.

ESA re-visited the road segments in 2019. While the road retains integrity of location, ESA recommends that the road does not meet the other aspects of integrity to deem it eligible for listing in the National Register or California Register. The reported wagon ruts appear to be water worn places and do not appear to represent historic-era travel routes. The road does not retain integrity of workmanship, association, and materials. The road has been impacted by adjacent development and does not retain integrity of design and setting. While some segments of the road may retain some integrity of feeling, other locations do not, and as a whole the feeling has been compromised by adjacent development. ESA recommends that P-09-004406 – Tullis Mine Road is not eligible for listing in the National Register and California Register.

4.4.3 Regulatory Setting

Federal

National Register of Historic Places

Under the National Historic Preservation Act of 1966, as amended (U.S. Code Title 54, Section 306108) and its implementing regulations, a property is considered significant if it meets the criteria for listing in the National Register at Code of Federal Regulations Title 36, Section 60.4 (36 CFR 60.4), as stated below:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:

- A. Are associated with events that have made a significant contribution to the broad patterns of our history, or
- B. Are associated with the lives of persons significant in our past, or

- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

If a federal action is required for implementation of a project, National Historic Preservation Act Section 106 requires federal agencies to consider the effects of the undertaking on historic properties (properties listed in or eligible for listing in the National Register), and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register. The Section 106 review normally involves a four-step procedure, which is described in detail in the implementing regulations (36 CFR 800):

- (1) Identify historic properties in consultation with the State Historic Preservation Office and interested parties.
- (2) Assess effects.
- (3) Consult with the State Historic Preservation Office and others to develop and execute an agreement regarding the treatment of historic properties.
- (4) Proceed with the project according to the agreement.

State

California Environmental Quality Act

CEQA (Public Resources Code [PRC] Section 21000 et seq.) is the principal statute governing environmental review of projects occurring in California. CEQA requires lead agencies to determine whether a project would have a significant effect on historical resources, unique archaeological resources, or tribal cultural resources.

Historical Resources

The CEQA Guidelines establish that a *historical resource* is any of the following:

- (1) A resource in the California Register of Historical Resources.
- (2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g).
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 apply. If an archaeological site does not meet the criteria for a historical resource contained in the CEQA Guidelines, then the site may

be treated in accordance with the provisions of PRC Section 21083, pertaining to unique archaeological resources.

Unique Archaeological Resources

As defined in PRC Section 21083.2, a *unique archaeological resource* is an archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

The CEQA Guidelines note that if an archaeological resource is not a unique archaeological, historical, or tribal cultural resource, the effects of the project on those cultural resources shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064.5(c)(4)).

California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC Section 5024.1(a)). The criteria for eligibility for the California Register are based on criteria for listing in the National Register (PRC Section 5024.1(b)). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a cultural resource must be significant at the federal, state, and/or local level under one or more of the following four criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- (2) Is associated with the lives of persons important in our past;
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must be of sufficient age, and retain enough of its historic character or appearance (integrity), to convey the reason for its significance.

California Public Resources Code Section 5097.99

PRC Section 5097.99, as amended, states that no person shall obtain or possess any Native American artifacts or human remains that are taken from a Native American grave or cairn. Any

person who knowingly or willfully obtains or possesses any such artifacts or human remains is guilty of a felony punishable by imprisonment. Any person who removes, without authority of law, any such items with intent to sell or dissect or with malice or wantonness is also guilty of a felony punishable by imprisonment.

California Public Resources Code Section 5024

The California State Legislature enacted PRC Section 5024 and 5024.5 as part of a larger effort to establish a state program to preserve historical resources. These sections of the code require state agencies to take a number of actions to ensure preservation of state-owned historical resources under their jurisdictions.

For project activities and permits that affect Caltrans-owned cultural resources, PRC Section 5024 is handled under the 2015 Memorandum of Understanding (MOU) Between the California Department of Transportation and the California State Historic Preservation Officer Regarding Compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92, effective January 1, 2015. The MOU identifies Caltrans Headquarters and District roles and compliance responsibilities, delegates some of SHPO's PRC Section 5024 responsibilities to Caltrans, and expedites compliance. California Native American Historic Resource Protection Act

The California Native American Historic Resources Protection Act of 2002 (PRC Section 5097.995 et seq.) imposes civil penalties, including imprisonment and fines up to \$50,000 per violation, for persons who unlawfully and maliciously excavate upon, remove, destroy, injure, or deface a Native American historic, cultural, or sacred site that is listed or may be listed in the California Register.

California Health and Safety Code Sections 7050.5 and 7052

California Health and Safety Code Section 7050.5 protects human remains by prohibiting the disinterment, disturbance, or removal of human remains from any location other than a dedicated cemetery. PRC Section 5097.98 (reiterated in CEQA Guidelines Section 15064.5(e)) also identifies steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery. Health and Safety Code Section 7052 states that the disturbance of Native American remains, or any other human remains, is a felony unless the disturbance has been lawfully authorized.

Local

El Dorado County General Plan

The following policies from the Conservation and Open Space Element of the El Dorado County General Plan are applicable to cultural resources within and in the vicinity of the project site.

Policy 7.5.1.2: Reports and/or maps identifying specific locations of archaeological or historical sites shall be kept confidential in the Planning Department but shall be disclosed where applicable.

Policy 7.5.1.3: Cultural resource studies (historic, prehistoric, and paleontological resources) shall be conducted prior to approval of discretionary projects. Studies may

include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, the Museum of Paleontology, University of California, Berkeley, field surveys, subsurface testing, and/or salvage excavations. The avoidance and protection of sites shall be encouraged.

Policy 7.5.1.4: Promote the registration of historic districts, sites, buildings, structures, and objects in the National Register of Historic Places and inclusion in the California State Office of Historic Preservation’s California Points of Historic Interest and California Inventory of Historic Resources.

Policy 7.5.1.6: The County shall treat any significant cultural resources (i.e., those determined California Register of Historical Resources/National Register of Historic Places eligible and unique paleontological resources), documented as a result of a conformity review for ministerial development, in accordance with CEQA standards.

El Dorado County Cultural Resources Ordinance

General Plan Policy 7.5.1.1 directed the County to “*establish a Cultural Resources Ordinance. This ordinance shall provide a broad regulatory framework for the mitigation of impacts on cultural resources (including historic, prehistoric and paleontological resources) by discretionary projects.*” Related General Plan Policy 7.5.1.5 states that a “*Cultural Resources Preservation Commission shall be formed to aid in the protection and preservation of the County’s important cultural resources.*” This policy also states that the “*County shall request to become a Certified Local Government (CLG) through the State Office of Historic Preservation.*”

In 1998, the Board of Supervisors established a Cultural Resources Preservation Commission which implemented part of General Plan Policy 7.5.1.5. In 1999, the Board approved Guidelines for Cultural Resources Studies. The County has not requested to become a CLG, and Policy 7.5.1.1 has not yet been implemented.

4.4.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

For purposes of this analysis, an impact on cultural resources is considered significant if implementation of the proposed Project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of a unique archaeological resources pursuant to CEQA Guidelines Section 15064.5; or
- Disturb any human remains, including those interred outside of dedicated cemeteries.

Impacts and Mitigation Measures

Impacts

Impact 4.4-1: The project could cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. (Significant and Unavoidable Impact, with Mitigation) (For State Route 49 Intersection Improvement Option A only)

Archival review identified the location of a plaque designating Diamond Springs as CHL #487. This designation does not include a site boundary or include any specific structure within the town, but rather commemorates Diamond Springs as a whole for its early mining history. No potential impact to the plaque or Diamond Springs as a Historic Landmark would occur as a result of the project.

Archival review and field survey identified one additional potential historical resource within the project footprint: 484 Pleasant Valley Road. The 1878 building at 484 Pleasant Valley Road is recommended as potentially eligible for its association with the development of Diamond Springs from a mining to an agricultural economy. The building retains sufficient integrity to present as a large late nineteenth century residence, reflecting the successful transition of the community's main economic driver from mining to agriculture. If selected, Option A of the State Route 49 Intersection component of the project would include the demolition of the historic building as part of the construction of road improvements along State Route 49. The loss of the building would be a potentially significant and unavoidable impact. To reduce this impact, implementation of **Mitigation Measure 4.4-1** is required; however, it is not possible to reduce the demolition of a historical resource to a less than significant level.

If Option B of the State Route 49 Intersection component of the project is selected, there would be no direct impact to the building at 484 Pleasant Valley Road. Vibratory impacts to the building from Option B are addressed in Section 4.10, *Noise and Vibration*. As described in Section 4.10, construction activities for lane widening under Option B could be as close as 20 feet from this building and could involve use of vibratory compaction equipment. As shown in Table 4.10-11, at this distance construction-related vibration levels could exceed the vibration limit of 0.12 in/sec PPV for cosmetic damage at historic buildings. Consequently, the impact of the proposed project under Option B with respect to generation of excessive groundborne vibration or groundborne noise levels would be significant. This impact would be reduced to a less than significant level through implementation of **Mitigation Measure 4.10-2: Alternative Compaction Methods for Option B**, which would require contractors to use non-vibratory excavator-mounted compaction wheels and small smooth drum rollers for final compaction of asphalt base and asphalt concrete within 50 feet of the structure at 484 Pleasant Valley Road.

Mitigation Measures

Mitigation Measure 4.4-1: HABS-like Recordation of 484 Pleasant Valley Road. (Required for SR-49 Intersection Option A only)

Prior to demolition and construction, the project applicant shall prepare a HABS-like recordation package for 484 Pleasant Valley Road as an individual historical resource. The HABS-like document shall be prepared by a qualified architectural historian, historic

architect, or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualification Standards for History, Architectural History, or Architecture, pursuant to 36 CFR 61. This document shall record the history of Diamond Springs during the period prior to the turn of the twentieth century, as well as the Carpenter House itself, and detail the important events or other significant contributions to the patterns and trends of history with which the property is associated, as appropriate. The building's physical condition, both historic and current, shall be documented through historic photographs; large format photographs; and written data. The building's character-defining features, as well as the property setting and contextual views shall be documented. The document will be created relying on information already compiled for this project, as well as information and materials compiled from additional research with the El Dorado County Historical Society and El Dorado County records. The final document will be provided to the El Dorado County Historical Society for their records.

Significance After Mitigation

Even with implementation of the above mitigation measure, impacts to the building at 484 Pleasant Valley Road from implementation of Option A would remain **significant and unavoidable**. Implementation of Mitigation Measure 4.10-2 would ensure that vibration levels during construction activities associated with Option B would remain below the 0.12 in/sec PPV for cosmetic damage at historic buildings and the impact with respect to potential vibration impacts to historic buildings would be **less than significant with mitigation**.

Impact 4.4-2: The project could cause a substantial adverse change in the significance of a historical resource, including unique archaeological resources, pursuant to CEQA Guidelines Section 15064.5. (*Less than Significant Impact, with Mitigation*)

Based on the natural environment, the prehistoric and ethnohistoric context, and the records search results and the archaeological survey efforts completed for the proposed project, there are two identified prehistoric archaeological resources in the project area that are eligible for the California Register. These resources are, therefore, considered historical resources and unique archaeological resources for the purposes of CEQA. Impacts to these resources would be potentially significant.

To reduce impacts to historical resources, including unique archaeological resources, to a less-than-significant level, the resources are to be avoided during all construction activities. The project plans, including building and road development, include avoiding the areas of known significant archaeological resources. In addition, implementation of **Mitigation Measure 4.4-2a (Archaeological and Native American Monitoring)** would ensure that the resource locations are avoided and treated appropriately during construction activities. This measure requires archaeological and Native American monitoring within 200 feet of the boundaries of known historical resources, including unique archaeological resources.

The Fowler Lane Improvement Area was not subject to intensive archaeological survey due to access restrictions outside of the existing right-of-way. If the proposed improvements were to move forward, acquisition of right-of-way would be required prior to project implementation.

Although there are no previously identified archaeological resources in the alignment, the area has not been surveyed by an archaeologist. Project construction could cause impacts to as-yet-unknown archaeological resources, which would be a significant impact. **Mitigation Measure 4.4-2b (Cultural Resources Assessment for the Fowler Lane Improvement Area)**, would reduce the potential for such impacts through a pre-construction cultural resources identification study to determine whether previously unrecorded archaeological resources are present. The results of the study would provide additional recommendations including site avoidance, construction monitoring, evaluation efforts, or inadvertent discovery protocol.

In addition, if cultural materials are inadvertently identified in the project area during construction and the materials are determined to be historical resources or unique archaeological resources, damage to the resource would be a potentially significant impact. Impacts to previously undiscovered archaeological resources would be reduced to a less-than-significant level by implementation of **Mitigation Measure 4.4-2c (Inadvertent Discovery of Cultural Resources)**, which would ensure that any resources identified during construction activities would be treated appropriately.

Mitigation Measures

Mitigation Measure 4.4-2a: Archaeological and Native American Monitoring. Prior to authorization to proceed, a Secretary of the Interior-qualified archaeologist shall prepare a cultural resources monitoring plan. Monitoring shall be required for work within 200 feet of the boundaries of known historical resources/unique archaeological resources. The plan shall include (but not be limited to) the following components:

- Training program for all construction and field workers involved in site disturbance; on-site personnel shall attend a mandatory pre-project training led by a Secretary of the Interior-qualified archaeologist. The training will outline the general archaeological sensitivity of the area (without providing site specifics) and the procedures to follow in the event an archaeological resource and/or human remains are inadvertently discovered.
- Person(s) responsible for conducting monitoring activities, including a request to Native American representatives for a Native American monitor;
- Person(s) responsible for overseeing and directing the monitors;
- How the monitoring shall be conducted and the required format and content of monitoring reports, including schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports;
- Clear delineation and fencing of sensitive cultural resource areas requiring monitoring;
- Physical monitoring boundaries (e.g., 200-foot radius of a known historical resource);
- Protocol for notifications in case of encountering cultural resources, as well as methods of dealing with the encountered resources (e.g., collection, identification, curation);
- Methods to ensure security of cultural resources sites, including protocol for notifying local authorities (i.e. sheriff, police) should site looting and other illegal activities occur during construction.

During the course of the monitoring, the archaeologist may adjust the frequency—from continuous to intermittent—of the monitoring based on the conditions and professional judgment regarding the potential to impact resources.

If an archaeological resource is encountered, all soil disturbing activities within 100 feet will cease until the find is evaluated. The archaeological monitor will immediately notify the County of El Dorado of the encountered archaeological resource. The monitor will, after making a reasonable effort to assess the identity, integrity, and significance of the encountered resource, present the findings of this assessment to the County of El Dorado.

Mitigation Measure 4.4-2b: Cultural Resources Assessment for the Fowler Lane Improvement Area. If the Optional Fowler Lane Improvements component of the project is selected, and when the project plans are complete and access is granted for the Fowler Lane Improvement Area, the project area shall be subject to a cultural resources investigation that includes, at a minimum:

- An intensive survey of all areas proposed for ground disturbing activity;
- A report disseminating the results of this research; and,
- Recommendations for additional cultural resources work necessary to mitigate any adverse impacts to recorded and/or undiscovered cultural resources.

Mitigation Measure 4.4-2c: Inadvertent Discovery of Cultural Resources. If prehistoric or historic-era archaeological resources are encountered, all construction activities within 100 feet will halt. The County of El Dorado will be notified. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials might include deposits of metal, glass, and/or ceramic refuse.

A Secretary of the Interior-qualified archaeologist will inspect the findings within 24 hours of discovery. If it is determined that the project could damage a significant archaeological resource, the applicant shall re-design the proposed project to avoid any adverse impacts. If avoidance is not feasible, a qualified archaeologist shall prepare and implement a detailed Archaeological Resources Management Plan in consultation with the County of El Dorado, and, for prehistoric resources, the appropriate Native American representative.

Significance After Mitigation

Implementation of the above mitigation measures would reduce impacts to a **less-than-significant** level by ensuring that known significant cultural resources are avoided during construction and providing protocol to follow in the event of an inadvertent discovery of cultural materials.

Impact 4.4-3: The project could disturb any human remains, including those interred outside of dedicated cemeteries. (*Less than Significant, with Mitigation*)

Based on background research, there is no indication that the project area has been used for human burial purposes in the recent or distant past. The Diamond Springs Cemetery is adjacent to the project area but would not be directly impacted by the project. An examination of historic maps and aerial imagery, as well as communication with local historic societies, indicates that the boundaries of the Diamond Springs Cemetery have remained constant and it is unlikely that human remains from the historic period would be encountered during construction of the proposed project. In addition, while there is anecdotal information that there was a Native American burial site in the vicinity of Diamond Springs, the referenced location is not within the direct project area. In the unlikely event that human remains are discovered during project construction, including those interred outside of dedicated cemeteries, the human remains could be inadvertently damaged, which could be a significant impact. However, this impact would be minimized by implementation of **Mitigation Measure 4.4-3 (Inadvertent Discovery of Human Remains)**, which would ensure that the legal procedures are followed in the event of an inadvertent discovery of human remains.

Mitigation Measure 4.4-3: Inadvertent Discovery of Human Remains. In the event of discovery of any human remains during construction activities, such activities within 100 feet of the find shall cease until the El Dorado County Coroner has been contacted to determine that no investigation of the cause of death is required. The Native American Heritage Commission will be contacted within 24 hours if it is determined that the remains are Native American. The Commission will then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to the County of El Dorado for the appropriate means of treating the human remains and any grave goods.

Significance After Mitigation

Implementation of the mitigation measure would reduce impacts to a **less-than-significant** level by ensuring that if human remains are encountered during construction activities the legal protocol is followed and the remains are treated appropriately.

Cumulative Impacts

Impact 4.4-4a: The project could cause a cumulative impact to a historical resource as defined in CEQA Guidelines Section 15064.5. (*Significant and Unavoidable Impact, with Mitigation*) (For State Route 49 Intersection Improvement Option A only)

As discussed in **Impact 4.4-1**, the implementation of Option A as part of the State Route 49 Intersection portion of the project would result in the demolition of the existing structure at 484 Pleasant Valley Road, a National Register eligible resource, significant for its associations with the development of Diamond Springs from a mining to an agricultural economy. As with all historic structures of a particular design or time period, there are a finite number of representative structures that exist. The community of Diamond Springs includes several buildings dating to its

early development, including the IOOF Lodge, the Old Wells Fargo Express Office, Louis Lepetit's Store, and the historic structure at approximately 425 Pleasant Valley Road.

Cumulative projects in the proposed project vicinity do not include the demolition of National or California Register eligible built historical resources. The loss of 484 Pleasant Valley Road under Option A would, however, result in a cumulative loss to the historic fabric of the community of Diamond Springs. The loss of this resource would result in a significant and unavoidable impact to the building as a historical resource under CEQA. Implementation of **Mitigation Measure 4.4-1, HABS-like Recordation of 484 Pleasant Valley Road**, would reduce the impact to historical resources, but it is not possible to reduce the demolition of a historical resource to a less than significant level. Cumulative impacts to historical resources would therefore remain **Significant and Unavoidable**. Option B, however, would not result in the loss of 484 Pleasant Valley Road. Therefore, the impact under Option B would be **less than significant**.

Significance After Mitigation

Even with implementation of **Mitigation Measure 4.4-1**, the project's contribution to this cumulative impact under Option A to built historical resources would be cumulatively considerable and would be **significant and unavoidable**. Under Option B, the impact would be **less than significant**.

Impact 4.4-4b: The project could cause a cumulative impact to an archaeological resources and/or human remains. (Less than Significant Impact, with Mitigation)

As discussed in Impacts 4.4-2 and 4.4-3, excavation associated with the proposed project could have a significant impact related to the potential to encounter previously unrecorded archaeological resources and/or human remains. Cumulative projects in the proposed project vicinity that also involve excavation include El Mirage Plaza, El Dorado Senior Village, and Shinn Ranch. These cumulative projects also have the potential to encounter previously unrecorded archaeological resources or human remains, which would be a potentially significant cumulative impact, and the proposed project's contribution to this impact would be cumulatively considerable.

However, as discussed in Impacts 4.4-2 and 4.4-3, the proposed project's potential to encounter archaeological resources and human remains would be reduced to a less-than-significant level with implementation of **Mitigation Measure 4.4-2a (Archaeological and Native American Monitoring)**, **Mitigation Measure 4.4-2c (Inadvertent Discovery of Cultural Resources)**, and **Mitigation Measure 4.4-3 (Inadvertent Discovery of Human Remains)**. These measures require protocol in the event archaeological resources are identified during ground disturbing activity. With regard to the accidental discovery of human remains, in particular, the El Dorado coroner must be notified immediately, and, in the event the coroner determined that the remains are Native American, the NAHC must be notified. Implementation of these measures would effectively avoid damage to or loss of resources, and little to no residual impact would remain after mitigation. With implementation of these mitigation measures, the project's contribution to this cumulative impact would not be cumulatively considerable (less than significant).

Significance After Mitigation

With implementation of these mitigation measures, the project's contribution to this cumulative impact would not be cumulatively considerable and would be less than significant.

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4.5 Energy

4.5.1 Introduction

This section describes the impact of the project on energy resources both in the region and throughout the state. Background detail includes discussion of California's energy profile (i.e., mix of energy resources and consumption characteristics) and the energy production and transmission profile of Pacific Gas & Electric Company (PG&E), the regional provider of electricity to the project area. This section also identifies regulatory and policy frameworks that govern the production and consumption of energy resources and aim to increase energy efficiency while reducing reliance on fossil fuels, and examines the energy usage characteristics of the project to determine whether the project could result in any energy-related environmental impacts during its construction or operational activities. Demand for energy (i.e., electricity, natural gas, transportation fuels) as a result of the project, has been calculated for construction and operations. Potential impacts related to energy demand and conservation that could result from the project are analyzed, and, as necessary feasible mitigation measures are described in order to avoid or reduce the magnitude of potential energy demand and conservation-related impacts.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. The County received no comments on the NOP related to energy demand and conservation.

4.5.2 Environmental Setting

State Setting

Total energy usage in California was 7,967 trillion British Thermal Units (Btu) in 2018 (the most recent year for which data is available), which equates to an average of 202 million Btu per capita (EIA, 2020a). These figures place California second among the nation's 50 states in total energy use and 48th in per capita consumption. Of California's total energy usage, the breakdown by sector is roughly 40 percent transportation, 23 percent industrial, 19 percent commercial, and 18 percent residential. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities. Petroleum-based fuel consumption is generally accounted for within the transportation sector. California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Fossil fuels (including gasoline and diesel fuel, natural gas, and energy used to generate electricity) are the most widely used forms of energy in the State. However, renewable sources of energy (such as solar and wind) are growing in proportion to California's overall energy mix. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS) discussed under the Regulatory Setting.

Electricity

In 2018, California's energy use totaled 285,488 gigawatt hours (GWh) of electricity, out of which 68 percent was from in-state electricity generation and the remaining 32 percent imported from the northwestern and southwestern states. Of the electricity generated in California, about 46.5 percent

was produced by natural gas, 11.3 percent from hydroelectricity, 9.4 percent from nuclear, and 32.4 percent was produced by renewable sources such as wind, solar, geothermal, biomass, and small hydroelectric facilities with the remaining 0.4 percent from coal and other sources (CEC, 2020a).

Total system electric generation for California for 2018 decreased by 2.2 percent from 2017's total generation of 292,039 GWh. Electricity from non-CO₂ emitting electric generation categories (i.e., nuclear, large hydroelectric, and renewable generation) accounted for more than 53 percent of total in-state generation for 2018, compared to 56 percent in 2017. As a result, California's in-state electric generation dropped by 6 percent in 2018. This decrease was due, in part, to reduced generation from hydroelectric power plants as dry conditions returned to the state. Net imports of electricity increased by 6 percent, partially offsetting the decline (CEC, 2020a).

Increasingly, electricity is used in multiple transportation modes, including light-duty vehicles, transit buses, and light and heavy rail. In California, electricity use is emerging in battery-electric medium-duty trucks, battery-electric buses, catenary-electric port drayage trucks, and high-speed rail. The CEC forecasts the statewide electricity demand for electricity-powered transportation modes will increase from its current level of 2,000 GWh annually to between 12,000 and 18,000 GWh per year by 2030, depending on technology development and market penetration of the various vehicle types (CEC, 2017a).

Natural Gas

One third of energy commodities consumed in California is natural gas. Although natural gas is the most common energy source for electricity generation in California, 90 percent of the state's natural gas is supplied from out-of-state imports (CEC, 2020b). Californians consumed approximately 2,137 billion cubic feet of natural gas in 2018, which is equal to 2,137,000,000 million Btu (MMBtu) (CEC, 2020c). The natural gas market continues to evolve and service options expand, but its use falls mainly into the following four sectors: residential, commercial, industrial, and electric power generation. In addition, natural gas is a viable alternative to petroleum fuels for use in cars, trucks, and buses. Nearly 45 percent of the natural gas burned in California is used for electricity generation, and most of the remainder is consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors (CEC, 2020b). Natural gas has become an increasingly important source of energy since the majority of the state's power plants rely on this fuel providing the largest portion of the total in-state capacity and electricity generation in California.

Transportation Fuels

The energy consumed by the transportation sector accounts for roughly 41 percent of California's petroleum demand. Gasoline and diesel, both derived from petroleum (also known as crude oil), are the two most common fuels used for vehicular travel. According to the CEC, the state relies on petroleum-based fuels for 96 percent of its transportation needs. The transportation sector, including on-road and rail transportation (but excluding aviation), accounts for more than 96 percent of all motor gasoline use in the U.S., at roughly 350 million barrels in 2018 (EIA, 2020b). California is the third largest consumer of gasoline in the world, behind the U.S. (as a whole) and China. In 2019, approximately 30 percent of California's crude oil was obtained from within the state, about 12 percent came from Alaska, and the remaining 58 percent came from foreign countries (CEC, 2020d).

The CEC forecasts demand for gasoline in California will range from 12.3 billion to 12.7 billion gallons in 2030, with most of the demand generated by light-duty vehicles. While the models show an increase in light-duty vehicles along with population and income growth over the forecast horizon, total gasoline consumption is expected to decline, primarily due to increasing fuel economy (stemming from federal and state regulations) and gasoline displacement from the increasing market penetration of zero emission vehicles (ZEVs). For diesel, demand is forecast to increase modestly by 2030, following the growth of California's economy, but would be tempered by an increase in fleet fuel economy and market penetration of alternative fuels, most prominently by natural gas in the medium- and heavy-duty vehicle sectors (CEC, 2017b). It should be noted that due to the health risk issues related to combustion of diesel it is possible regulatory pressure will result in a decrease of use in the future.

California's oil fields comprise the fourth-largest petroleum-producing area in the United States, behind federal offshore production, Texas, and North Dakota. Crude oil is moved from area to area within California through a network of pipelines that carry it from both onshore and offshore oil wells to the refineries that are located in the San Francisco Bay Area, the Los Angeles area, and the Central Valley. Currently, 15 petroleum refineries operate in California, processing approximately 1.9 million barrels per day of crude oil (EIA, 2020c).

Other transportation fuel sources used in California include alternative fuels, such as methanol and denatured ethanol (alcohol mixtures that contain no less than 70 percent alcohol), natural gas (compressed or liquefied), liquefied petroleum gas, hydrogen, and fuels derived from biological materials (i.e., biomass).

Regional Setting

Electricity

In 2018, electricity consumption in El Dorado County was 1,218.6 GWh. PG&E provides electricity to the Diamond Springs community and to the project area. PG&E meets its service area's energy demands with a diverse mix of energy sources that are over 85 percent greenhouse gas (GHG) free. In 2018, 39 percent of the electricity supplied to its customers was from renewable resources that qualify under California's Renewables Portfolio Standard discussed under the Regulatory Setting below. El Dorado County consumed 1,218.6 GWh of electricity in 2018 (CEC, 2020e).

Natural Gas

PG&E is the supplier of natural gas to El Dorado County which consumed 32.3 million therms of electricity in 2018. PG&E serves approximately 4.4 million natural gas distribution customers (PG&E, 2020). However, currently there is no natural gas service to the project area.

Petroleum

Gasoline and diesel fuel are by far the largest transportation fuels used by volume in El Dorado County. The total estimated 2018 sales of gasoline in El Dorado County amounted to 76 million gallons and the total estimated 2018 sales of diesel fuel in El Dorado County amounted to 18.75 million gallons (CEC, 2019a).

4.5.3 Regulatory Setting

Federal

At the federal level, the U.S. Department of Transportation, U.S. Department of Energy, and U.S. Environmental Protection Agency (U.S. EPA) have substantial influence over energy policies related to fuel consumption in transportation. Generally, federal agencies influence transportation energy consumption by establishing and enforcing fuel economy standards for automobiles and light trucks, and by funding projects for energy-related research and development for transportation infrastructure.

National Energy Conservation Policy Act

The National Energy Conservation Policy Act (NECPA) serves as the underlying authority for federal energy management goals and requirements. Signed into law in 1978, it has been regularly updated and amended by subsequent laws and regulations. This act is the foundation of most federal energy requirements. NECPA established energy-efficiency standards for consumer projects and includes a residential program for low-income weatherization assistance, grants and loan guarantees for energy conservation in schools and hospitals, and energy-efficiency standards for new construction.

National Energy Policy Act of 2005

The National Energy Policy Act of 2005 sets equipment energy efficiency standards and seeks to reduce reliance on nonrenewable energy resources and provide incentives to reduce demand on these resources. For example, under the act, consumers and businesses can attain federal tax credits for purchasing fuel-efficient appliances and products, including hybrid vehicles; constructing energy-efficient buildings; and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), signed in 2007, strengthens the key energy management goals for the federal government and sets more challenging goals than the National Energy Policy Act of 2005. The energy reduction and environmental performance requirements of Executive Order 13423 were expanded upon in Executive Order 13514 (Federal Leadership in Environmental, Energy, and Economic Performance), and signed in 2009.

Energy and Independence Security Act of 2007

The Energy and Independence Security Act of 2007 sets federal energy management requirements in several areas, including energy reduction goals for federal buildings, facility management and benchmarking, performance and standards for new buildings and major renovations, high-performance buildings, energy savings performance contracts, metering, energy-efficient product procurement, and reduction in petroleum use, including setting automobile efficiency standards, and encouraging increases in alternative fuel use. This act also amends portions of the National Energy Policy Conservation Act.

Corporate Average Fuel Economy (CAFE) Standards

Established by the U.S. Congress in 1975, the CAFE standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. EPA jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the “maximum feasible level” with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.¹

Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule

On March 30, 2020, the SAFE Vehicles Rule was issued by NHTSA and U.S. EPA which sets fuel economy and carbon dioxide (CO₂) standards that increase 1.5% in stringency each year from model years 2021 through 2026. These standards are applicable to both passenger cars and light trucks and are intended to continue the nation’s progress toward energy independence and CO₂ reduction.

In September 2019, SAFE Vehicles Rule Part One: One National Program announced U.S. EPA’s decision to withdraw California’s waiver of preemption under Section 209 of the Clean Air Act, and finalized NHTSA’s regulatory text relating to preemption under 49 U.S.C. 32919.

State

California Public Utilities Commission

The California Public Utilities Commission (CPUC) is a state agency created by a constitutional amendment to regulate privately owned utilities providing telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation services. The CPUC is responsible for assuring that California utility customers have safe, reliable utility services at reasonable rates, while protecting utility customers from fraud. The CPUC regulates the planning and approval for the physical construction of electric generation, transmission, and distribution facilities, and the local distribution pipelines for natural gas.

California Energy Commission

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The CEC is the primary energy policy and planning agency in California and has five major responsibilities: (1) forecast future energy needs and track historical energy data; (2) license thermal power plants 50 megawatt (MW) or larger; (3) promote energy efficiency through appliance and building standards; (4) develop energy technologies and support renewable energy; and (5) plan for and direct the state response to energy emergencies.

California Energy Action Plan

California’s *2008 Energy Action Plan Update* revised the *2005 Energy Action Plan II*, which is the state’s principal energy planning and policy document. The plan maintains the goals of the original *Energy Action Plan*, describes a coordinated implementation plan for state energy

¹ For more information on the CAFE standards, refer to <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>. Accessed March 2019.

policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. First-priority actions to address California's increasing energy demands are to promote energy efficiency, demand response (i.e., reduce customer energy usage during peak periods to address power system reliability and support the best use of energy infrastructure), and use of renewable power sources. To the extent that these strategies are unable to satisfy increasing energy and capacity needs, the plan supports clean and efficient fossil-fuel fired generation.

State of California Integrated Energy Policy

Senate Bill (SB) 1389 passed in 2002 requires the CEC to prepare a biennial Integrated Energy Policy Report (IEPR) that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code Section 25301[a]). The IEPR has replaced the Energy Action Plan as the chief program intended to provide a comprehensive statewide energy strategy to guide energy investments, energy-related regulatory efforts and GHG reduction measures.

The most recent 2019 update to the IEPR examines how California's energy system must be transformed to meet the state's 2030 GHG reduction goal, including implementation of SB 350 (De Leon, Chapter 547, Statutes of 2015) to double the energy efficiency of existing buildings and SB 100's target of achieving 60 percent renewables in the electricity supply by 2030. The report also covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The key strategies identified in the most recent, 2019 IEPR Update are summarized below (CEC, 2020f).

Decarbonizing the Electricity Sector

Decarbonizing the electricity sector is part of an integrated approach to reducing emissions from energy use. In 2018, about 34 percent of the electricity used to serve California was produced from renewable resources, exceeding the 2020 goal for the RPS. In 2018, solar energy accounted for 43 percent of the state's renewable generation (CEC, 2020a). Although the state's GHG reduction goals (i.e., Assembly Bill (AB) 32 and SB 32) are economy-wide, in 2017, GHG emissions in the electricity sector dropped to more than 40 percent below 1990 levels, to support the state in achieving the 2030 statewide GHG reduction target set by Senate Bill 32 (see Section 4.2, *Air Quality and Greenhouse Gas Emissions*, for more information about SB 32). These gains are largely attributable to advancements in energy efficiency, increased use of renewable energy resources, and reduced use of coal-fired electricity. To further reduce GHG emissions, California is increasingly using renewable resources to produce electricity while planning for increased demand from transportation electrification and other opportunities for electrification.

Energy Efficiency and Building Decarbonization

In 2017, as called for in Senate Bill 350, the CEC established ambitious annual targets to achieve a statewide doubling of cumulative energy efficiency savings in electricity and natural gas end

uses by 2030. The CEC developed the doubling targets in collaboration with the CPUC, investor-owned utilities, publicly owned utilities, and other stakeholders through a public process. Achieving these efficiency targets is one of the primary ways the energy sector can help achieve the state's climate goal of reducing GHG emissions to 40 percent below 1990 levels by 2030. However, the state will need additional efforts to decarbonize homes and businesses to meet California's goals for 2030 and 2050.

As spelled out in the California Energy Efficiency Strategic Plan, the CPUC has set a goal of achieving zero net energy (ZNE) performance for all new low-rise homes constructed in or after 2020, and for all new commercial buildings constructed in or after 2030. The latest adopted building energy standards (2019 Title 24 standards, described below), require, for the first time, PV installations on new homes.

Transportation Electrification

California is working to transform the transportation sector away from petroleum to near-zero emission vehicles operating with low-carbon fuels and ZEVs that run on electricity from batteries or hydrogen fuel cells. The transportation sector accounted for approximately 40 percent of the state's GHG emissions in 2017. The state is advancing goals, policies, and plans to support the proliferation of zero-emission and near-zero-emission vehicles. As described in more detail below, the Governor's Executive Orders have set goals of reaching 1.5 million ZEVs on California's roadways by 2025 and 5 million by 2030. As usage grows, ZEVs will have an increasing role in grid management and the integration of renewables in particular.

Title 24 - California Energy Efficiency Standards

The Energy Efficiency Standards for residential and nonresidential buildings specified in Title 24, Part 6 of the California Code of Regulations were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated approximately every three years to allow for consideration and possible incorporation of new energy-efficiency technologies and methods. The current standards became effective on January 1, 2017. The 2016 Title 24 standards include efficiency improvements to the residential standards for attics, walls, water heating, lighting, and efficiency improvements to the non-residential standards to align with the American Society of Heating and Air-Conditioning Engineers (ASHRAE) 90.1-2013 national standards. The most recent update to the Title 24 energy efficiency standards (2019 standards) went into effect on January 1st, 2020. Title 24, Part 6 is updated approximately every three years.

California Green Building Standards Code (CALGreen, or Title 24 Part 11)

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. CALGreen is intended to encourage more sustainable and environmentally friendly building practices, require low-pollution emitting substances that cause less harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment. Since 2011, the CALGreen Code is mandatory for all new residential and non-residential buildings constructed in the state. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and nonresidential uses; the new measures took effect on January 1, 2020.

Renewables Portfolio Standard (RPS)

The State of California has adopted RPS program to increase the percentage that retail sellers of electricity, including investor-owned utilities and community choice aggregators, must provide from renewable resources. Qualifying renewables under the RPS include bioenergy such as biogas and biomass, small hydroelectric facilities (30 MW or less), wind, solar, and geothermal energy. The CPUC and the CEC jointly implement the RPS program. The CPUC's responsibilities include: (1) determining annual procurement targets and enforcing compliance; (2) reviewing and approving each investor-owned utility's renewable energy procurement plan; (3) reviewing contracts for RPS-eligible energy; and (4) establishing the standard terms and conditions used in contracts for eligible renewable energy.

Executive Order S-14-08 and S-21-09

In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expanded the state's RPS to 33 percent renewable power by 2020. In September 2009, Governor Schwarzenegger continued California's commitment to the RPS by signing Executive Order S-21-09, which directed the California Air Resources Board (CARB) under AB 32 authority to enact regulations to help the state meet its RPS goal of 33 percent renewable energy by 2020.

SB 350 - Clean Energy and Pollution Reduction Act of 2015

SB 350, known as the Clean Energy and Pollution Reduction Act of 2015 was enacted on October 7, 2015 and provides a new set of objectives in clean energy, clean air, and pollution reduction by 2030. The objectives include the following:

1. To increase from 33 percent to 50 percent, the procurement of the state's electricity from renewable sources.
2. To double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 goes beyond the RPS goals that were established by SB 350 in 2015. Specifically, the bill increases the required energy from renewable sources for both investor-owned utilities and publicly-owned utilities from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. The updated RPS goals are considered achievable, since many California energy providers are already meeting or exceeding the RPS goals established by SB 350. PG&E reached California's 2020 renewable energy target three years ahead of schedule and is on track to meet the state's new 60 percent by 2030 renewable energy target.

On the same day that SB 100 was signed, Governor Brown signed Executive Order B-55-18 with a new statewide goal to achieve carbon neutrality (zero-net GHG emissions) by 2045 and to maintain net negative emissions thereafter.

Appliance Efficiency Regulations, California Code of Regulations Title 20

California's Appliance Efficiency Regulations (20 CCR Part 160-1608) contain standards for both federally regulated appliances and non-federally regulated appliances. The regulations are updated regularly to allow consideration of new energy efficiency technologies and methods. The current regulations were adopted by the CEC on November 18, 2009. The standards outlined in the regulations apply to appliances that are sold or offered for sale in California. More than 23 different categories of appliances are regulated, including refrigerators, freezers, water heaters, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings.

Transportation Energy

AB 1007 (Pavley)-Alternative Fuel Standards

Assembly Bill 1007, (Pavley, Chapter 371, Statutes of 2005) required the CEC to prepare a state plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other state, federal, and local agencies. The final State Alternative Fuels Plan, published in December 2007, attempts to achieve an 80-percent reduction in GHG emissions associated with personal modes of transportation, even as California's population increases.

California Assembly Bill 1493 (AB 1493, Pavley)

In response to the transportation sector accounting for more than half of California's CO₂ emissions, AB 1493 (commonly referred to as CARB's Pavley regulations), enacted on July 22, 2002, requires CARB to set GHG emission standards for new passenger vehicles, light duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009 through 2016 and Phase II established standards for model years 2017 through 2025. Refer to Section 4.2, *Air Quality and Greenhouse Gas Emissions*, of this Draft EIR for additional details regarding this regulation.

Low Carbon Fuel Standard

The Low Carbon Fuel Standard (LCFS), established in 2007 through Executive Order S-1-07 and administered by CARB, requires producers of petroleum-based fuels to reduce the carbon intensity of their products that started with a 0.25 percent reduction in 2011, and culminated in a 10-percent total reduction in 2020. In September 2018, CARB extended the LCFS program to 2030, making significant changes to the design and implementation of the program including a doubling of the carbon intensity reduction to 20 percent by 2030.

Petroleum importers, refiners, and wholesalers can either develop their own low carbon fuel products, or buy LCFS credits from other companies that develop and sell low carbon alternative fuels, such as biofuels, electricity, natural gas, and hydrogen.

Executive Order B-16-12 - 2025 Goal for Zero Emission Vehicles

In March 2012, Governor Brown issued an executive order establishing a goal of 1.5 million ZEVs on California roads by 2025. In addition to the ZEV goal, Executive Order (EO) B-16-12 stipulated that by 2015 all major cities in California will have adequate infrastructure and be 'zero-emission vehicle ready'; that by 2020 the state will have established adequate infrastructure to support 1 million ZEVs; and that by 2050, virtually all personal transportation in the state will

be based on ZEVs, and GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

CARB's Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations. The program requires a greater number of ZEV models for years 2015 through 2025 to control smog, soot, and GHG emissions. This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the ZEV regulations to require manufactures to produce an increasing number of pure ZEVs (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEV) between 2018 and 2025.

CARB's Mobile Source Strategy

The Mobile Source Strategy (2016) includes an expansion of the Advanced Clean Cars program (which further increases the stringency of GHG emissions for all light-duty vehicles, and 4.2 million zero-emission and plug-in hybrid light-duty vehicles by 2030). It also calls for more stringent GHG requirements for light-duty vehicles beyond 2025 as well as GHG reductions from medium-duty and heavy-duty vehicles and increased deployment of zero-emission trucks primarily for classes 3 through 7 "last mile" delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in GHG emissions, and a 50 percent reduction in the consumption of petroleum-based fuels. CARB's Mobile Source Strategy includes measures to reduce total light-duty vehicle miles travelled (VMT) by 15 percent compared to business-as-usual in 2050.

Executive Order B-48-18

On January 26, 2018, Governor Brown issued an executive order establishing a goal of 5 million ZEVs on California roads by 2030, and spur the installation and construction of 250,000 plug-in electric vehicle chargers, including 10,000 direct current fast chargers, and 200 hydrogen refueling stations by 2025.

Local

The Public Services and Utilities Element of the El Dorado County General Plan contains the following objective and policies related to energy conservation that would apply to the project.

Objective 5.6.2: Encourage Energy Efficient Development. Encourage development of energy-efficient buildings, subdivisions, development, and landscaping designs.

Policy 5.6.2.1: Require energy conserving landscaping plans for all projects requiring design review or other discretionary approval.

Policy 5.6.2.2: All new subdivisions should include design components that take advantage of passive or natural summer cooling and/or winter solar access, or both, when possible.

Measure PS-O of the Implementation Program requires the County to develop standards for energy-efficient site development and construction in response to Policies 5.6.2.1 and 5.6.2.2.

4.5.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

For purposes of this EIR and consistent with the criteria presented in Appendix G of the State CEQA Guidelines, impacts associated with energy may be considered significant if implementation of the project would:

- Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Impacts and Mitigation Measures

Impacts

Impact 4.5-1: Construction and operation of the project would not result in the inefficient, wasteful, or unnecessary use of energy resources. (*Less than Significant Impact*)

Construction Energy Use

Construction of the project would require the use of fuels (gasoline and diesel) for the operation of construction equipment and vehicles to perform a variety of activities, including excavation, hauling, paving, and transportation of employees and materials. Minimal amounts of energy in the form of electricity may also be consumed by some pieces of construction equipment, such as welding machines, power tools, lighting, and other equipment.

Diesel fuel consumption associated with on-site off-road construction equipment have been estimated based on the GHG emissions estimates for off-road equipment that were developed based on applicant-provided data including construction schedule; equipment types, numbers, and hours of use in combination with The Climate Registry (TCR) 2019 default factors for calculating CO₂ emissions from diesel fuel (TCR, 2020). All off-road construction equipment is assumed to be diesel-fueled.

With regard to on-road construction vehicles, it is assumed that light-duty automobiles and trucks used by commuting workers would be fueled by gasoline and that on-road construction vehicles, such as vendor and haul trucks for demolition debris, soil, and other material hauling, would use diesel fuel. This analysis assumes that no electric on-road vehicles would be used during construction of the project. The fuel quantities that would be required for on-road vehicles during construction have been calculated based on the GHG emissions associated with commuting workers and vendor and haul trips estimated using CalEEMod defaults for estimated trip counts and for worker, vendor, and haul trip lengths and TCR 2019 default factors for calculating CO₂ emissions from gasoline and diesel fuels (TCR, 2020).

Table 4.5-1 below, presents the total and annual average estimated construction energy consumption by energy source for the project. It should be noted that the total energy consumption would occur incrementally during the various construction phases over a period of 4 years. The level of energy usage would fluctuate depending on the construction activities underway during any particular time period. Energy use would be higher during the first phase of construction involving demolition of existing structures and the initial site clearance and earth-

moving/grading, where the largest and most powerful equipment would be required to excavate, lift, and transport large volumes of soil from the site. Gasoline and diesel fuel would be the primary energy sources for vehicles driven by construction crews and to power the large haul trucks used to deliver and retrieve construction equipment, materials, and debris, respectively.

**TABLE 4.5-1
 PROJECT CONSTRUCTION ENERGY USE**

Energy Use Type	Unit of Measure	Project Construction Usage
Diesel		
On-road vehicles	gallons/project	58,746
Off-road equipment	gallons/project	182,959
Total Diesel Use	gallons/project	241,705
Annual Average Diesel Use¹	gallons/year	60,426
Gasoline		
On-road vehicles	gallons/project	66,794
Total Gasoline Use	gallons/project	66,794
Annual Average Gasoline Use¹	gallons/year	16,699

NOTES:

1. Annual averages are estimated by dividing the total energy use by the expected 4-year duration of construction.

SOURCE: Appendix B1.

As detailed in Table 4.5-1, it is estimated that construction related off-road equipment and on-road vehicles would consume a total of approximately 241,705 gallons of diesel fuel and on-road worker vehicles would consume a total of approximately 66,794 gallons of gasoline over the entire construction duration of the project. These total use amounts are equivalent to averages of approximately 60,426 gallons of diesel fuel per year and 16,699 gallons of gasoline fuel per year over the 4-year construction period. These annual average diesel and gasoline use amounts are equivalent to approximately 0.3 percent of the diesel and less than 0.1 percent of the gasoline sold in El Dorado County annually.

Overall, the use of diesel and gasoline fuels to construct development allowed under the project would not be substantial relative to the total sales of transportation fuels in El Dorado County. In addition, the project would be subject to an idling limit of a maximum of five minutes in accordance with the Title 13, Section 2485, of the California Code of Regulations and Title 13, Section 2449, of the California Code of Regulations for all commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower which would avoid wasteful or inefficient use of fuel during construction.

Operational Energy Use

Operation of the project would require long-term consumption of energy primarily in the form of electricity, diesel and gasoline. Electricity would be used as the primary power source for the proposed residences, including operation of HVAC system, lights, appliances, and other

residential equipment. As there is no natural gas service to the project area, electricity would also be used for space and water heating and in cooking appliances. In addition, water used in project residences would require the consumption of electricity to supply, treat, and distribute potable water to and also to convey and treat wastewater generated at the project residences.

Mobile source fuel use associated with operation of the project has been estimated based on VMT and the fleet-average fuel consumption (in gallons per mile) from the EMFAC2017 model for year 2027, which is anticipated to be the year by which the project would be fully built out. Electricity demand for electric vehicles (EV) is based on VMT from EMFAC2017 and an estimated EV energy economy (in kWh per mile) of 26 kWh/100 miles (U.S. Department of Energy, 2020). The annual energy use estimated for project operation are summarized in **Table 4.5-2** by energy use type.

The project area is currently supplied electricity by PG&E, which has established contracts and commitments to ensure there is adequate electricity generation capacity to meet current and future energy loads. The project would be compliant with existing County land use and zoning requirements for the site, as defined in the General Plan and Zoning Code. Hence, development of the project was planned for in the County’s General Plan and would generate demand for electricity services consistent with assumptions in the County’s General Plan.

**TABLE 4.5-2
PROJECT OPERATIONAL ENERGY USE (ANNUAL)**

Energy Use Type	Units	NAR PUD Buildout
Electricity		
Buildings	MWh/year	3,620
Water Consumption	MWh/year	411
Mobile Sources ¹	MWh/year	57
Total Electricity Use	MWh/year	4,088
Diesel		
Mobile Sources	Gallons/year	32,875
Total Diesel Use	Gallons/year	32,875
Gasoline		
Mobile Sources	Gallons/year	252,336
Total Gasoline Use	Gallons/year	252,336

NOTES:

1. The fuel economy is consistent with the current range of fuel efficiencies of electric cars from US Department of Energy, available at <https://www.fueleconomy.gov/feg/PowerSearch.do?action=noform&path=1&year1=1984&year2=2019&vtype=Electric>.

MWh = Megawatt-hour.

SOURCE: Appendix B1.

Electricity

Operational electricity usage for the project was derived from the CalEEMod output and includes an adjustment of a two percent reduction to account for the most recent 2019 standards over the

default 2016 Title 24 Building Energy Efficiency Standards used in the model. This is a conservative estimate as it does not include the energy savings from installing photovoltaic panels on homes. If project residences were to include photovoltaic panels, electricity usage would reduce by up to 79 percent over the default energy use rates for 2016 Title 24 Building Energy Efficiency Standards used in CalEEMod. In addition, since the project area does not have natural gas service, natural gas usage default assumptions as estimated by CalEEMod have been converted to and included with the project's electricity use.

To put the operational electricity requirements of the project in context, in 2018 the total generated electricity for California was 285,488 GWh of electricity, of which consumers in El Dorado County used 1218.6 GWh. The CEC estimates that state-wide energy demand will increase to 320,375 GWh by 2025 based on an average annual mid-energy demand growth rate of 1.32 percent (CEC, 2018a). As shown in Table 4.5-2, the anticipated long-term operational increase in electricity usage under the project relative to existing conditions would increase to 4,088 MWh per year upon full buildout in 2026. This represents less than 0.01 percent of the total 2018 state-wide electricity usage and approximately 0.3 percent of El Dorado County's 2018 electricity usage.

Based on a comparison to the state-wide and El Dorado County annual energy demand and the projected demand growth rate, the project-related increase in electricity consumption is not expected to cause adverse effects on local and regional energy supplies or require additional generation capacity beyond the state-wide planned increase to accommodate projected energy demand growth. In addition, operational electricity demand estimates for the project presented in Table 4.5-2 exclude the benefits of any additional sustainability features that project residences may include such as buildings built to LEED design standards, installation of PV panels on homes, as well as due to future revisions to Title 24 energy standards, which would further reduce electricity demand.

Transportation Fuels

During operations, it is estimated that the annual consumption of diesel fuel in motor vehicle trips would be approximately 32,875 gallons per year and the annual consumption of gasoline would be approximately 252,336 gallons per year (see Table 4.5-2). These annual average diesel and gasoline use amounts are equivalent to approximately 0.2 percent and 0.3 percent, respectively, of the diesel and gasoline fuel sold in El Dorado County in 2018. Overall, the use of gasoline and diesel fuels from the operation of the project would not be substantial relative to the total sales of fuels in El Dorado County.

Based on the above analysis and discussion under Impact 4.5-2 below, construction and operation of the project would not result in an environmental impact due to wasteful, inefficient, or unnecessary consumption of fuel or energy. The impact would be **less than significant**.

Mitigation Measures

None required.

Impact 4.5-2: Construction and operation of the proposed project would not conflict with or obstruct adopted energy conservation plans or violate energy efficiency standards. (*Less than Significant Impact*)

Construction and operation of the project would comply with existing energy standards, including state and local standards designed to minimize use of fuel in construction vehicles, and ensure that buildings employ strict energy efficiency techniques, as described further below.

Construction Vehicles and Equipment

Construction activities associated with the proposed project would require use of on-road trucks for soil and debris hauling and material deliveries, and off-road equipment such as excavators, cranes, forklifts, and pavers. Construction activities and related vehicle fuels usage, would comply with state and local requirements designed to minimize idling and associated emissions, which also minimizes use of fuel. Specifically, idling of commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower would be limited to a maximum of two minutes in accordance with the Title 13, Section 2485, of the California Code of Regulations and Title 13, Section 2449, of the California Code of Regulations.

Building Efficiency

This includes an analysis of the anticipated electricity and natural gas use associated with the project. Construction of the new homes would be subject to the standards in the most recent update to California's Title 24, including the Building Energy Efficiency Code and CALGreen Code as discussed in Section 4.5.2, above. California's Title 24 reduces energy use in residential and commercial buildings through continued updates to both the Green Building Standards Code (Title 24, Part 11) and the Energy Efficiency Standards (Title 24, Part 6). Provisions for consideration added to Title 24 include new energy efficiency technologies and methods for building features such as space conditioning, water heating, lighting, as well as construction waste diversion goals. Additionally, some standards focus on larger energy saving concepts such as reducing loads at peak periods and seasons, improving the quality of energy-saving installations, and performing energy system inspections. Past updates to the Title 24 standards have proved very effective in reducing building energy use, with the 2013 update to the energy efficiency standards estimated to reduce energy consumption in residential buildings by 25 percent and energy consumption in commercial buildings by 30 percent, relative to the 2008 standards (CEC, 2012).

The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential standards include the introduction of photovoltaic into the prescriptive package, improvements for attics, walls, water heating, and lighting. The standards are expected to further reduce energy compared to the 2016 standards, with single-family savings of up to 79 percent of electricity (with the use of photovoltaic panels) and 9 percent of natural gas. For low-rise multi-family, savings will be up to 79 percent of electricity and 5 percent of natural gas. The first-year savings associated with the 2019 standards for newly constructed non-residential buildings would be 10.7 percent for electricity and 1 percent for natural gas (CEC, 2018b).

Because the project would be constructed between 2022 and 2026, further reductions can be anticipated from future Title 24 code revision cycles if building permits are issued at future dates corresponding to those code updates. In addition, California has developed a goal of zero net energy (ZNE) use in all new homes by 2020 and commercial buildings by 2030 (CPUC, 2020). The ZNE goal means new construction must use a combination of improved efficiency and distributed renewable energy generation to meet 100 percent of their annual energy need. Implementation of the 2019 Title 24 standards are expected to take the final step to achieve ZNE for newly constructed residential buildings throughout California. Since all project related development would be built to the 2019 or later standards, development allowed under the proposed project would be highly efficient in terms of energy use in residential structures.

Transportation

Regulatory requirements reduce mobile vehicle fuel use and VMT, and development of the project would comply with all these requirements as the fleet turnover happens in response to these regulatory requirements. Statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time. For example, SB 743 requires projects to evaluate VMT relative to existing regional averages rather than evaluating traffic Level of Service (LOS) for CEQA significance, and allows streamlining for projects in high quality transit areas. SB 375, the Sustainable Communities and Climate Protection Program, requires Metropolitan Planning Organizations to develop Sustainable Communities Strategies to reduce per capita VMT. As the project is consistent with the El Dorado County General Plan, it has been accounted for and therefore consistent with the planning assumptions of the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). The MTP/SCS pro-actively links land use, air quality, energy, and transportation needs for the greater Sacramento region including El Dorado county. The vehicles that travel to and from the project site would be registered at the Department of Motor Vehicles consistent with the overall regional fleet. To obtain registration, the Department of Motor Vehicles requires that vehicles comply with vehicle efficiency standards. The project would be consistent with the County's General Plan and regional planning pursuant to MTP/SCS, the project's transportation energy use would not conflict with a state or regional plan related to the increased use of renewable energy on a regional scale.

Overall, construction and operation of the proposed project would not conflict with or obstruct adopted energy conservation plans or violate energy efficiency standards. This would be a **less-than-significant** impact.

Mitigation Measures

None required.

Cumulative Impacts

The cumulative impacts regarding the wasteful, inefficient, or unnecessary consumption of energy during construction and operation (Impact 4.5-1) and where the project could conflict with or obstruct adopted energy conservation plans or violate energy efficiency standards (Impact 4.5-2) would be the same as the project-specific context. Energy consumption effects related to individual projects are localized and would not combine with similar effects in other locations. However, continued growth in the Diamond Springs and El Dorado County area and throughout PG&E's service areas could contribute to ongoing increases in demand for electricity and natural gas, which are discussed below.

Impact 4.5-3: The proposed project, in combination with other cumulative development, could contribute to cumulative increases in demand for energy. (*Less than Significant Impact*)

Other projects proposed in the vicinity of the project area, El Dorado County, and the service area for PG&E in general could cumulatively contribute to ongoing increases in demand for electricity. These anticipated increases would be countered, in part, by ongoing increases in national, statewide, and local requirements and incentives to support construction or retrofit of buildings with increased energy efficiency.

For electricity, overall supply during most conditions is adequate. However, as demand continues to increase in PG&E's service area, temporary shortfalls could occur on PG&E's system (and other portions of the statewide grid) during temporary periods of high peak demand. Peak demands typically occur during the summer hot weather conditions when people run their air conditioners and meeting demand during peak periods is a key planning consideration for PG&E. PG&E's demand response programs enable customers to reduce energy use during periods of peak demand, adding stability to the electric system. By giving customers incentives to curtail usage, demand response programs provide valuable services to the grid, lower costs for customers and help reduce GHG emissions. These programs also help avoid the need for additional power plants that would only be called on for short periods throughout the year on days when demand is highest, allowing a more sustainable approach to balancing energy supply and demand. Through a combination of increases in efficiency and deployment of power management strategies including power imports during peak periods, PG&E expects to maintain sufficient capacity to provide power to its service area, including the proposed project. Therefore, the project's incremental contribution to the cumulative impact on electrical supply would be **less than significant**.

Additionally, conservation policies encouraged by the County, including those set forth in the General Plan (electricity services, energy consumption per capita, renewable energy, and energy efficiency appliances), are expected to support increased energy conservation in new development, such as that which would occur pursuant to the proposed project. Although the proposed project could result in an overall increase in energy demand on suppliers, anticipated increases would be affected positively by these requirements.

The proposed project, in combination with other cumulative development in the area, would not lead to a cumulatively significant increase in demand for energy. This impact would be **less than significant**.

Mitigation Measures

None required.

4.5.5 References

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4.6 Geology, Soils, Seismicity, Paleontological Resources, and Mineral Resources

4.6.1 Introduction

This section evaluates the potential for the proposed project to result in adverse impacts related to geologic, seismic, and soils hazards, mineral resources, and paleontological resources. The analysis is based on review of available geologic, geotechnical, and paleontological reports and maps of the project site and vicinity, including site-specific investigations, relevant regulations, and a discussion of the methodology and thresholds used to determine whether the proposed project would result in significant impacts. This section analyzes the potential for both project-level and cumulative environmental impacts.

A preliminary geotechnical study was conducted to provide information on geologic, seismic, and soils conditions on the site (YoungDahl, 2018). A drainage and stormwater quality study was also prepared to provide information on stormwater volumes and to evaluate the proposed drainage infrastructure (D&A, 2018). These reports are included with this EIR in **Appendix E**. The information provided in the Environmental Setting discussion below incorporates results of these investigations unless otherwise cited.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Comments relevant to geology included concerns regarding the increase in stormwater runoff due to the addition of additional impermeable surfaces. There were no comments on mineral or paleontological resources.

4.6.2 Environmental Setting

Topography and Drainage

Most of the project site is hilly and sloping to the south. Elevations range from about 1,675 feet above mean sea level at the southernmost end of the project site to about 1,845 feet above sea level at a low hilltop near the center of the project site. There are two generally north-south ridgelines, which route most drainage to the center of the project site and then south. Some drainage along the western border flows offsite to the west and some drainage along the eastern border flows offsite to the east. Much of the topography is hummocky and disturbed due to the placer gold mining activities conducted during the Gold Rush era and due to a proposed 1980s development that did not proceed beyond initial limited grading (ESA, 2019a, b).

Regional and Local Geology

Regional Geology

The project site is located at the foothills of the Sierra Nevada Mountain Range. The Range is about 400 miles north-to-south and about 70 miles at its widest across east-to-west. The majority of the range is composed of granitic rocks with some metavolcanic and metasedimentary rocks.

Local Geology and Soils

The project site is underlain by highly weathered Mesozoic¹ granitic rocks with some observed metavolcanic rock. For most of the site, the depth to bedrock ranges from 0 feet (present at the ground surface) to 6 feet. The weathering of these bedrock materials is the primary source of soils at the site. The soils are composed primarily of loose to medium dense silty sands. Groundwater was not encountered during test pits excavated in 2007. Surface water was observed flowing across the site in the late spring of 2018 and late spring of 2019. Groundwater may be present for periods of time as perched water zones in the alluvial materials and fractures and joints in the underlying bedrock.

Test pits excavated in the eastern middle portion of the site encountered undocumented fill with thicknesses ranging from 8 to 20 feet. As discussed in Section 4.4, *Cultural Resources*, the site was extensively mined for gold during the Gold Rush era, using placer mining methods. This technique used stream water routed through the site to separate the heavier gold from lighter materials. In the process, piles of the washed materials referred to as tailing piles were left onsite, which is the undocumented fill encountered in the test pits. Some residual evidence of the ditches used to route the water are still visible. In addition, some soil in the northern third of the site was moved around as part of a previous development effort in the 1980s that did not proceed beyond some initial grading (ESA, 2019a, b).

Seismicity and Faults

This section characterizes the region's existing faults, describes historical earthquakes, estimates the likelihood of future earthquakes, and describes probable groundshaking effects.

Earthquake Terminology and Concepts

Earthquake Mechanisms and Fault Activity

Faults are planar features within the earth's crust that have formed to release strain caused by the dynamic movements of the earth's major tectonic plates. An earthquake on a fault is produced when these strains overcome the inherent strength of the earth's crust, and the rock ruptures. The rupture causes seismic waves that propagate through the earth's crust, producing the groundshaking effect known as an earthquake. The rupture also causes variable amounts of slip along the fault, which may or may not be visible at the earth's surface.

Geologists commonly use the age of offset rocks as evidence of fault activity—the younger the displaced rocks, the more recently earthquakes have occurred. To evaluate the likelihood that a fault would produce an earthquake, geologists examine the magnitude and frequency of recorded earthquakes and evidence of past displacement along a fault. The California Geological Survey (CGS) defines an active fault as one that has had surface displacement within Holocene time (within the last 11,000 years; the U.S. Geological Survey (USGS) uses within the last 15,000 years). A Quaternary fault is defined as a fault that has shown evidence of surface displacement during the Quaternary period (the last 2.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not mean

¹ Mesozoic time is from 66 to 252 million years before present time.

that a fault lacking evidence of surface displacement is necessarily inactive. The term “sufficiently active” is also used to describe a fault if there is some evidence that Holocene displacement has occurred on one or more of its segments or branches (CGS, 2007).

Earthquake Magnitude

When an earthquake occurs along a fault, its size can be determined by measuring the energy released during the event (CGS, 2002b). A network of seismographs records the amplitude and frequency of the seismic waves that an earthquake generates. The Richter magnitude (ML) of an earthquake represents the highest amplitude measured by the seismograph at a distance of 100 kilometers from the epicenter. Richter magnitudes vary logarithmically with each whole-number step, representing a tenfold increase in the amplitude of the recorded seismic waves and 32 times the amount of energy released. While Richter magnitude was historically the primary measure of earthquake magnitude, seismologists now use Moment Magnitude (Mw) as the preferred way to express the size of an earthquake. The Mw scale is related to the physical characteristics of a fault, including the rigidity of the rock, the size of fault rupture, and the style of movement or displacement across the fault. Although the formulae of the scales are different, they both contain a similar continuum of magnitude values, except that Mw can reliably measure larger earthquakes and do so from greater distances.

Peak Ground Acceleration

A common measure of ground motion at any particular site during an earthquake is the peak ground acceleration (PGA). The PGA for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared. In terms of automobile acceleration, one “g” of acceleration is equivalent to the motion of a car traveling 328 feet from rest in 4.5 seconds. For comparison purposes, the maximum PGA value recorded during the 1994 Northridge earthquake in the vicinity of the epicenter exceeded 1 g in several areas. Unlike measures of magnitude, which provide a single measure of earthquake energy, PGA varies from place to place and is dependent on the distance from the epicenter and the character of the underlying geology (e.g., hard bedrock, soft sediments, or artificial fills)

Modified Mercalli Intensity Scale

The Modified Mercalli Intensity Scale assigns an intensity value based on the observed effects of groundshaking produced by an earthquake. Unlike measures of earthquake magnitude and PGA, the Modified Mercalli Intensity Scale is qualitative in nature in that it is based on actual observed effects rather than measured values. Similar to PGA, Modified Mercalli values for an earthquake at any one place can vary depending on the earthquake’s magnitude, the distance from its epicenter, the focus of its energy, and the type of geologic material. The Modified Mercalli values for intensity range from I (earthquake not felt) to XII (damage nearly total), and intensities ranging from IV to X can cause moderate to significant structural damage. Because the Modified Mercalli scale is a measure of groundshaking effects, intensity values can be correlated to a range of average PGA values, as shown in **Table 4.6-1, Modified Mercalli Intensity Scale**.

**TABLE 4.6-1
MODIFIED MERCALLI INTENSITY SCALE**

Intensity Value	Intensity Description	Average Peak Ground Acceleration^a
I	Not felt	< 0.0017 g
II	Felt by people sitting or on upper floors of buildings	0.0017 to 0.014 g
III	Felt by almost all indoors. Hanging objects swing. Vibration like passing of light trucks. May not be recognized as an earthquake.	0.0017 to 0.014 g
IV	Vibration felt like passing of heavy trucks. Stopped cars rock. Hanging objects swing. Windows, dishes, doors rattle. Glasses clink. In the upper range of IV, wooden walls and frames creak.	0.014 to 0.039 g
V (Light)	Felt outdoors. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing. Pictures move. Pendulum clocks stop.	0.035 to 0.092 g
VI (Moderate)	Felt by all. People walk unsteadily. Many frightened. Windows crack. Dishes, glassware, knickknacks, and books fall off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster, adobe buildings, and some poorly built masonry buildings cracked. Trees and bushes shake visibly.	0.092 to 0.18 g
VII (Strong)	Difficult to stand or walk. Noticed by drivers of cars. Furniture broken. Damage to poorly built masonry buildings. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices, unbraced parapets and porches. Some cracks in better masonry buildings. Waves on ponds.	0.18 to 0.34 g
VIII (Very Strong)	Steering of cars affected. Extensive damage to unreinforced masonry buildings, including partial collapse. Fall of some masonry walls. Twisting, falling of chimneys and monuments. Wood-frame houses moved on foundations if not bolted; loose partition walls thrown out. Tree branches broken.	0.34 to 0.65 g
IX (Violent)	General panic. Damage to masonry buildings ranges from collapse to serious damage unless modern design. Wood-frame structures rack, and, if not bolted, shifted off foundations. Underground pipes broken.	0.65 to 1.24 g
X (Very Violent)	Poorly built structures destroyed with their foundations. Even some well-built wooden structures and bridges heavily damaged and needing replacement. Water thrown on banks of canals, rivers, lakes, etc.	> 1.24 g
XI (Very Violent)	Few, if any, masonry structures remain standing. Bridges destroyed. Rails bent greatly. Underground pipelines completely out of service.	> 1.24 g
XII (Very Violent)	Damage nearly total. Practically all works of construction are damaged greatly or destroyed. Large rock masses displaced. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown into the air.	> 1.24 g

NOTES:

a. Value is expressed as a fraction of the acceleration due to gravity (g). Gravity (g) is 9.8 meters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

SOURCES: ABAG, 2016; CGS, 2002a.

Faults and Historical Earthquake Activity

No active faults are known to pass through or near the project site. The regional area contains some active and potentially active faults. Throughout the project region, there is the potential for damage resulting from movement along any one of a number of the active faults, resulting in seismic shaking and seismically induced ground failures (e.g., liquefaction). The nearest historic

(moved within the last 200 years), active, and potentially active faults are listed below on **Table 4.6-2**. Based on the shear-wave characteristics of the geologic units and subsurface interpretations, the geotechnical consultant recommended classifying the project site as Site Class C, which applies to sites with very dense soil and soft rock. The PGA for the project site is estimated at 0.181 g, which would correspond to a Modified Mercalli Intensity Scale event of VII or strong seismic shaking. The Working Group on California Earthquake Probabilities (WGCEP), comprised of the USGS, the CGS, and the Southern California Earthquake Center, evaluates the probability of one or more earthquakes of Mw 6.7 or higher occurring in the state of California over the next 30 years (WGCEP, 2015a, b). The table below includes probabilities for those faults, where estimated by the WGCEP. As listed below, the probabilities are relatively low, indicating the region has a relatively low level of seismic activity.

**TABLE 4.6-2
 ACTIVE FAULTS**

Fault	Activity	Approximate Distance from Project Site	Historical Seismicity	Probability of M6.7 Earthquake over next 30 Years in Percent
Maidu	Potentially Active	12-½ miles northwest	None known	Not estimated
West Tahoe	Active	42 miles northeast	None known	1.06
North Tahoe	Active	50 miles northeast	None known	0.21
Dunnigan Hills	Active	56 miles southwest	None known	Not estimated
Polaris	Active	56 miles northeast	None known	0.90
Dog Valley	Historic	59 miles northeast	M6.0 in 1966	0.22
Cleveland Hill	Historic	60 miles northwest	M5.7 in 1975	Not estimated

SOURCES: YoungDahl, 2018; Cronin & Strasser, 2017; Topozada and Morrison, 1982; WGCEP, 2015a

Geologic Hazards

Based on the geologic data reviewed during preparation of this EIR, the potential geologic hazards at the project site include erosion and expansive soil. These geologic hazards are discussed below. Liquefaction and lateral spreading, while possible without seismic shaking, are more commonly triggered by a seismic event, as discussed further below in seismic hazards.

Erosion

Erosion is the wearing away of soil and rock by processes such as mechanical or chemical weathering, mass wasting, and the action of water and wind. Excessive soil erosion can eventually damage infrastructure such as pipelines, wellheads, building foundations, and roadways. In general, granular soils with relatively low cohesion and soils located on steep topography have a higher potential for erosion. Generally, slopes of 2H:1V (e.g., two feet horizontal run over one-foot vertical rise or a 50 percent slope) or less are considered relatively stable. Slopes at the project site range from 1.7 to 26.4 percent, which are considered relatively stable with the onsite materials.

Landslides

The term landslide refers to the downward movement of large masses of rocks, soil, mud, and/or organic debris. Areas with steep slopes are particularly susceptible to landslide hazards. Most landslides are caused by one or more factors that act together to destabilize the slope. The primary driving force of the slope failure is the influence of gravity acting on weakened materials that make up a sloping area of land. While some landslides occur slowly over time (e.g., land movement on the order of a few meters or yards per month), the most destructive ones happen suddenly after a triggering event, such as heavy rainfall or an earthquake. Landslides can be triggered by human activities that weaken the stability of a slope. These actions may include excavation of the toe of a slope removing a restraining force to slope failure, the addition of water at the head of a slope increasing the weight of the materials within the upper slope area and adding a lubricant (i.e., water) to the materials, by construction activities that disturb soil conditions and create unstable slopes, and/or by water leaks or breaks in pipelines or pumps. As noted above, the slopes at the project site are considered to be relatively stable. The geotechnical study did not observe evidence of landslides, tension cracks, or slump blocks during the field investigation and concluded the potential for slope instability is negligible.

Expansive Soils

Expansion and contraction of expansive soils in response to changes in moisture content can cause differential and cyclical movements that can cause damage and/or stress to shallow founded structures and equipment. Issues with expansive soils typically occur in soils comprised mostly of plastic clays near the ground surface where changes in moisture content typically occur. The geotechnical study encountered non-plastic materials that would not be potentially expansive.

Corrosive Soils

Risk of corrosion pertains to potential soil-induced electrochemical or chemical actions that corrode or weaken concrete or uncoated steel. The rate of concrete corrosion is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. The rate of uncoated-steel corrosion is related to such factors as the moisture, particle-size distribution, acidity, and electrical conductivity of the soil. Steel installations that intersect soil boundaries or soil layers are more susceptible to corrosion than the steel installations that are entirely within one kind of soil or within one soil layer. The geotechnical study included testing soil for corrosivity. The results indicate the soils are potentially corrosive to unprotected steel and not potentially corrosive to concrete.

Subsidence and Collapse

When oil and/or groundwater is extracted from the subsurface, subsidence of the overlying land surface can occur. Collapse is also typically associated with shallow groundwater withdrawal. Subsidence is usually associated with severe, long-term withdrawal in excess of recharge that eventually leads to overdraft of the aquifer. As oil and/or groundwater is pumped out, water and/or oil is removed from the soil pore spaces leading to a reduction in soil strength. The subsurface conditions more conducive to subsidence include clay or organic-rich soils. Sand- and gravel-rich soils are less prone to subsidence because the larger grains comprise a skeleton less dependent on water pressure for support. The subsidence can result in damage to infrastructure

such as buildings or pipelines, or can result in a decrease in the volume of available aquifer storage. The proposed project does not include the extraction of oil or groundwater.

Seismic Hazards

Seismic hazards are generally classified into two categories: primary seismic hazards (surface fault rupture and groundshaking) and secondary seismic hazards (liquefaction, landslides, and other types of seismically induced ground failure).

Surface Fault Rupture

Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude, sense, and nature of fault rupture can vary for different faults or even along different strands of the same fault. The highest potential for surface faulting is along existing fault traces that have had Holocene displacement. As previously discussed, no known active or potentially active faults have been mapped through the project site.

Seismic Groundshaking

As discussed above, although there are no active or potentially active faults crossing the project site, there are a number of active faults in the region and a seismic event could subject the site to strong seismic groundshaking throughout the region. Earthquakes on active or potentially active faults, depending on magnitude and distance from the project area, could produce a range of groundshaking intensities at the project area. The ground shaking hazard estimated at the project site using the CGS Ground Motion Interpolator estimates a PGA of 0.181 g. Based on the Modified Mercalli Intensity Scale (see Table 4.6-1), this PGA would result in an Intensity Value of VII, strong shaking, seismic event.

Liquefaction, Lateral Spreading, and Settlement

Liquefaction is the rapid loss of shear strength experienced in saturated, predominantly granular soils below the groundwater level during strong earthquake groundshaking and occurs due to an increase in pore water pressure. Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore-pressure buildup or liquefaction in a shallow underlying deposit during an earthquake (VT 2013). The occurrence of this phenomenon is dependent on many complex factors, including the intensity and duration of groundshaking, particle-size distribution, and density of the soil.

The potential damaging effects of liquefaction include differential settlement, loss of ground support for foundations, ground cracking, heaving and cracking of structure slabs due to sand boiling, and buckling of deep foundations due to ground settlement. Dynamic settlement (i.e., pronounced consolidation and settlement from seismic shaking) may also occur in loose, dry sands above the water table, resulting in settlement of and possible damage to overlying structures. In general, a relatively high potential for liquefaction exists in loose, sandy soils that are within 50 feet of the ground surface and are saturated (below the groundwater table). Lateral spreading can move blocks of soil, placing strain on levees and roads that can lead to ground failure.

Settlement or densification of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid rearrangement, compaction, and settling of subsurface materials, particularly loose, uncompacted, and variable sandy sediments. Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Areas are susceptible to differential settlement if underlain by compressible sediments. Densification typically occurs in old fills and in soils that, if saturated, would be susceptible to liquefaction.

The geotechnical study concluded that the project site is not located within an area susceptible to liquefaction, lateral spreading, or settlement due to the absence of a permanently elevated groundwater table, the relatively low level of seismic activity in the area, and the relatively shallow depth to bedrock.

Paleontological Resources

The Society of Vertebrate Paleontology (SVP) has established standard guidelines that outline professional protocols and practices for conducting paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation (SVP, 2010). Most practicing professional vertebrate paleontologists adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines.

Paleontological sensitivity is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its "Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontologic Resources," the SVP defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential.

As previously discussed, the project site is underlain mostly by granitic bedrock with a small amount of metavolcanic rock. Neither of these geologic units would have any potential for paleontological resources. Although Holocene deposits (i.e., the surface soils at the project site) can contain remains of plants and animals, generally not enough time has passed for the remains to become fossilized. In addition, the project site soil is derived from the granite and metavolcanics, which would not have any paleontological resources. Finally, much of the project site has been heavily reworked during historical gold mining activities and the 1980's initial grading activities, which would have destroyed paleontological resources in the highly unlikely case that some had been present. Therefore, the soils at the project site are also considered to have no potential for paleontological resources.

Mineral Resources

In accordance with California's Surface Mining and Reclamation Act of 1975 (SMARA) (discussed in Section 4.6.2, *Regulatory Setting*, below), the state geologist, through the California Department of Conservation, California Geological Survey (CGS; formerly known as the

California Division of Mines and Geology [CDMG]), is responsible for identifying and mapping the non-fuel mineral resources of the state. Economically significant mineral deposits are classified based on the known and inferred mineral resource potential of the land using the California Mineral Land Classification System, which includes the following four mineral resource zones (MRZs).

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- **MRZ-3:** Areas containing mineral deposits, the significance of which cannot be evaluated.
- **MRZ-4:** Areas where available information is inadequate for assignment to any other zone.

The CGS's classification of lands at the project site focuses on significant metals (gold, copper, chromite, zinc, carbonate rock, and talc) deposits that have the potential to be economic resources (CDMG, 1983). The project site is within an area classified as MRZ-4, where the resources are listed as unknown. Neither the State of California nor the County have designated mineral resource recovery areas or preservation sites in the project vicinity (CDMG, et al., 1983; El Dorado County, 2004)

However, the site inspection conducted in 2019 for the Phase I environmental site assessment observed residual evidence of historical placer gold mining operations conducted in the late 1800s under an 1878 mining claim of Phillip Newton Hufft (ESA, 2019b). Stream water had been rerouted through surface levee works and surface depressions to separate the gold using water and gravity. This indicates that placer gold was present in the past but has been mined out. It is thus likely that the residual value of any potential deposits on the site are low. Consequently, the project site no longer has mineral resources of economic value.

4.6.3 Regulatory Setting

Federal

Clean Water Act

The federal Clean Water Act (CWA) and subsequent amendments, under the enforcement authority of the U.S. Environmental Protection Agency (USEPA), was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The purpose of the CWA is to protect and maintain the quality and integrity of the nation's waters by requiring states to develop and implement state water plans and policies. The CWA gave the USEPA the authority to implement pollution control programs such as setting wastewater standards for industry. In California, implementation and enforcement of the National Pollutant Discharge Elimination System (NPDES) program is conducted through the California State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs). The CWA also sets water quality standards for surface waters and established the NPDES program to protect water quality through various sections of the CWA, including

Sections 401 through 404 and 303(d) that are implemented and regulated by the SWRCB and the nine RWQCBs. Section 402 of the CWA would apply to the proposed project because the project would be required to control discharges of pollutants from point sources, as discussed below.

Section 402

The 1972 amendments to the Federal Water Pollution Control Act established the NPDES permit program to control discharges of pollutants from point sources (Section 402). The 1987 amendments to the CWA created a new section of the CWA devoted to stormwater permitting (Section 402[p]). The USEPA has granted the SWRCB primacy in administering and enforcing the provisions of CWA and NPDES through the local RWQCBs. NPDES is the primary federal program that regulates point-source and non-point-source discharges to waters of the United States.

The SWRCB issues both general and individual permits for discharges to surface waters, including for both point-source and non-point-source discharges. In response to the 1987 amendments, the US EPA developed the Phase I NPDES Storm Water Program for cities with populations larger than 100,000, and Phase II for smaller cities. In California, the SWRCB has drafted the General Permit for Discharges of Storm Water from Municipal Separate Storm Sewer Systems (MS4 General Permit). The project site would be under the Phase II MS4 permit, discussed further below.

National Pollutant Discharge Elimination System (NPDES) Permit

The NPDES permit system was established in the CWA to regulate municipal and industrial point discharges to surface waters of the U.S. Each NPDES permit for point discharges contains limits on allowable concentrations of pollutants contained in discharges. Section 402 of the CWA contain general requirements regarding NPDES permits.

The CWA was amended in 1987 to require NPDES permits for non-point source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a definable point. The goal of NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the “maximum extent practicable” through the use of structural and non-structural Best Management Practices (BMPs). BMPs can include the development and implementation of various practices including educational measures (workshops informing public of what impacts results when household chemicals are dumped into storm drains), regulatory measures (local authority of drainage facility design), public policy measures, and structural measures (filter strips, grass swales and detention ponds). The NPDES permits that apply to activities in El Dorado County are described under State and local regulations below.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to protect structures for human occupancy from the hazard of surface faulting. In accordance with the act, the State Geologist has established regulatory zones—called earthquake fault zones—around the surface traces of active faults, and has published maps showing these zones. Buildings for human

occupancy cannot be constructed across surface traces of faults that are determined to be active. Because many active faults are complex and consist of more than one branch that may experience ground surface rupture, earthquake fault zones extend approximately 200 to 500 feet on either side of the mapped fault trace. This act does not apply to the project because no active faults cross the project site.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize property damage caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones, and cities, counties, and other local permitting agencies to regulate certain development projects within these zones. For projects that would locate structures for human occupancy within designated Zones of Required Investigation, the Seismic Hazards Mapping Act requires project applicants to perform a site-specific geotechnical investigation to identify the potential site-specific seismic hazards and corrective measures, as appropriate, prior to receiving building permits. The *CGS Guidelines for Evaluating and Mitigating Seismic Hazards* (Special Publication 117A) provides guidance for evaluating and mitigating seismic hazards (CGS 2008). The CGS is in the process of producing official maps based on USGS topographic quadrangles. To date, the CGS has not completed a delineation for the USGS quadrangle in which project components are proposed.

California Building Code

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The 2019 edition of the CBC is based on the 2018 International Building Code (IBC) published by the International Code Council, which replaced the Uniform Building Code (UBC). The code is updated triennially, and the 2019 edition of the CBC was published by the California Building Standards Commission on July 1, 2019, and took effect starting January 1, 2020. The 2019 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-16, Minimum Design Loads for Buildings and Other Structures, provides requirements for general structural design and includes means for determining earthquake loads² as well as other loads (such as wind loads) for inclusion into

² A load is the overall force to which a structure is subjected in supporting a weight or mass, or in resisting externally applied forces. Excess load or overloading may cause structural failure.

building codes. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. The prescribed lateral forces are generally smaller than the actual peak forces that would be associated with a major earthquake. Consequently, structures should be able to (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some nonstructural damage; and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a structure designed in accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC ranges from A (very small seismic vulnerability) to E/F (very high seismic vulnerability and near a major fault). Seismic design specifications are determined according to the SDC in accordance with CBC Chapter 16. CBC Chapter 18 covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load-bearing of soils (Section 1806), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). For Seismic Design Categories D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

Requirements for geotechnical investigations are included in Appendix J, CBC Section J104, Engineered Grading Requirements. As outlined in Section J104, applications for a grading permit are required to be accompanied by plans, specifications, and supporting data consisting of a soils engineering report and engineering geology report. Additional requirements for subdivisions requiring tentative and final maps and for other specified types of structures are in California Health and Safety Code Sections 17953 to 17955 and in 2013 CBC Section 1802. Testing of samples from subsurface investigations is required, such as from borings or test pits. Studies must be done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

The design of the proposed homes and associated infrastructure would be required to comply with CBC requirements, which would make the proposed project consistent with the CBC.

California Excavation Notification Requirements

California Code of Regulations Section 4216 requires that construction contractors report a project that involves excavation 48-hours prior to breaking ground. This program allows owners of buried installations to identify and mark the location of its facilities before any nearby excavation projects commence. Adherence to this law by contractors of projects reduces the potential of inadvertent pipeline and utility damage and leaks. All contractors are required to comply with California excavation notification requirements, which would make the proposed project consistent with California excavation notification requirements.

California Occupational Safety and Health Administration Regulations

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. In California, the California Division of Occupational Safety and Health (Cal/OSHA) and the federal OSHA are the agencies responsible for ensuring worker safety in the workplace.

The OSHA Excavation and Trenching standard (29 CFR 1926.650) covers requirements for excavation and trenching operations, which are among the most hazardous construction activities. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area. Cal/OSHA is the implementing agency for both state and federal OSHA standards. All contractors are required to comply with OSHA regulations, which would make the proposed project would be consistent with OSHA.

NPDES Construction General Permit

Construction associated with the proposed project would disturb more than one acre of land surface affecting the quality of stormwater discharges into waters of the U.S. The proposed project would, therefore, be subject to the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb one acre or more of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a Risk Level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the receiving waters risk during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could potentially be discharged to receiving water bodies and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving waters risk level reflects the risk to the

receiving waters from the sediment discharge. Depending on the risk level, the construction projects could be subject to the following requirements:

- Effluent standards;
- Good site management “housekeeping;”
- Non-stormwater management;
- Erosion and sediment controls;
- Run-on and runoff controls;
- Inspection, maintenance, and repair; or
- Monitoring and reporting requirements.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving off site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

The SWPPP must be prepared before the construction begins. The SWPPP must contain a site map(s) that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project area. The SWPPP must list BMPs and the placement of those BMPs that the applicant would use to protect stormwater runoff. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing and fueling. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site following construction).

In the project area, the Construction General Permit is implemented and enforced by the Central Valley Regional Water Quality Control Board (RWQCB), which administers the stormwater permitting program within its region. Dischargers must electronically submit a notice of intent and permit registration documents to obtain coverage under this Construction General Permit.

Dischargers are to notify the RWQCB of violations or incidents of non-compliance, and submit annual reports identifying deficiencies in the BMPs and explaining how the deficiencies were corrected. The risk assessment and SWPPP must be prepared by a State Qualified SWPPP Developer, and implementation of the SWPPP must be overseen by a State Qualified SWPPP Practitioner. A legally responsible person, who is legally authorized to sign and certify permit registration documents, is responsible for obtaining coverage under the permit.

NPDES MS4 Permit

Discharges of stormwater runoff from MS4s are regulated under the state Municipal Regional Stormwater NPDES Permit (MRP), under Water Quality Order No. 2013-0001; NPDES Permit No. CAS000004, issued by the SWRCB. The SWRCB and the individual RWQCBs implement and enforce the MRP. Multiple municipalities, including El Dorado County, are co-permittees.

New and redevelopment projects that create or replace 10,000 square feet or more of impervious surface area are required to implement site design, source control, and Low Impact Development–based stormwater treatment controls to treat post-construction stormwater runoff. Low Impact Development–based treatment controls are intended to maintain or restore the site’s natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and for using stormwater as a resource (e.g., rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures be properly installed, operated, and maintained.

In addition, the MRP requires new development and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, generate silt pollutants, or cause other impacts on local rivers, streams, and creeks.

To comply with the MS4 permit, El Dorado County developed and implemented the West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements, discussed further below.

Public Resources Code Sections 5097.5 and 30244

California Public Resources Code (PRC) Sections 5097.5 and 30244 specify state requirements for paleontological resource management. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, defining their removal as a misdemeanor. PRC Sections 5097.5 and 30244 require reasonable mitigation of adverse impacts on paleontological resources from developments on public (state, county, city, district) lands.

Surface Mining and Reclamation Act of 1975

SMARA (CCR, Title 14, Division 2, Chapter 8, Subchapter 1) requires the State Mining and Geology Board (SMGB) to adopt state policies that regulate the operation of surface mines, the reclamation of mined lands, and the conservation of mineral resources. In accordance with SMARA, the State of California established the Mineral Land Classification System to help identify and protect mineral resources in areas that are subject to urban expansion or other

irreversible land uses that would preclude mineral extraction. Protected mineral resources include construction materials, industrial and chemical mineral materials, metallic and rare minerals, and non-fluid mineral fuels. The proposed project would be consistent with SMARA because the proposed project is not located on land with known mineral resources.

Regional and Local

El Dorado County Subdivision Ordinance

The County's Subdivision Ordinance (El Dorado County Code Title 120) requires drainage plans to be submitted prior to the approval of tentative maps for proposed subdivision projects. The drainage plans must include an analysis of upstream, onsite, and downstream facilities and pertinent details, as well as details of any necessary offsite drainage facilities. The tentative map must include data on the location and size of proposed drainage structures. In addition, drainage culverts consistent with the drainage plan may be required in all existing drainage courses, including roads.

Grading, Erosion, and Sediment Control Ordinance

The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance; Chapter 15.14 of the County Code) establishes provisions for public safety and environmental protection associated with grading activities on private property. The Grading Ordinance requires the intended land use be consistent with the El Dorado County General Plan, the adopted Storm Water Management Plan, California Fire Safe Standards, and applicable El Dorado County ordinances including the Zoning Ordinance and the California Building Code. The Grading Ordinance prohibits grading activities that would cause flooding where it would not otherwise occur or would aggravate existing flooding conditions. The Grading Ordinance also requires all drainage facilities, aside from those in subdivisions that are regulated by the County's Subdivision Ordinance, be approved by the County Transportation Division. Pursuant to the ordinance, the design of the drainage facilities in the county must comply with the County of El Dorado Drainage Manual.

County of El Dorado Design and Improvement Standards Manual

The County's Design and Improvement Standards Manual was adopted in 1990 and revised through 2007. This Manual identifies required erosion and sediment control measures that are applicable to subdivisions, roadways, and other types of developments. The purpose of the Design and Improvement Standards Manual is to standardize development practices used in the hillside environment that is prevalent in El Dorado County and to minimize the environmental effects of construction.

Volume II of the manual includes drainage and design criteria for stormwater and Volume III of the manual provides guidance on how to implement the erosion and sediment control standards in Chapter 15.14 of the El Dorado County Code of Ordinances. Specifically, Volume III: Grading, Erosion and Sediment Control describes the criteria for determining whether an erosion and sediment control plan is required. When an erosion and sediment control plan is required, it must comply with the standards described in the Manual and with the adopted Western El Dorado County Stormwater Management Plan (County SWMP).

County of El Dorado Drainage Manual

The Drainage Manual, adopted in 1995 and revised in 2007, provides standard procedures for future designs of drainage improvements. The Drainage Manual supersedes the stormwater drainage system design standards in the County's Design Improvements Standards Manual. The Drainage Manual requires that a hydrologic and hydraulic analysis be submitted for all proposed drainage facilities. The analysis must include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. This analysis is usually required on projects undergoing discretionary review. However, under the Building Code and Grading Ordinance, the County also reviews ministerial development, including required drainage plans, to ensure that appropriate runoff design and controls are in place.

The final analysis would include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. The analysis would address the following topics.

- A calculation of pre-development runoff conditions and post-development runoff scenarios using appropriate engineering methods. This analysis would evaluate potential changes to runoff through specific design criteria, and account for increased surface runoff.
- An assessment of existing drainage facilities within the project area, and an inventory of necessary upgrades, replacements, redesigns, and/or rehabilitation, including the sizing of onsite stormwater detention features and pump stations.
- A description of the proposed maintenance program for the onsite drainage system.
- Standards for drainage systems to be installed on a project- or parcel-specific basis.
- Proposed design measures to ensure structures are not located within 100-year floodplain areas.

Drainage systems must be designed on a site-specific basis in accordance with the findings of the studies and County requirements. As a performance standard, measures to be implemented would provide for no net increase in peak stormwater discharge relative to current conditions to ensure that 100-year flooding and its potential impacts are maintained at or below current levels and that people and structures are not exposed to additional flood risk.

Stormwater Management Plan and Stormwater Quality Ordinance

The Western El Dorado County SWMP was adopted by the County in 2004 as a means of compliance with the then-applicable Small MS4 Permit. In May 2015, the County adopted a County-Wide Storm Water Ordinance (Ordinance No. 5022) to ensure compliance with the new Small MS4 permit requirements in the entire unincorporated County. Chapter 8.79 of the County Code contains the stormwater regulations, which establishes the County's authority to implement and enforce the Stormwater Management Plan and to ensure compliance with state and federal stormwater laws and regulations. It also sets forth requirements that development projects

incorporate BMPs to control the volume, rate, and potential pollutant loading of stormwater runoff. As provided by Section 8.79.150.G, the required BMPs may be contained in any land use entitlement, conditions of approval, grading plans, improvement plans, or any construction or building-related permit to be issued relative to such development. The requirements became effective in June 2015. The West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements discussed below provide details of the applicability and requirements.

West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements

The West Slope Development and Redevelopment Standards provide the requirements to comply with the MS4 permit. The proposed project would be a Type 5 regulated project, which includes projects that create 5,000 square feet or more of new impervious surface, and require hydromodification management. The requirements include the following:

- Implement and direct water to one or more site design measures (BMPs).
- Remaining runoff from the 85th percentile 24-hour storm event (~1.13 inches of water) shall be directed to one or more storm water treatment and baseline hydromodification measures using volumetric and/or flow-based sizing criteria.
- Verification showing post project flows will not exceed pre-project flow rate for the 2-year, 24-hour storm (can be included in a Drainage Report). Alternatively, the Permittee may use a geomorphically based hydromodification standard or set of standards and analysis procedures designed to ensure that Regulated Projects do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. The alternative hydromodification standard or set of standards and analysis procedures must be reviewed and approved by the Regional Board Executive Officer.
- Identify potential sources of pollutants and implement corresponding source control measures using CASQA Source Control BMP Fact Sheets.
- Provide ongoing maintenance of water retention and treatment facilities.

El Dorado County General Plan

The El Dorado County General Plan provides County-wide policies for regulating land use, development, and conservation in the County. The Public Health, Safety, and Noise Element of the general plan includes policies pertaining to land use in areas where naturally occurring asbestos may be encountered and in areas where seismic and other geologic hazards may be a planning and development concern. The Conservation and Open Space Element discusses significant natural resources in the County, including geology and soils, and establishes goals, objectives, and policies related to these topics. Policies relevant to geology and soils in the El Dorado County General Plan include:

Public Health, Safety, and Noise Element

Goal 6.3: Geologic and Seismic Hazards - Minimize the threat to life and property from seismic and geologic hazards.

Objective 6.3.2: County-Wide Seismic Hazards - Continue to evaluate seismic related hazards such as liquefaction, landslides, and avalanche, particularly in the Tahoe Basin.

Policy 6.3.2.1: The County shall maintain updated geologic, seismic and avalanche hazard maps, and other hazard inventory information in cooperation with the State Office of Emergency Services, California Department of Conservation-Division of Mines and Geology, U.S. Forest Service, Caltrans, Tahoe Regional Planning Agency, and other agencies as this information is made available. This information shall be incorporated into the El Dorado County Operational Area Multi-Hazard Functional Emergency Operations Plans.

Policy 6.3.2.5: Applications for development of habitable structures shall be reviewed for potential hazards associated with steep or unstable slopes, areas susceptible to high erosion, and avalanche risk. Geotechnical studies shall be required when development may be subject to geological hazards. If hazards are identified, applicants shall be required to mitigate or avoid identified hazards as a condition of approval. If no mitigation is feasible, the project will not be approved.

Conservation Element

Goal 7.1: Soil Conservation - Conserve and protect the County's soil resources.

Objective 7.1.1: Erosion/Sedimentation - Minimize soil erosion and sedimentation.

Policy 7.1.2.1: Development or disturbance of slopes over 30% shall be restricted. Standards for implementation of this policy, including but not limited to exceptions for access, reasonable use of the parcel, and agricultural uses shall be incorporated into the Zoning Ordinance.

Policy 7.1.2.2: Discretionary and ministerial projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation. Specific standards for minimizing erosion and sedimentation shall be incorporated into the Zoning Ordinance.

Policy 7.1.2.3: Enforce Grading Ordinance provisions for erosion control on all development projects and adopt provisions for ongoing, applicant-funded monitoring of project grading.

Goal 7.2: Mineral Resources - Conserve of the County's significant mineral resources.

Objective 7.2.1: Identification of the County's important mineral resources.

Policy 7.2.1.1: In accordance with California Code of Regulations, Sections 3675-3676, the County shall maintain all Mineral Land Classification reports produced by the State Department of Conservation, California Geological Survey, which pertain

to El Dorado County. El Dorado County hereby recognizes, accepts, and adopts by reference those State Classification Reports as they currently exist and as may be amended, or supplemented, in the future.

Policy 7.2.1.2: Areas designated as Mineral Resource (-MR) overlay on the General Plan Land Use Map shall be identified by the Mineral Resource (-MR) combining zone district on the zoning maps when the likely extraction of the resource through surface mining methods will be compatible with adjacent land uses as determined by Policy 7.2.2.2.

Policy 7.2.1.3: The County shall utilize the most recent State Department of Conservation assessment of the location and value of non-metallic mineral materials. The County shall zone them and the surroundings to allow for mineral resource management.

4.6.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The criteria used to determine the significance of impacts related to geology, soils, mineral, and paleontological resources are based on Appendix G of the *CEQA Guidelines*. The proposed project would result in a significant impact to geology, soils, mineral, and paleontological resources if it would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - 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
 - Strong seismic ground shaking
 - Seismic-related ground failure, including liquefaction
 - Landslides
- Result in substantial soil erosion or the loss of topsoil;
- 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 onsite or offsite landslide, lateral spreading, subsidence (i.e., settlement), liquefaction, or collapse;
- Be located on expansive³ or corrosive⁴ soil creating direct or indirect substantial risks to life or property;
- Have soils incapable of adequately supporting the use of septic tanks or alternative reclaimed water disposal systems where sewers are not available for the disposal of reclaimed water;

³ The CBC, based on the International Building Code and the now defunct Uniform Building Code, no longer includes a Table 18-1-B. Instead, Section 1803.5.3 of the CBC describes the criteria for analyzing expansive soils.

⁴ The list of significance criteria in Appendix G do not include corrosive soils. However, the preliminary geotechnical investigation identified corrosive soils a potential issue, which are included for analysis here.

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; and
- 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 or 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.

Methodology and Assumptions

General

This environmental analysis of the potential impacts related to geology, soils, mineral, and paleontological resources is based on a review of the results of the site-specific geotechnical study, the drainage and stormwater quality study, a review of published reports and maps, and the El Dorado County General Plan.

The proposed project would be regulated by the various laws, regulations, and policies summarized above in Section 4.6.3, *Regulatory Setting*. Compliance by the proposed project with applicable federal, state, and local laws and regulations is assumed in this analysis and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. It should be noted that compliance with many of the regulations is a condition of permit approval.

The structural elements of the proposed project would undergo appropriate design-level geotechnical evaluations prior to final design and construction. Implementing the regulatory requirements in the CBC and County ordinances and ensuring that all buildings and structures constructed in compliance with the law is the responsibility of the project engineers and building officials. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care for the particular region in California, which, in the case of the proposed project, is El Dorado County.⁵ The California Professional Engineers Act (Building and Professions Code Sections 6700-6799), and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. The local Building Officials are typically with the local jurisdiction (i.e. El Dorado County) and are responsible for inspections and ensuring CBC compliance prior to approval of building and occupancy permits.

A significant impact would occur if, after considering the features described in Section 3.0, *Project Description*, and the required compliance with regulatory requirements, a significant impact would still occur. For those impacts considered to be significant, mitigation measures are proposed to reduce the identified impacts.

⁵ A geotechnical engineer (GE) specializes in structural behavior of soil and rocks. GEs conduct soil investigations, determine soil and rock characteristics, provide input to structural engineers, and provide recommendations to address problematic soils.

Geotechnical Engineering Study

To inform the project design, a geotechnical engineering study (also referred to as a preliminary geotechnical investigation) was conducted to investigate site conditions and identify potential geotechnical issues, as discussed above in Section 4.6.2, *Environmental Setting* (YoungDahl, 2018). To address potential geotechnical issues, the geotechnical study provided the relevant preliminary geotechnical recommendations listed below; additional details are provided in the geotechnical study. The recommendations would be further developed in the final geotechnical investigation required by the CBC.

- **Seismic design criteria:** According to the 2016 CBC criteria used in the preliminary geotechnical investigation, site structures should be designed to consider a PGA of 0.181 g. Note that the CBC has been updated to a 2019 version. The final design will need to calculate the PGA and other seismic design criteria in accordance with the current version of the CBC.
- **Foundations:** Foundations should be placed on firm native soils, bedrock, or engineered fills. Foundations should never be placed on soils that are soft, loose, or that contain organic materials, slough, or debris. All footing and stemwall backfill should be compacted to 90 percent of the maximum dry density.
- **Site wall drainage:** All grades should provide for rapid removal of surface water runoff with positive drainage away from foundations. Drainage devices should be able to accept 100-year storm event flows. A blanket of permeable filter materials should be placed behind all walls to facilitate drainage. The materials should be 12 inches thick and should extend from the bottom of the wall to within 12 inches of the ground surface. A 4-inch-diameter drain pipe should be installed near the bottom of the filter material with adequate gradient to facilitate drainage.
- **Drainage next to slabs:** All grades should provide for rapid removal of surface water runoff with positive drainage away from foundations. If overland flow is not achieved adjacent to buildings, drainage devices should be able to accept 100-year storm event flows. All soils placed against foundations should be compacted to minimize infiltration. Downspouts should be tight-piped via an area drain network and discharged to an appropriate non-erosive outlet away from all foundations.

Drainage and Stormwater Study

The addition of houses and hardscape (e.g., sidewalks, road pavement) would increase the impervious area within the project site by more than one acre and is therefore required to provide storm water treatment for the 85th percentile storm event (D&A, 2018). A drainage and storm water quality analysis was conducted based on the project design (D&A, 2018). The study concluded that the proposed infrastructure is sufficient to serve the planned development. The study conducted modeling using the U.S. Army Corps of Engineers HEC-HMS program that simulates hydrologic processes. The input parameters considered the topography of the project site, the points of compliance (i.e., the locations where surface water would exit the project site), the soil types, the volume and extents of new impervious surfaces, and the proposed water quality swales and basins. The analysis was conservative because it did not consider the water quality treatment (i.e., Low-Impact Development or LID) measures described in Section 3.4, *Project Components*. In addition to detention basins, the new stormwater management system would include water quality treatment measures to control the quality of stormwater runoff from the site

prior to discharge to the surrounding waters. Typical measures could include bio-filtration planters, bio-filtration basins, infiltration areas, permeable paving, localized rainwater harvesting, where feasible, and other treatment measures as approved by the County.

Issues Not Discussed in Impacts

Due to the nature of the project and based on the site conditions as discussed in Section 4.6.2, *Environmental Setting*, there would be no impact related to the following topics for the reasons described below:

- ***Risk of loss, injury, or death involving fault rupture.*** The proposed project would not directly or indirectly cause or expose people or structures to injury, death, or damage from fault rupture because none of the components intersect any active faults, as determined by CGS mapping performed in accordance with the Alquist-Priolo Earthquake Fault Zoning Act. Therefore, this significance criterion is not applicable to the proposed project and is not discussed further.
- ***Have soils incapable of adequately supporting use of septic tanks or alternative wastewater disposal systems.*** The project would not use septic tanks or other onsite wastewater disposal systems. Therefore, there would be no impact related to the adequacy of soils to support such systems. This significance criterion is not applicable to the proposed project and is not discussed further.
- ***Directly or indirectly destroy unique paleontological or unique geological resources.*** The project site is not located in an area with paleontological resources. The granite and metavolcanics on the site are not unique geological resources. Therefore, there would be no impact related to paleontological or unique geological resources. This significance criterion is not applicable to the proposed project and is not discussed further.
- ***Loss of mineral resources.*** The project site is not located in an area with mineral resources. The historic gold rush activities on the site removed economically valuable gold, and any residual values would be low. Therefore, there would be no impact related to mineral resources. This significance criterion is not applicable to the proposed project and is not discussed further.

Impacts and Mitigation Measures

Strong Seismic Ground Shaking

Impact 4.6-1a: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic groundshaking. (*Less than Significant Impact*)

As discussed above in Section 4.6.2, *Environmental Setting*, the region will likely experience a regional earthquake within the operational life of the project. There is a potential for strong intensity groundshaking at the project site that would be associated with such an earthquake. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the magnitude, the duration of shaking, and the nature of the geologic materials on which the project components would be constructed. Intense groundshaking and high ground accelerations would affect the entire project site.

Construction

Construction activities would be temporary, and thus, are not anticipated to exacerbate the exposure of people or structures to substantial adverse effects involving seismic hazards. In addition, the proposed project would not exacerbate the potential for causing earthquakes because the project does not include the injection or extraction of groundwater or oil. Therefore, relative to seismicity during construction, the impact would be **less than significant**.

Operation

As discussed above in Section 4.6.3, *Regulatory Setting*, the CBC and local ordinances require that the structural elements of the proposed project undergo appropriate design-level geotechnical evaluations prior to final design and construction. The geotechnical investigation would include any necessary recommendations for soils remediation and/or foundation systems necessary to reduce seismic shaking hazards to less than significant. The preliminary geotechnical recommendations are discussed above in Section 4.6.4, *Environmental Impacts and Mitigation Measures, Geotechnical Engineering Study*. The CBC and local ordinances would require the preparation of a final geotechnical investigation that would provide the final seismic design criteria.

Implementing the regulatory requirements in the CBC and county ordinances, and ensuring that buildings and structures are constructed in compliance with the law is the responsibility of the project engineers and building officials. The CBC and county ordinances describe required standards for the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California. The standards include earthquake design requirements that determine the seismic design category and then describe the structural design requirements. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care for the particular region in California, which, in the case of the proposed project, would be El Dorado County. The California Professional Engineers Act (Building and Professions Code Sections 6700–6799), and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. The local building officials are typically with the local jurisdiction (i.e., the County) and are responsible for inspections and ensuring CBC and local code compliance prior to approval of the building permit.

As previously discussed, the geotechnical investigations would include recommendations to address geotechnical issues due to seismic shaking. With compliance with the regulatory requirements and the implementation of geotechnical design recommendations, impacts relative to seismic shaking and seismically induced ground failure during operations would be **less than significant**.

Mitigation Measures

None required.

Seismic-Related Ground Failure

Impact 4.6-1b: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction and landslides. (*Less than Significant Impact*)

As discussed above in Section 4.6.2, *Environmental Setting*, and Impact 4.6-1a, the region will likely experience a regional earthquake within the operational life of the project. Intense groundshaking and high ground accelerations would affect the entire project site, including existing geologic units susceptible to seismic-related ground failure, including liquefaction, lateral spreading, and landslides.

Construction

Construction activities would be temporary, and thus, are not anticipated to exacerbate the exposure of people or structures to substantial adverse effects involving seismic-related ground failure, including liquefaction and landslides. Therefore, relative to seismic-related ground failure during construction, the impact would be **less than significant**.

Operation

As discussed above in Section 4.6.2, *Environmental Setting*, the geotechnical study concluded that site soils would not be susceptible to liquefaction, lateral spreading, or landslides.

In addition, and as previously discussed, the CBC and local ordinances would require that the structural elements of the proposed project would undergo appropriate design-level geotechnical evaluations prior to final design and construction. The geotechnical investigation would include any necessary recommendations for soils remediation and/or foundation systems necessary to reduce seismic-related ground failure hazards to less than significant. The geotechnical investigations would include recommendations to address geotechnical issues, including seismically induced ground failures. With compliance with the regulatory requirements and the implementation of geotechnical design recommendations, impacts relative to seismically induced ground failure during operations would be **less than significant**.

Mitigation Measures

None required.

Soil Erosion or Topsoil Loss

Impact 4.6-2: The proposed project would not result in substantial soil erosion or the loss of topsoil. (*Less than Significant Impact, with Mitigation*)

As discussed above in Section 4.6.2, *Environmental Setting*, the project site has slopes that range from 1.7 to 26.4 percent, which are considered relatively stable with the onsite materials. However, construction grading activities and ineffective surface water drainage after construction would have the potential to result in erosion and loss of topsoil.

Construction

Construction of the proposed project would have the potential to result in soil erosion during excavation, grading, and soil stockpiling. Because the overall footprint of construction activities would exceed one acre, the proposed project would be required to comply with the *NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ) (Construction General Permit) and the local stormwater ordinances, which are described above in Section 4.6.3, *Regulatory Setting*. In addition, local regulations also require the preparation and implementation of an Erosion Sediment Control Plan. These state and local requirements were developed to ensure that stormwater is managed and erosion is controlled on construction sites. The Construction General Permit requires preparation and implementation of a SWPPP, which requires applications of BMPs to control runoff and runoff from construction work sites. The BMPs would include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. With compliance with existing regulations, impacts associated with soil erosion during construction would be **less than significant**.

Operation

As summarized in Section 4.6.3, *Environmental Impacts and Mitigation Measures, Methodology, Drainage and Stormwater Study*, the project design without the inclusion of LID storm water control measures is sufficient to satisfactorily treat and convey stormwater within the proposed drainage facilities without damage to structures or downstream receiving waters. In addition, and as discussed in Section 3.4, *Project Components, Stormwater*, additional LID measures would be constructed to control the quality of stormwater runoff from the site prior to discharge to the surrounding waters. Typical measures could include tree planting, disconnected impervious areas, bioretention facilities and a vegetated swale (e.g., bio-filtration planters, bio-filtration basins, infiltration areas), permeable paving, localized rainwater harvesting, where feasible, and other treatment measures as approved by the County. As discussed in Section 4.6.3, *Regulatory Setting*, the regional MS4 permit and the local ordinances and regulations implemented to comply with the MS4 permit would require the implementation of LID measures to control stormwater runoff and protect water quality as a condition of permits for the project. With compliance with existing regulations and geotechnical design recommendations, impacts associated with soil erosion and loss of topsoil during operations would be **less than significant**.

The drainage study (D&A 2018) summarized above in Methodology provided some analysis of drainage. However, the drainage study did not include an analysis to verify that post project flows will not exceed pre-project flow rate for the 2-year, 24-hour storm. If the post-project flow rate were to exceed the pre-project flow rate, this would be a **significant** impact. To completely address this potential impact, the project applicant shall implement **Mitigation Measure 4.6-2: 2-Year, 24-Hour Storm Evaluation**, to reduce the impacts to less than significant with mitigation.

Mitigation Measures

Mitigation Measure 4.6-2: 2-Year, 24-Hour Storm Evaluation – The project applicant shall conduct a study that verifies that post project flows will not exceed pre-project flow rate for the 2-year, 24-hour storm. The study shall be in accordance with the requirement of the County’s West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan.

Significance After Mitigation

Implementation of Mitigation Measure 4.6-2 would ensure that the project’s post-project flows would not exceed its pre-project flows. After mitigation, the project’s impact would be **less than significant**.

Unstable Geologic Units

Impact 4.6-3: The proposed project is not 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. (*Less than Significant Impact*)

Construction

Construction activities would be temporary, and thus, are not anticipated to be affected by landslides, lateral spreading, subsidence, liquefaction, or collapse until after construction is complete. Therefore, relative to unstable geologic or soil units during construction, the impact would be **less than significant**.

Operation

As discussed above in Section 4.6.2, *Environmental Setting*, the geotechnical study concluded that site soils would not be susceptible to landslides, liquefaction and lateral spreading, subsidence or collapse. The slopes at the site are relatively shallow and thus not susceptible to landslides. The geotechnical study concluded that the site is not susceptible to liquefaction or lateral spreading because the site does not have a permanently elevated groundwater table, the area has a relatively low level of seismic activity, and the depth to bedrock is relatively shallow. The site would not be susceptible to subsidence or collapse because the project does include the injection or extraction of groundwater or oil. Impacts associated with unstable geologic or soil units during operations would be **less than significant**.

Mitigation Measures

None required.

Expansive or Corrosive Soil

Impact 4.6-4: The proposed project could be located on expansive or corrosive soil creating substantial direct or indirect risks to life or property. (*Less than Significant Impact*)

Construction

Construction activities would be temporary, and thus, are not anticipated to be affected by expansive or corrosive soils until after construction is complete. Therefore, relative to expansive or corrosive soils during construction, the impact would be **less than significant**.

Operation

As discussed above in Section 4.6.2, *Environmental Setting, Expansive Soils*, the geotechnical study encountered non-plastic materials that would not be potentially expansive. Therefore, the impact relative to expansive soils would be **less than significant**.

As discussed above in Section 4.6.1, *Environmental Setting, Corrosive Soils*, the geotechnical study tested soils for the potential for corrosion. The results indicate the soils are potentially corrosive to unprotected steel and not potentially corrosive to concrete. The geotechnical study recommended that a certified corrosion engineer be retained to develop recommendations in accordance with CBC standards. This requirement would be included as part of the final geotechnical investigation, as required by the CBC and local ordinances. With the implementation of the geotechnical recommendation and compliance with the CBC and local ordinances requiring implementation of geotechnical recommendations, the impact relative to corrosive soils would be **less than significant**.

Mitigation Measures

None required.

Cumulative Impacts

Impact 4.6-5: Concurrent construction and operation of the proposed project and related projects in the geographic scope would not result in cumulative impacts to geology and soils. (*Less than Significant Impact*)

This section presents an analysis of the cumulative effects of the proposed project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. As previously discussed, the proposed project would have no impact with respect to being located on an active fault, septic tanks and alternate wastewater disposal systems, paleontological resources, or mineral resources. Accordingly, the proposed project could not contribute to cumulative impacts related to these topics and are not discussed further.

The geographic area affected by the proposed project and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. The geographic scope of analysis for cumulative geologic impacts encompasses and is limited to the project site and its immediately adjacent area. This is because impacts relative to geologic hazards are generally site-specific. For example, the effect of erosion would tend to be limited to the localized area of a

project and could only be cumulative if erosion occurred as the result of two or more adjacent projects that spatially overlapped.

The timeframe during which proposed project could contribute to cumulative geologic hazards includes the construction and operations phases. For the proposed project, the operations phase is permanent. However, similar to the geographic limitations discussed above, it should be noted that impacts relative to geologic hazards are generally time-specific. Geologic hazards could only be cumulative if two or more geologic hazards occurred at the same time, as well as overlapping at the same location.

Significant cumulative impacts related to geologic hazards could occur if the incremental impacts of the proposed project combined with the incremental impacts of one or more of the three cumulative projects identified in Chapter 4.0, *Environmental Setting, Impacts, and Mitigation Measures, Cumulative Impacts*, to substantially increase risk that people or the environment would be exposed to geologic hazards. The cumulative projects include El Mirage Plaza (2 miles to the northwest), El Dorado Senior Village (1.5 miles to the west), Shinn Ranch (3.5 miles to the west), Indian Creek Ranch (about 5 miles to the northwest), and Diamond Village Apartments and Piedmont Oak Estates, both about 1.25 miles to the northeast. Given these distances, the proposed project could not combine with the cumulative projects to result in a cumulatively considerable effect relative to seismic shaking, seismic-related ground failures, unstable geologic units, or expansive or corrosive soils.

If the projects are constructed at the same time, the erosion effects could be cumulatively significant. However, the state Construction General Permit would require each project to prepare and implement a SWPPP. The SWPPPs would describe BMPs to control runoff and prevent erosion for each project. Through compliance with this requirement, the potential for erosion impacts would be reduced. The Construction General Permit has been developed to address cumulative conditions arising from construction throughout the state, and is intended to maintain cumulative effects of projects subject to this requirement below levels that would be considered significant. For example, two adjacent construction sites would be required to implement BMPs to reduce and control the release of sediment and/or other pollutants in any runoff leaving their respective sites. The runoff water from both sites would be required to achieve the same action levels, measured as a maximum amount of sediment or pollutant allowed per unit volume of runoff water. Thus, even if the runoff waters were to combine after leaving the sites, the sediments and/or pollutants in the combined runoff would still be at concentrations (amount of sediment or pollutants per volume of runoff water) below action levels and would not be cumulatively considerable (**less than significant**).

During operations, the proposed project and the cumulative projects would be required to comply with the County MS4 requirements described in the West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements (see Section 4.6.3, *Regulatory Setting*). These requirements require managing storm water runoff through the use of storm water retention and treatment measures as part of LID requirements. The runoff water from the cumulative sites would be required to achieve the same level of storm water

management as the proposed project and impacts would not be cumulatively considerable (**less than significant**).

Mitigation Measures

None required.

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4.7 Hazards and Hazardous Materials

4.7.1 Introduction

This section evaluates the potential for the proposed project to result in adverse impacts related to hazards and hazardous materials. The analysis is based on review of site-specific Phase I environmental site assessments and available reports and regulatory records, relevant regulations, and a discussion of the methodology and thresholds used to determine whether the proposed project would result in significant impacts. This section analyzes the potential for both project-level and cumulative environmental impacts.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Comments relevant to hazards and hazardous materials included concerns regarding the increase in potential wildfires and emergency access due to increased traffic. Issues and impact analysis concerning wildfires are presented in Section 4.16, *Wildfire*.

Phase I Environmental Site Assessments were prepared for the Dorado Oaks Tentative Subdivision Map Site (ESA, 2019a) and the State Route 49 Intersection Area and the Optional Fowler Lane Improvement Area (ESA, 2019b). These documents are included with this EIR as **Appendix F**. The information provided in the Environmental Setting summarized below incorporates results of these investigations unless otherwise cited.

4.7.2 Environmental Setting

Definitions of Hazardous Materials

Definitions of terms used in this discussion's characterization of baseline conditions, the regulatory framework, and impact analysis for hazards and hazardous materials are provided below.

Hazardous Material

The term "hazardous material" can have varying definitions depending on the regulatory programs. For the purposes of this EIR, the term refers to both hazardous materials and hazardous wastes. The California Health and Safety Code Section 25501(p) defines hazardous material as: Hazardous material means any material that because of its quantity, concentrations, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Hazardous Waste

A “hazardous waste” is a waste that because of its quantity, concentration, or physical, chemical, or infectious characteristic, causes or significantly contributes to an increase in mortality or illness or poses substantial or potential threats to public health or the environment (42 U.S.C. 6903(5)). Hazardous wastes are further defined under the Resource Conservation and Recovery Act (RCRA) as substances exhibiting the characteristics of ignitability, reactivity, corrosivity, or toxicity. Chemical-specific concentrations used to define whether a material is a hazardous, designated, or nonhazardous waste include Total Threshold Limit Concentrations (TTLCs), Soluble Threshold Limit Concentrations (STLCs), and Toxic Characteristic Leaching Procedure (TCLPs), listed in CCR Title 22, Chapter 11, Article 3, Section 66261, and used as waste acceptance criteria for landfills. Waste materials with chemical concentrations above TTLCs, STLCs, and TCLPs must be sent to Class I disposal facilities, may be sent to Class II disposal facilities depending on the waste material, and may not be sent to Class III disposal facilities.

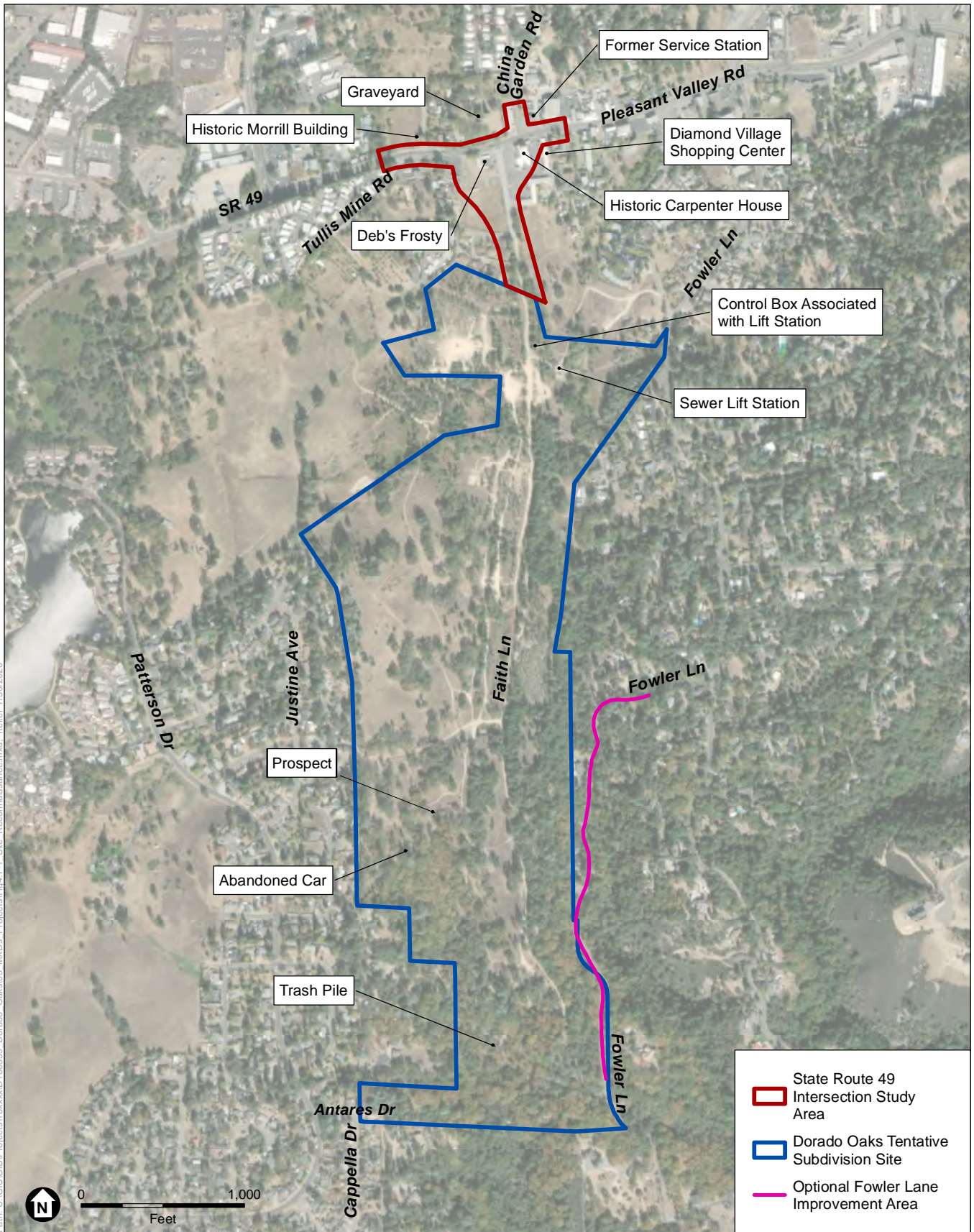
Screening Levels for Hazardous Materials in Soil, Soil Gas, or Groundwater

The San Francisco Bay Area Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) are guidelines used to evaluate the potential risk associated with chemicals found in soil or groundwater where a release of hazardous materials has occurred. Although developed and maintained by the San Francisco Bay Area RWQCB, ESLs are used by regulatory agencies throughout the state. Screening levels have been established for both residential and commercial/industrial land uses, and for construction workers. Residential screening levels are the most restrictive; soil with chemical concentrations below these levels generally would not require remediation and would be suitable for unrestricted uses if disposed of offsite.

Onsite Conditions

Phase I environmental site assessments were conducted in 2019 to evaluate the project site for potential hazardous materials issues. Since the Dorado Oaks Tentative Subdivision Map Site, the State Route 49 Intersection Area, and the Optional Fowler Lane Improvement Area are generally contiguous with one another, this analysis refers to all of them collectively as “the project site,” except where specific call-outs are warranted. The subdivision portion of the site consists mostly of conifer, oak, and brush forest, and some open grassy areas. The majority of the subdivision portion of the site has a highly disturbed topography from placer mining activities in the late 1800s and a development effort during the 1980s that did not proceed beyond some initial grading. The site reconnaissance observations discussed below are from the north to the south, with items of interest noted on **Figure 4.7-1**.

The State Route 49 Intersection Area of the site consists of State Route 49, the paved portion of Faith Lane that extends from State Route 49 south into the project site, and the Diamond Village shopping center along the east side of the paved road section. This shopping center consists of various commercial retail outlets; no industrial or manufacturing facilities were observed. Deb’s Frosty, a fast food outlet, is located along the west side of Faith Lane. Hazardous materials use for these commercial facilities would be limited to small household quantities of cleaning solutions. A buried sewer line is located under Faith Lane and various utilities are buried under State Route 49.



SOURCE: USDA, 2016; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.7-1
Phase I Site Reconnaissance Observations



One former service station was previously located at the north end of the project site at 493 Main Street (now Pleasant Valley Road/State Route 49) and is listed on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Two 500-gallon gasoline USTs were removed in 1992. The USTs had numerous holes and the surrounding soil and groundwater was contaminated with gasoline. Although the RWQCB issued a No Further Action (NFA) letter in 1996, the NFA letter states that contaminated soil and groundwater are present along the south side of the former service station site extending south to beneath State Route 49, which would be within the northern part of the project site. Soil samples from the south wall of the UST excavation facing State Route 49 had 540 milligrams per kilograms (mg/kg) of total petroleum hydrocarbons (TPH) as gasoline, 1.4 mg/kg of toluene, 2.2 mg/kg of ethylbenzene, and 11 mg/kg of xylenes. Soil samples collected further south and closer to State Route 49 had 260 to 1,400 mg/kg of TPH as gasoline, 0.49 to 3.8 mg/kg of toluene, non-detect to 16 mg/kg of ethylbenzene, and 3.0 to 86 mg/kg of xylenes. In addition, groundwater collected from the excavation pit had 40 micrograms per liter (ug/L) of TPH as gasoline, 500 ug/L of benzene, 1,200 ug/L of toluene, 410 ug/L of ethylbenzene, and 3,000 ug/L of xylenes. The RWQCB concluded that contaminated soil and groundwater extends to an unknown distance beneath State Route 49. It is unknown whether the soil and groundwater contamination extends further south. The available records did not include maps showing the location of the USTs or contamination. Almost all of the above-listed chemical concentrations exceeded ESLs for residential use.

The El Dorado Irrigation District sewer lift station is located about 1,460 feet south of State Route 49 (see Figure 4.7-1). A raw sewage leak was reported on December 16, 1994 at the sewer lift station located on APN 329-310-10. The spill reportedly went to a nearby culvert. Cleanup was conducted by the El Dorado Irrigation District. No visual evidence of sewage or discolored soil or concrete was observed at or around the lift station during the January 2019 site reconnaissance.

The reworking of the surface topography indicates that mining activities conducted in the late 1800s used placer mining techniques where the gold was separated using water and gravity. In one area in the southern portion of the site, a shallow mining prospect was found. No mining equipment or associated contamination was observed during the site reconnaissance. Occasional trash and debris were observed in scattered locations throughout the southern portion of the project site; none of it consisted of hazardous materials. No evidence of discolored or stained pavement, soil, or water; stressed vegetation; above ground or underground storage tanks; pits; or lagoons were observed on any portion of the project site.

Offsite Conditions

Active and closed hazardous materials sites that have reported spills or releases are tracked on the State Water Resources Control Board (SWRCB) GeoTracker and Department of Toxic Substances Control (DTSC) EnviroStor websites, which can be viewed simultaneously. The Phase I assessments searched these lists and identified several offsite properties listed with former hazardous materials issues. However, the Phase I assessments concluded none of the offsite listed properties would have affected the project site.

Schools

The following schools are listed within one-quarter mile of the proposed project:

- Independence Continuation High School at 385 Pleasant Valley Road (State Route 49) about 200 feet west of the project site.
- Woodson School at State Route 49 about 660 feet east of the project site. Note that an internet search for this school did not turn up any results.
- Country Kids Daycare & Preschool at 610 Pleasant Valley Road (State Route 49) located at about 1,200 feet east of the project site.

Airports

The only airport or airstrip located within two miles of the project site is the PG&E - Placerville Service Center Heliport, located 0.3 miles to the west-northwest. This facility serves helicopters only.

Emergency Response Plans

The project site is vacant and does not currently have an internal roadway system beyond the several unimproved dirt tracks that cross the site. Emergency response is addressed in El Dorado County's local Hazard Mitigation Plan (El Dorado County, 2018). Emergency response to hazardous materials events in El Dorado County is conducted by the Hazardous Materials Emergency Response Program in close cooperation with law enforcement, fire and allied health agency officers and staff. Local emergency response is provided by the Diamond Springs - El Dorado Fire Protection District. Additional information regarding emergency response is provided in Section 4.12, *Public Services and Recreation* and Section 4.16, *Wildfire*. The El Dorado County Department of Environmental Management, Hazardous Waste Division, is the Certified Unified Program Agency (CUPA) for El Dorado County.

The primary travel corridor in Diamond Springs is the two-lane State Route 49. All other roadways in the local area are two-lane rural roads or surface streets. The project site is not located on a public road. Current access to the site is from the south end of Faith Lane.

4.7.3 Regulatory Setting

Federal

The primary federal agencies with responsibility for hazardous materials management include the U.S. Environmental Protection Agency (USEPA), U.S. Department of Labor Occupational Safety and Health Administration (Fed/OSHA), and the U.S. Department of Transportation (USDOT). Federal laws, regulations, and responsible agencies are summarized in **Table 4.7-1**.

**TABLE 4.7-1
 FEDERAL LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible Federal Agency	Description
Hazardous Materials Management	Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA))	Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released.
Hazardous Waste Handling	Resource Conservation and Recovery Act of 1976 (RCRA)	Under RCRA, the USEPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from “cradle to grave.”
	Hazardous and Solid Waste Act	Amended RCRA in 1984, affirming and extending the “cradle to grave” system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes.
Hazardous Materials Transportation	USDOT	USDOT has the regulatory responsibility for the safe transportation of hazardous materials. The USDOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
	U.S. Postal Service (USPS)	USPS regulations govern the transportation of hazardous materials shipped by mail.
Occupational Safety	Occupational Safety and Health Act of 1970	Fed/OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR 1910).

State and local agencies often have either parallel or more stringent rules than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the State or local agency section.

State

The primary State agencies with responsibility for hazardous materials management in the region include the DTSC and the RWQCB within the California Environmental Protection Agency (Cal EPA), California Occupational Safety and Health Administration (Cal/OSHA), California Department of Health Services (CDHS), California Highway Patrol (CHP), and the California Department of Transportation (Caltrans). State laws, regulations, and responsible agencies are summarized in **Table 4.7-2**.

**TABLE 4.7-2
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible State Agency	Description
Hazardous Materials Management	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program); CUPA (Health and Safety Code Sections 25404 et seq)	In January 1996, Cal EPA adopted regulations, which implemented a Unified Program at the local level. The agency responsible for implementation of the Unified Program is called the Certified Unified Program Agency (CUPA), which for El Dorado County is the El Dorado County Department of Environmental Management, Hazardous Waste Division.
	California Fire Code	The California Fire Code regulates the storage and handling of hazardous materials, including the requirement for secondary containment, separation of incompatible materials, and preparation of spill response procedures.
Hazardous Waste Handling	California Hazardous Materials Release Response Plan and Inventory Law of 1985; CUPA	The California Hazardous Materials Release Response Plan and Inventory Law of 1985 (Business Plan Act) requires that businesses that store hazardous materials onsite prepare a Hazardous Materials Business Plan (HMBP) and submit it to the local CUPA.
	California Hazardous Waste Control Act; DTSC	Under the California Hazardous Waste Control Act, California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq., DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. DTSC is also the administering agency for the California Hazardous Substance Account Act. California Health and Safety Code, Division 20, Chapter 6.8, Sections 25300 et seq., also known as the State Superfund law, providing for the investigation and remediation of hazardous substances pursuant to State law.
Hazardous Materials Transportation	Titles 13, 22, and 26 of the California Code of Regulations	Regulates the transportation of hazardous waste originating in and passing through the state, including requirements for shipping, containers, and labeling.
	CHP and Caltrans	These two state agencies are primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies.
Occupational Safety	Cal/OSHA	Cal/OSHA has primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the Code of Federal Regulations (CFR). Cal/OSHA standards are generally more stringent than federal regulations.
	Cal/OSHA regulations (Title 8 CCR)	Concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.
Construction Storm Water General Permit (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ)	RWQCB	Dischargers whose project disturbs one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the <i>NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities</i> (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). Construction activity subject to this permit includes clearing, grading, grubbing, and other disturbances to the ground such as excavation and stockpiling, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan

Classification	Law or Responsible State Agency	Description
		(SWPPP) that includes specific Best Management Practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving offsite into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. The Construction General Permit is discussed in more detail in Section 4.6, <i>Geology and Soils</i> .
Municipal Separate Storm Sewer System (MS4) Permit NPDES No. CAS000004 and Order No. 2013-0001	RWQCB	The MS4 permit requires permittees (in this case, El Dorado County) to reduce pollutants and runoff flows from new development and redevelopment using BMPs to the maximum extent practical. The MS4 permittee also has its own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification element. The MS4 permit requires specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process. The MS4 Permit is discussed in more detail in Section 4.6, <i>Geology and Soils</i> .
Underground Infrastructure	California Code of Regulations Section 4216-4216.9	Section 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

Regional

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), codified in Health and Safety Code Sections 25404 et seq., requires the administrative consolidation of six hazardous materials and waste programs under one agency, a Certified Unified Program Agency (CUPA). The following programs are consolidated under the unified program:

- Hazardous Materials Release Response Plans, and Inventory (also referred to as Hazardous Materials Business Plans)
- California Accidental Release Program
- Underground Storage Tanks
- Aboveground Petroleum Storage Spill Prevention Control and Countermeasures
- Hazardous Waste Generation and Onsite Treatment
- Uniform Fire Code Plans and Inventory Requirements

The State Secretary for Environmental Protection designated the El Dorado County Department of Environmental Management, Hazardous Waste Division as the local CUPA. The CUPA is charged with the responsibility of conducting compliance inspections of over hazardous materials facilities in El Dorado County. These facilities and businesses handle hazardous materials, generate or treat a hazardous waste, and/or operate underground storage tanks. The CUPA uses education and enforcement to minimize the risk of chemical exposure to human health and the environment. The CUPA forwards important facility information to local fire prevention agencies that enables them to take appropriate protective action in the event of an emergency at regulated facilities. In order to legally store and use hazardous materials above the trigger quantities, users must apply for permits and demonstrate satisfactory compliance with regulations. The quantities that trigger disclosure are based on the maximum quantity on site at any time:

- 55 gallons, 500 pounds, or 200 cubic feet for 30 days or more at any time in the course of a year
- Any amount of hazardous waste
- Category I or II pesticides
- Explosives
- Extremely hazardous substances above the threshold planning quantity

Local

West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements

The proposed project would be a Type 3 regulated project, which includes projects that create 5,000 square feet or more of new impervious surface. The requirements include the following:

- Implement and direct water to one or more site design measures (BMPs).
- Remaining runoff from the 85th percentile 24-hour storm event (~1.13 inches of water) shall be directed to one or more storm water treatment and baseline hydromodification measures using volumetric and/or flow-based sizing criteria.
- Identify potential sources of pollutants and implement corresponding source control measures using CASQA Source Control BMP Fact Sheets.
- Provide ongoing maintenance of water retention and treatment facilities.

El Dorado County General Plan

The El Dorado County General Plan provides County-wide policies for regulating land use, development, and conservation in the County. The Public Health, Safety, and Noise Element of the general plan includes policies pertaining to land use in areas where naturally occurring asbestos may be encountered and in areas where seismic and other geologic hazards may be a planning and development concern. The Conservation and Open Space Element discusses significant natural resources in the County, including geology and soils, and establishes goals, objectives, and policies related to these topics. Policies relevant to geology and soils in the El Dorado County General Plan include:

Public Health, Safety, and Noise Element

Goal 6.1: Coordination - A coordinated approach to hazard and disaster response planning.

Objective 6.1.1: El Dorado County Multi-Jurisdictional Local Hazard Mitigation Plan - The El Dorado County Multi-Jurisdictional Local Hazard Mitigation Plan shall serve as the implementation program for this Goal.

Policy 6.1.1.1: The El Dorado County Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) shall serve as the implementation program for the coordination of hazard planning and disaster response efforts within the County and is incorporated by reference to this Element. The County will ensure that the LHMP is updated on a regular basis to keep pace with the growing population.

Goal 6.6: Management of Hazardous Materials - Recognize and reduce the threats to public health and the environment posed by the use, storage, manufacture, transport, release, and disposal of hazardous materials.

Objective 6.6.1: El Dorado County Multi-Jurisdictional Local Hazard Mitigation Plan - The El Dorado County Multi-Jurisdictional Local Hazard Mitigation Plan shall serve as the implementation program for this Goal.

Policy 6.1.1.1: The Hazardous Waste Management Plan shall serve as the implementation program for management of hazardous waste in order to protect the health, safety, property of residents and visitors, and to minimize environmental degradation while maintaining economic viability.

Policy 6.1.1.2: Prior to the approval of any subdivision of land or issuing of a permit involving ground disturbance, a site investigation, performed by a Registered Environmental Assessor or other person experienced in identifying potential hazardous wastes, shall be submitted to the County for any subdivision or parcel that is located on a known or suspected contaminated site included in a list on file with the Environmental Management Department as provided by the State of California and federal agencies. If contamination is found to exist by the site investigations, it shall be corrected and remediated in compliance with applicable laws, regulations, and standards prior to the issuance of a new land use entitlement or building permit.

El Dorado County Municipal Code

The following chapters of the County Municipal Code are relevant to hazards and hazardous materials.

Hazardous Materials Ordinance

The Hazardous Materials Ordinance (County Code Chapter 8.38) regulates the handling, storage, use, transport, processing, or disposal of hazardous materials. This ordinance requires reporting of the use of hazardous materials. It also requires disclosure of accidental release of hazardous materials, as well as preventive and mitigative efforts for impacts of hazardous materials. The

ordinance is enforced locally by trained staff of fire protection districts and the Solid Waste & Hazardous Materials Division of the County Environmental Management Department.

Solid Waste Management Ordinance

The Solid Waste Management Ordinance (County Code Chapter 8.42) prohibits the disposal, depositing, or otherwise disposing of any hazardous or biomedical waste onto land, into soil, rock, air, or water or at an unauthorized disposal sites, transfer stations, resource recovery facilities, transformation facilities, buy back centers, drop off recycling centers, or any container to be collected and ultimately deposited, unless otherwise approved by the County. Penalties may be assessed on acts of illegal disposal.

El Dorado County Local Hazard Mitigation Plan (LHMP)

The El Dorado County Local Hazard Mitigation Plan (LHMP) provides guidance for the County's response to emergency situations, including wildfire, flood events, earthquakes, levee failures, and severe weather. El Dorado County developed the LHMP to make the County and its residents less vulnerable to hazard events. The LHMP was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 so that El Dorado County would be eligible for the Federal Emergency Management Agency's (FEMA) Pre-Disaster Mitigation and Hazard Mitigation Grant programs.

4.7.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The criteria used to determine the significance of impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. The proposed project would result in a significant impact to hazards and hazardous materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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;
- 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 area; and
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Methodology and Assumptions

General

This environmental analysis of the potential impacts related to hazards and hazardous materials is based on a review of the results of the site-specific Phase I assessments, a review of published reports and maps, and the El Dorado County General Plan.

The proposed project would be regulated by the various laws, regulations, and policies summarized above in Section 4.7.3, *Regulatory Setting*. Compliance by the proposed project with applicable federal, state, and local laws and regulations is assumed in this analysis and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the regulations is a condition of permit approval.

A significant impact would occur if, after considering the features described in Section 3.0, *Project Description*, and the required compliance with regulatory requirements, a significant impact would still occur. For those impacts considered to be significant, mitigation measures are proposed to reduce the identified impacts.

Impacts and Mitigation Measures

Hazardous Materials

Impact 4.7-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials. (*Less than Significant Impact*)

Construction

During the construction phase, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect construction workers, the public, and the environment.

As discussed in Section 4.7.3, *Regulatory Setting*, construction activities would be required to comply with numerous hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies. Contractors would be required to prepare and implement Hazardous Materials Business Plans (HMBPs) that would require that hazardous materials used for construction would be used properly and stored in appropriate containers with secondary containment to contain a potential release. The California Fire Code would also require measures for the safe storage and handling of hazardous materials.

As discussed in Section 3.6, *Geology and Soils*, construction contractors would also be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) for construction activities according to the National Pollutant Discharge Elimination System (NPDES) General Construction Permit

requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site runoff.

In addition, the transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release.

Finally, in the event of a spill that releases hazardous materials at the project site, a coordinated response would occur at the federal, state, and local levels, including the El Dorado County Office of Emergency Services and the Diamond Springs-El Dorado Fire Protection District, which is the local hazardous materials response team. In the event of a hazardous materials spill, the fire and police departments would be simultaneously notified and sent to the scene to respond and assess the situation.

The required compliance with the numerous laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for creation of hazardous conditions due to the use or accidental release of hazardous materials, and would render this impact **less than significant**.

Operations

Once constructed, the project's residences would use and store small quantities of chemicals typical in residences, such as household cleaning solutions, paints and thinners, and motor fuel (e.g., motor vehicles and lawn mowers). Few of the chemicals would be considered hazardous materials (e.g., bleach) and the anticipated volumes would be small (i.e., less than 5 gallons). Given that the quantities would be small, the routine use or an accidental spill of hazardous materials would render this impact **less than significant**.

Mitigation Measures

None required.

Proximity to Schools

Impact 4.7-2: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (*Less than Significant Impact*)

As discussed in Section 4.7.2, *Environmental Setting*, there are three schools located within one-quarter mile of the proposed project. The construction of the project would include the handling of hazardous materials. The route to the project site would use State Route 49, which could pass by the schools, depending on the route taken. The accidental release or spill of hazardous

materials transported by the school could expose schoolchildren and workers to hazardous materials.

Construction

As discussed in Impact 4.7-1, there are numerous regulations covering the transportation, use, storage, and disposal of hazardous materials during construction activities. The required compliance with these regulations would ensure that the nearby schools would not be exposed to hazardous materials. Accordingly, the impact relative to hazardous materials, substances, or waste in proximity to schools would be **less than significant with mitigation**.

Mitigation Measures (Construction)

None required.

Operations

As discussed in Impact 4.7-1, once constructed, the residences would use and store small quantities of chemicals typical in residences, such as household cleaning solutions, paints and thinners, and motor fuel (e.g., cars and lawn mowers). Few of the chemicals would be considered hazardous materials (e.g., bleach) and the anticipated volumes would be small (i.e., less than 5 gallons). Given that the quantities would be small, the potential to expose schools to hazardous materials would be **less than significant**.

Mitigation Measures (Operations)

None required.

Listing on Hazardous Materials Site List

Impact 4.7-3: The project would 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, the project could create a significant hazard to the public or the environment. (*Less than Significant Impact with Mitigation*)

Construction

As discussed above in Section 4.7.2, *Environmental Setting, Onsite Conditions*, the former service station located on the north side of State Route 49 is listed on the RWQCB GeoTracker list, which is one of the hazardous materials sites lists compiled pursuant to Government Code Section 65962.5. This site known to have leaked gasoline into soil and groundwater beneath State Route 49 and possibly further south. Therefore, construction activities in this portion of the State Route 49 Intersection Area could encounter soil and groundwater contaminated with gasoline, which could adversely affect construction workers, the public, or the environment.

To address encountering contaminated materials during construction, the proposed project would implement **Mitigation Measures 4.7-3a: Health and Safety Plan and 4.7-3b: Soil and Groundwater Management Plan**.

Mitigation Measures (Construction)

Mitigation Measure 4.7-3a, Health and Safety Plan. Before the start of ground-disturbing activities in the vicinity of the former service station site at 493 Main Street, including grading, trenching, or excavation, or structure demolition in the vicinity, the project applicant for the specific work conducted shall require that the construction contractor(s) retain a qualified professional to prepare a site-specific Health and Safety Plan in accordance with federal OSHA regulations (29 CFR 1910.120) and Cal/OSHA regulations (8 CCR Section 5192).

The plan shall be implemented by the construction contractor to protect construction workers, the public, and the environment during all ground-disturbing and structure demolition activities. The Health and Safety Plan shall be submitted to the El Dorado County Fire District and Diamond Springs El Dorado Fire Protection District to inform the permit approval process before the start of demolition and construction activities and as a condition of the grading, construction, and/or demolition permit(s). The Health and Safety Plan shall include, but not be limited to, the following elements:

- Designation of a trained, experienced site safety and health supervisor who has the responsibility and authority to develop and implement the site Health and Safety Plan.
- A summary of all potential risks to demolition and construction workers and maximum exposure limits for all known and reasonably foreseeable site chemicals.
- Specified personal protective equipment and decontamination procedures, if needed.
- The requirement to prepare documentation showing that Health and Safety Plan measures have been implemented during construction (e.g., tailgate safety meeting notes with signup sheet for attendees).
- A requirement specifying that any site worker who identifies hazardous materials has the authority to stop work and notify the site safety and health supervisor.
- Emergency procedures, including the route to the nearest hospital.
- Procedures to follow if evidence of potential soil or groundwater contamination is encountered (such as soil staining, noxious odors, debris or buried storage containers). These procedures shall be followed in accordance with hazardous waste operations regulations and specifically include, but not be limited to, immediately stopping work in the vicinity of the unknown hazardous materials release; notifying the MHFEOP and the regulatory agency overseeing site cleanup, if any; and retaining a qualified environmental firm to perform sampling and remediation.

Mitigation Measure 4.7-3b, Soil and Groundwater Management Plan. In support of the Health and Safety Plans described in Mitigation Measure 4.7-3a, the project applicant for the specific work conducted in the vicinity of the former service station site at 493 Main Street shall require that its contractor(s) develop and implement a Soil and

Groundwater Management Plan for the management of soil and groundwater before any ground-disturbing activity. The Plan shall include the following, at a minimum:

- Site description, including the hazardous materials that may be encountered.
- Roles and responsibilities of on-site workers, supervisors, and the regulatory agency.
- Training for site workers focused on the recognition of and response to encountering hazardous materials.
- Protocols for the materials (soil and/or dewatering effluent) testing, handling, removing, transporting, and disposing of all excavated materials and dewatering effluent in a safe, appropriate, and lawful manner.
- Confirmation sampling to verify that the remaining soil and/or groundwater at the site does not have chemical concentrations above screening levels for the applicable planned land use.
- Identification of licensed disposal sites permitted to accept the waste materials.
- Reporting requirement to the overseeing regulatory agency, documenting that site activities were conducted in accordance with the Soil and Groundwater Management Plan.

The Soil and Groundwater Management Plan shall be submitted to the El Dorado County Fire District and Diamond Springs El Dorado Fire Protection District to inform the permit approval process before the start of demolition and construction activities and as a condition of the grading, construction, and/or demolition permit(s). The Contract specifications shall mandate full compliance with all applicable federal, state, and local regulations related to the identification, transportation, and disposal of hazardous materials.

The Soil and Groundwater Management Plan shall include a groundwater dewatering control and disposal plan specifying how groundwater (dewatering effluent), if encountered, will be handled and disposed of in a safe, appropriate, and lawful manner. The groundwater portion of the Soil and Groundwater Management Plan shall include the following, at a minimum:

- The locations at which groundwater dewatering is likely to be required.
- Test methods to analyze groundwater for hazardous materials.
- Appropriate treatment and/or disposal methods.

Significance After Mitigation (Construction)

Implementation of the mitigation measures would result in construction crews being made aware of the potential to encounter contaminated soil and groundwater, if still present, and trained to respond accordingly. The Health and Safety Plan and Soil and Groundwater Management Plan would describe procedures for the removal and disposal of contaminated soil and groundwater,

once removed, the contaminated materials would no longer be present and the impact would be reduced to **less than significant with mitigation**.

Operations

Once constructed, contaminated materials, if present, would have been removed during construction, and there would be **no impact**.

Mitigation Measures (Operations)

None required.

Proximity to Airports

Impact 4.7-4: The project would not be located within an airport land use plan or within two miles of a public airport or public use airport. (*No Impact*)

Construction and Operation

As discussed above in Section 4.7.2, *Environmental Setting, Airports*, the PG&E - Placerville Service Center Heliport is located 0.3 miles to the west-northwest of the project site. The heliport is used by helicopters only, which would not require a landing and take-off flight path over the project site in the manner that an airplane would require. Consequently, there would be no potential for any structures on the project site to interfere with helicopter flights to and from the heliport, and there would be **no impact**.

Mitigation Measures (Operations)

None required.

Emergency Response

Impact 4.7-5: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (*Less than Significant Impact with Mitigation*)

As discussed in Section 3.0, *Project Description*, most of the project is located on undeveloped land south of Faith Lane. This portion of the construction would occur off public roads and would not require any road closures or restrictions. However, the project includes two intersection options for providing access to State Route 49. Construction on State Route 49 would require temporary lane closures and traffic control. These closures, although temporary, could affect emergency response. In addition, the subdivision would add additional traffic from new residents, which could be a significant impact.

Construction

As discussed in Section 4.13, *Transportation*, the proposed project would be required to prepare and implement **Mitigation Measure 4.7-5: Construction Traffic Control/Traffic Management**

Plan, which would manage the movement of traffic and construction vehicles during construction. This plan would be required to include measures to maintain emergency access. With compliance with regulations and the implementation of Mitigation Measure 4.7-5 (Construction Traffic Control/Traffic Management Plan), the impact relative to emergency access would be **less than significant with mitigation**.

Mitigation Measures (Construction)

Mitigation Measure 4.7-5, Construction Traffic Control/Traffic Management Plan.

Prior to issuance of a grading permit, the project applicant shall prepare a Construction Traffic Control/Traffic Management Plan. The plan shall include measures and protocols to avoid project interference with evacuation routes and established emergency response procedures in the project area. The plan shall be submitted for review and approval by the County, in consultation with area emergency service providers.

Significance After Mitigation (Construction)

Compliance with an approved Construction Traffic Control/Traffic Management Plan would avoid the project's impairment of an adopted emergency response plan or emergency evacuation plan. Accordingly, this impact would be **less than significant, with mitigation**.

Operations

As discussed in Section 4.13, *Transportation*, the proposed project would implement one of two intersection improvement options on State Route 49 to improve traffic flow and handle to additional traffic from the new residential subdivision. In addition, the subdivision would connect to Argonaut Drive to the west, and would also provide an emergency vehicle access road at the southern end of the subdivision site, connecting to either Antares Drive to the southwest, or Fowler Lane to the southeast. The construction of the residential subdivision would be required to be consistent with applicable general plan requirements, including roads. General Plan Policy 6.2.3.2 requires that the project design allow for adequate emergency vehicle access and private vehicle evacuation. Roadway design and approvals required to achieve adequate access for emergency vehicles and evacuation of personal vehicles are discussed in Section 4.13, *Transportation*, and the aforementioned access points would meet this requirement. Project implementation would not impair implementation of, or interfere with, the County MHFEOP. Therefore, the potential for project operations to result in impaired function of an adopted emergency response or evacuation plan would be **less than significant**.

Mitigation Measures (Operations): None required.

Cumulative Impacts

Impact 4.7-6: Concurrent construction and operation of the proposed project and related projects in the geographic scope would not result in cumulative impacts to hazards and hazardous materials. (*Less than Significant Impact, with Mitigation*)

This section presents an analysis of the cumulative effects of the proposed project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. As previously discussed, the proposed project would have no impact with respect to being located within two miles of an airport. Accordingly, the proposed project could not contribute to cumulative impacts related to this topic and is not discussed further.

The geographic area affected by the proposed project and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. The geographic scope of analysis for cumulative hazardous materials impacts encompasses and is limited to the project site and its immediately adjacent area. This is because impacts relative to hazardous materials are generally site-specific and depend on the nature and extent of the hazardous materials release, and existing and future soil and groundwater conditions. For example, hazardous materials incidents tend to be limited to a smaller more localized area surrounding the immediate spill location and extent of the release, and could only be cumulative if two or more hazardous materials releases spatially overlapped.

The timeframe during which proposed project could contribute to cumulative hazards and hazardous materials effects includes the construction and operations phases. For the proposed project, the operations phase would be permanent. However, similar to the geographic limitations discussed above, it should be noted that impacts relative to hazardous materials are generally time-specific. Hazardous materials events could only be cumulative if two or more hazardous materials releases occurred at the same time, as well as overlapping at the same location.

Significant cumulative impacts related to hazards and hazardous materials could occur if the incremental impacts of the proposed project combined with the incremental impacts of one or more of the three cumulative projects identified in Chapter 4.0, *Environmental Setting, Impacts, and Mitigation Measures, Cumulative Impacts*, to substantially increase risk that people or the environment would be exposed to hazards and hazardous materials. The cumulative projects include El Mirage Plaza (2 miles to the northwest), El Dorado Senior Village (1.5 miles to the west), and Shinn Ranch (3.5 miles to the west), Indian Creek Ranch (5.4 miles to the northwest), and Piedmont Oak Estates and Diamond Village Apartments (both about 1.5 miles to the northeast).

Cumulative Impacts During Project Construction

Significant cumulative impacts related to hazards and hazardous materials could occur if the incremental impacts of the project combined with the incremental impacts of one or more of the cumulative projects to substantially increase risk that people or the environment would be exposed to hazardous materials. However, given the distances to the cumulative projects, the proposed project could not combine with the cumulative projects to result in a cumulatively considerable effect relative to hazardous materials use or spills. In addition, all of the cumulative

projects would be subject to the same regulatory requirements discussed for the proposed project for compliance with existing hazardous materials regulations, including spill response. Cumulative projects that have spills of hazardous materials would be required to remediate their respective sites to the same established regulatory standards as the proposed project. This would be the case regardless of the number, frequency, or size of the release(s). While it is possible that the project and cumulative projects could result in releases of hazardous materials at the same time, the responsible party associated with each spill would be required to remediate site conditions to the same established regulatory standards. The residual less-than-significant effects of the project that would remain after mitigation would not combine with the potential residual effects of cumulative projects to cause a potential significant cumulative impact because residual impacts would be highly site-specific and would be below regulatory standards. Accordingly, no significant cumulative impact with respect to the use of hazardous materials would result. For the above reasons, the project would not cause or contribute to a cumulatively significant impact with respect to the use of hazardous materials, and impacts would be **less than significant**.

Construction for two or more projects that occur at the same time and use the same roads could cause interference with emergency access. As discussed in Section 3.13, *Transportation*, the proposed project would be required to prepare and implement **Mitigation Measure 4.7-5: Construction Traffic Control/Traffic Management Plan**, which would manage the movement of vehicles during construction such that emergency access would be maintained. Cumulative projects would also be required to prepare and implement similar traffic management plans to maintain traffic flow and prevent interference with emergency access. With the implementation of traffic control/traffic management plans, the project would not cause or contribute to a cumulatively significant impact with respect to emergency access, and impacts would be **less than significant with mitigation**.

Mitigation Measures (Construction)

See Mitigation Measure 4.7-5

Significance After Mitigation (Construction)

Compliance with an approved Construction Traffic Control/Traffic Management Plan would avoid the project's impairment of an adopted emergency response plan or emergency evacuation plan. Accordingly, this cumulative impact would be less than significant, with mitigation.

Cumulative Impacts During Project Operations

Significant cumulative impacts related to operational hazards could occur if the incremental impacts of the project combined with those of one or more of the above-listed projects to cause a substantial increase in risk that people or the environment would be exposed to hazardous materials used or encountered during the operations phase.

Once constructed, the residences would use and store small quantities of chemicals typical in residences, such as household cleaning solutions, paints and thinners, and motor fuel (e.g., cars and lawn mowers). Few of the chemicals would be considered hazardous materials (e.g., bleach) and the anticipated volumes would be small (i.e., less than 5 gallons). Given that the quantities

would be small, the project would not cause or contribute to a cumulatively significant impact with respect to the use of hazardous materials, and impacts would be **less than significant**.

Similar to the proposed project, cumulative projects involving the handling, storage, and disposal of hazardous materials would be required to prepare and implement an HMBP and comply with applicable regulations, including those governing containment, site layout, and emergency response and notification procedures in the event of a spill or release. Transportation and disposal of wastes, such as spent cleaning solutions, would also be subject to regulations for the safe handling, transportation, and disposal of chemicals and wastes. As noted previously, such regulations include standards to which parties responsible for hazardous materials releases must return spill sites, regardless of location, frequency, or size of release, or existing background contaminant concentrations to their original conditions. Therefore, compliance with existing regulations regarding hazardous materials transport would reduce the risk of environmental or human exposure to such materials. The combined effects of the project and cumulative projects would not result in a significant cumulative impact, and impacts would be **less than significant**.

Mitigation Measures (Operations): None required.

4.7.5 References

El Dorado County, 2018, *Local Hazard Mitigation Plan*, July

Environmental Science Associates (ESA). 2019a. *Draft Dorado Oaks Tentative Tract Map Project, Faith Lane, Diamond Springs, California, Phase I Environmental Site Assessment*. April, 2019.

Environmental Science Associates (ESA), 2019b. *Draft State Route 49/Pleasant Valley Road at Faith Lane Project Initial Site Assessment*. April, 2019.

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4.8 Hydrology and Water Quality

4.8.1 Introduction

This section evaluates the potential for the proposed project to result in adverse impacts related to hydrology and water quality. The analysis is based on review of available geotechnical and hydrology reports and maps of the project site, including site-specific investigations, relevant regulations, and a discussion of the methodology and thresholds used to determine whether the proposed project would result in significant impacts. This section analyzes the potential for both project-level and cumulative environmental impacts.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Comments relevant to hydrology and water quality included concerns regarding the increase in stormwater runoff due to the addition of additional impermeable surfaces.

A preliminary geotechnical study was conducted to inform the project of geologic and soils conditions (YoungDahl, 2018). A drainage and stormwater quality study was performed to inform the project of stormwater volumes to evaluate the proposed drainage infrastructure (D&A, 2018). These reports can be found in **Appendix G** of this EIR. Phase I environmental site assessments have also been conducted for the project site (ESA, 2019a, b), and these reports can be found in **Appendix F** of this EIR. The information provided in the Environmental Setting summarized below incorporates results of these investigations unless otherwise cited.

4.8.2 Environmental Setting

Climate

The climate of the Placerville area has cool wet winters and hot dry summers. The mean annual precipitation for the period between 1995 and 2013 was approximately 39 inches, the majority of which occurred from October through April (Western Climate Center 2020). During the period of record, annual precipitation has varied from about 14 inches (1976) to about 68 inches (1982). Precipitation primarily occurs as rain with limited snow (typically on the order of a few inches) in winter (El Dorado County 2003).

Surface Water Hydrology

El Dorado County contains four major watersheds: the Tahoe Watershed, the Middle Fork American River, the South Fork American River, and the Cosumnes River (El Dorado County 2003) (El Dorado County 2003). The project site is located along the northern boundary of the Upper Consumes River Watershed, which extends from just west of the Sacramento-El Dorado County line east to the higher reaches of the Sierra Nevada Mountains. According to the Central Valley Regional Water Quality Control Board (RWQCB) Basin Plan, the project site is located within the North Fork Cosumnes River Hydrologic Subarea (HAS 532.23.23) of the Middle Sierra Hydrologic Unit (RWQCB, 2018).

Overall surface drainage in the local area of the project site flows south to Martinez Creek, then south to the North Fork Cosumnes River, which then combines with the Middle and South Forks in the Cosumnes River (El Dorado County, 2003). Surface water flow at the project site is primarily seasonal stormwater runoff from rain with some runoff from the developed area along State Route 49.

Most of the project site is hilly and sloping to the south. Elevations range from about 1,675 feet above mean sea level at the southernmost end of the project site to about 1,845 feet above sea level at a hilltop near the center of the project site. There are two generally north-south ridgelines, which route most runoff to the center of the project site and then south (D&A, 2018). Some drainage along the western border is offsite to the west and some drainage along the eastern border is offsite to the east; both the west and east drainages then flow south. Much of the topography is hummocky and disturbed due to the placer gold mining activities conducted during the historical gold rush era and due to a previous 1980s development that did not proceed beyond initial limited grading (ESA, 2019a, b). One established stream flows south along the eastern border of the project site and appears to contain moisture for much of the year. One south-flowing ephemeral stream begins in the southernmost portion but does not flow year-round.

Surface Water Quality

No surface water samples are known to have been collected and analyzed from the two onsite streams noted above. However, the Phase I assessments site inspection did not identify any environmental conditions that would affect surface water quality (ESA, 2019a, b).

Groundwater Hydrology

For most of the site, the depth to bedrock ranges from 0 feet (present at the ground surface) to 6 feet (Youngdahl, 2018). Groundwater was not encountered during test pits excavated in 2007. Surface water was observed flowing across the site in the late spring of 2018 and late spring of 2019 (ESA, 2019a, b). Groundwater may be present for periods of time as perched water zones in the alluvial materials and fractures and joints in the underlying bedrock (Youngdahl, 2018). The groundwater direction likely mimics the surface topography to the south.

Groundwater Quality

One former service station was previously located at the north end of the project site at 493 Main Street (now Pleasant Valley Road/State Route 49) (ESA, 2019a, b). Two 500-gallon gasoline underground storage tanks (USTs) were removed in 1992. The USTs had numerous holes and the surrounding soil and groundwater was contaminated with gasoline, indicating that groundwater is present below State Route 49 and for some unknown distance south. Although the RWQCB issued a No Further Action (NFA) letter in 1996, the NFA letter states that contaminated soil and groundwater are present along the south side of the former service station site extending south to beneath State Route 49, which would be within the northern part of the project site. Groundwater collected from the excavation pit had 40 micrograms per liter (ug/L) of TPH as gasoline, 500 ug/L of benzene, 1,200 ug/L of toluene, 410 ug/L of ethylbenzene, and 3,000 ug/L of xylenes. The RWQCB concluded that contaminated soil and groundwater extends to an unknown distance beneath State Route 49. It is unknown whether the soil and groundwater contamination extends

further south. Gasoline plumes from UST leaks typically do not extend further than a few hundred feet at most because gasoline in groundwater degrades over time due to microbial activity. Given the date of the UST removals in 1992, the plume is likely relatively short, if still present at all.

Groundwater Basin

The project site is not located within a groundwater basin identified in the Department of Water Resources DWR's Bulletin 118 (DWR, 2020). Consequently, the area is not subject to the Sustainable Groundwater Management Act, and does not have a Groundwater Sustainability Plan.

Flood Hazard

The Federal Emergency Management Agency (FEMA) flood hazard map identifies the area of the project site as Zone X, which is an area of minimal flood hazard not within a 100-year flood zone (FEMA, 2008). The project site location is near the top of the ridge that separates two watersheds and consequently is not subject to flooding (El Dorado County, 2003).

Tsunami and Seiche

Tsunamis are ocean waves generated by vertical movement of the sea floor, normally associated with earthquakes or volcanic eruptions. Seiches are oscillations of enclosed or semi-enclosed bodies of water that result from seismic events, wind stress, volcanic eruptions, underwater landslides, and local basin reflections of tsunamis. The project site is not located in a coastal area subject to tsunami or near a water body subject to a seiche.

4.8.3 Regulatory Setting

Federal

Clean Water Act

The federal Clean Water Act and subsequent amendments, under the enforcement authority of the U.S. Environmental Protection Agency (USEPA), was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The Clean Water Act gave the USEPA the authority to implement pollution control programs such as setting wastewater standards for industry. In California, implementation and enforcement of the National Pollutant Discharge Elimination System (NPDES) program is conducted through the California State Water Resources Control Board (SWRCB) and the nine RWQCBs. The Clean Water Act also sets water quality standards for surface waters and established the NPDES program to protect water quality. Under Section 402 of the Act, discharge of pollutants is prohibited unless the discharge is in compliance with an NPDES permit. The NPDES program requires all facilities that discharge pollutants into waters of the United States to obtain a permit. The discharge permit provides limitations on pollutant concentrations to protect the water quality of the receiving waters. In 1972, the NPDES regulations initially focused on municipal and industrial wastewater discharges, followed by stormwater discharge regulations, which became effective in November 1990. NPDES permits for wastewater and industrial discharges specify discharge prohibitions and

effluent limitations and also include other provisions (such as monitoring and reporting programs) deemed necessary to protect water quality.

Federal Emergency Management Agency

Under Executive Order 11988, FEMA is responsible for the management and mapping of areas subject to flooding during a 100-year flood event (i.e., one percent chance of occurring in a given year). FEMA requires that local governments covered by federal flood insurance pass and enforce a floodplain management ordinance that specifies minimum requirements for any construction within the 100-year flood plain, as depicted on FEMA maps.

State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) is California's statutory authority for the protection of water quality. Under this act, the State must adopt water quality policies, plans, and objectives that protect the State's waters. The act sets forth the obligations of the State Water Resources Control Board (SWRCB) and RWQCBs pertaining to the adoption of Basin Plans and establishment of water quality objectives. Unlike the federal CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater and this authority serves as the basis for Waste Discharge Requirements issued to municipal sewage treatment facilities by the RWQCBs. The Porter-Cologne Water Quality Act is promulgated in the California Code of Regulations Title 22. Title 22 includes treatment and reuse requirements for recycled water projects throughout California. The project area lies within the jurisdiction of the Central Valley RWQCB.

Anti-Degradation Policy

The SWRCB's Anti-Degradation Policy, otherwise known as Resolution No. 68-16, sets specific restrictions for surface and groundwater that have higher than the required quality in order to avoid degradation of those water bodies. Requirements of this policy must be included within all Basin Plans throughout California (discussed below). Under this policy, actions that would lower the water quality in designated water bodies would only be allowed if the action would provide a maximum benefit to the people of California, if it will not unreasonably affect beneficial uses, and if it will not lower water quality below applicable standards.

NPDES Construction General Permit

As discussed in Section 4.6, *Geology, Soils, and Seismicity*, construction associated with the proposed project would disturb more than one acre of land surface potentially affecting the quality of stormwater discharges into waters of the U.S and is therefore subject to the NPDES Construction General Permit. The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water

pipelines and other utility lines. Further details are provided in Section 4.6.3, *Regulatory Setting*, in Section 4.6, *Geology, Soils, and Seismicity*.

NPDES Municipal General Permits

Discharges of stormwater runoff from MS4s are regulated under the state Municipal Regional Stormwater NPDES Permit (MRP), under Water Quality Order No. 2013-0001; NPDES Permit No. CAS000004, issued by the SWRCB. The SWRCB and the individual RWQCBs implement and enforce the MRP. Multiple municipalities, including El Dorado County, are co-permittees.

New and redevelopment projects that create or replace 2,500 square feet or more of impervious surface area are required to implement site design, source control, and Low Impact Development–based stormwater treatment controls to treat post-construction stormwater runoff. Low Impact Development–based treatment controls are intended to maintain or restore the site’s natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and for using stormwater as a resource (e.g., rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures be properly installed, operated, and maintained.

In addition, the MRP requires new development and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, generate silt pollutants, or cause other impacts on local rivers, streams, and creeks.

To comply with the MS4 permit, El Dorado County developed and implemented the West Slope Development and Redevelopment Standards and Post-Construction Stormwater Plan Requirements, discussed further below.

Regional and Local

Central Valley Water Quality Control Plan (Basin Plan)

The proposed project would be located within the area under the jurisdiction of the Central Valley RWQCB and its Basin Plan. The SWRCB and the Central Valley RWQCB share the responsibility, under the Porter-Cologne Act, to formulate and adopt water policies and plans and to adopt and implement measures to fulfill CWA requirements. The Central Valley Water Quality Control Plan (Basin Plan), last updated May 2018, identifies surface water and groundwater resources in the watershed and establishes beneficial uses and numeric water quality objectives for each resource. The beneficial uses for the Cosumnes River and its sources are listed below. The beneficial uses of any specifically identified water body generally apply to its tributary streams. The beneficial uses for surface water at this location are listed below in **Table 4.8-1**.

**TABLE 4.8-1
 BENEFICIAL USES OF COSUMNES RIVER SURFACE WATER**

Beneficial Use	Description
Municipal and Domestic Supply (MUN)	Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
Agricultural Supply (AGR)	Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
Water Contact Recreation (REC 1)	Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white-water activities, fishing, or use of natural hot springs.
Non-Contact Water Recreation (REC 2)	Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
Wildlife Habitat (WILD)	Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
Cold Freshwater Habitat (COLD)	Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
Warm Freshwater Habitat (WARM)	Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
Migration of Aquatic Organisms (MIGR)	Uses of water that support habitats necessary for migration or other temporary activities by aquatic organism, such as anadromous fish.
Spawning, Reproduction, and/or Early Development (SPWN)	Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.

SOURCE: RWQCB Basin Plan, 2018

Unless otherwise designated by the RWQCB, all ground waters in the Region are considered as suitable or potentially suitable, at a minimum, for municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO).

El Dorado County Subdivision Ordinance

The County’s Subdivision Ordinance (El Dorado County Code Title 120) requires drainage plans to be submitted prior to the approval of tentative maps for proposed subdivision projects. The drainage plans must include an analysis of upstream, onsite, and downstream facilities and pertinent details, as well as details of any necessary offsite drainage facilities. The tentative map must include data on the location and size of proposed drainage structures. In addition, drainage culverts consistent with the drainage plan may be required in all existing drainage courses, including roads.

Grading, Erosion, and Sediment Control Ordinance

The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance; Chapter 15.14 of the County Code) establishes provisions for public safety and environmental protection associated with grading activities on private property. The Grading Ordinance requires the intended land use be consistent with the El Dorado County General Plan, the adopted Stormwater Management Plan, California Fire Safe Standards, and applicable El Dorado County ordinances including the Zoning Ordinance and the California Building Code. The Grading Ordinance prohibits grading activities that would cause flooding where it would not otherwise occur or would aggravate existing flooding conditions. The Grading Ordinance also requires all drainage facilities, aside from those in subdivisions that are regulated by the County's Subdivision Ordinance, be approved by the County Transportation Division. Pursuant to the ordinance, the design of the drainage facilities in the county must comply with the County of El Dorado Drainage Manual.

County of El Dorado Design and Improvement Standards Manual

The County's Design and Improvement Standards Manual was adopted in 1990 and revised through 2007. This Manual identifies required erosion and sediment control measures that are applicable to subdivisions, roadways, and other types of developments. The purpose of the Design and Improvement Standards Manual is to standardize development practices used in the hillside environment that is prevalent in El Dorado County and to minimize the environmental effects of construction.

Volume II of the manual includes drainage and design criteria for stormwater and Volume III of the manual provides guidance on how to implement the erosion and sediment control standards in Chapter 15.14 of the El Dorado County Code of Ordinances. Specifically, Volume III: Grading, Erosion and Sediment Control describes the criteria for determining whether an erosion and sediment control plan is required. When an erosion and sediment control plan is required, it must comply with the standards described in the Manual and with the adopted Western El Dorado County Stormwater Management Plan (County SWMP).

County of El Dorado Drainage Manual

The Drainage Manual, adopted in 1995 and revised in 2007, provides standard procedures for future designs of drainage improvements. The Drainage Manual supersedes the stormwater drainage system design standards in the County's Design Improvements Standards Manual. The Drainage Manual requires that a hydrologic and hydraulic analysis be submitted for all proposed drainage facilities. The analysis must include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. This analysis is usually required on projects undergoing discretionary review. However, under the Building Code and Grading Ordinance, the County also reviews ministerial development, including required drainage plans, to ensure that appropriate runoff design and controls are in place.

The final analysis would include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. The analysis would address the following topics.

- A calculation of pre-development runoff conditions and post-development runoff scenarios using appropriate engineering methods. This analysis would evaluate potential changes to runoff through specific design criteria, and account for increased surface runoff.
- An assessment of existing drainage facilities within the project area, and an inventory of necessary upgrades, replacements, redesigns, and/or rehabilitation, including the sizing of onsite stormwater detention features and pump stations.
- A description of the proposed maintenance program for the onsite drainage system.
- Standards for drainage systems to be installed on a project- or parcel-specific basis.
- Proposed design measures to ensure structures are not located within 100-year floodplain areas.

Drainage systems must be designed on a site-specific basis in accordance with the findings of the studies and County requirements. As a performance standard, measures to be implemented would provide for no net increase in peak stormwater discharge relative to current conditions to ensure that 100-year flooding and its potential impacts are maintained at or below current levels and that people and structures are not exposed to additional flood risk.

Stormwater Management Plan and Stormwater Quality Ordinance

The Western El Dorado County SWMP was adopted by the County in 2004 as a means of compliance with the then-applicable Small MS4 Permit. In May 2015, the County adopted a County-Wide Stormwater Ordinance (Ordinance No. 5022) to ensure compliance with the new Small MS4 permit requirements in the entire unincorporated County. Chapter 8.79 of the County Code contains the stormwater regulations, which establishes the County's authority to implement and enforce the Stormwater Management Plan and to ensure compliance with state and federal stormwater laws and regulations. It also sets forth requirements that development projects incorporate best management practices (BMPs) to control the volume, rate, and potential pollutant loading of stormwater runoff. As provided by Section 8.79.150.G, the required BMPs may be contained in any land use entitlement, conditions of approval, grading plans, improvement plans, or any construction or building-related permit to be issued relative to such development. The requirements became effective in June 2015. The West Slope Development and Redevelopment Standards and Post Construction Stormwater Plan Requirements discussed below provide details of the applicability and requirements.

West Slope Development and Redevelopment Standards and Post Construction Stormwater Plan Requirements

The West Slope Development and Redevelopment Standards provide the requirements to comply with the MS4 permit. The proposed project would be a Type 5 regulated project, which includes

projects that create 5,000 square feet or more of new impervious surface, and require hydromodification management. The requirements include the following:

- Implement and direct water to one or more site design measures (BMPs).
- Remaining runoff from the 85th percentile 24-hour storm event (~1.13 inches of water) shall be directed to one or more storm water treatment and baseline hydromodification measures using volumetric and/or flow-based sizing criteria.
- Verification showing post project flows will not exceed pre-project flow rate for the 2-year, 24-hour storm (can be included in a Drainage Report). Alternatively, the Permittee may use a geomorphically based hydromodification standard or set of standards and analysis procedures designed to ensure that Regulated Projects do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. The alternative hydromodification standard or set of standards and analysis procedures must be reviewed and approved by the Regional Board Executive Officer.
- Identify potential sources of pollutants and implement corresponding source control measures using CASQA Source Control BMP Fact Sheets.
- Provide ongoing maintenance of water retention and treatment facilities.

El Dorado County General Plan

The El Dorado County General Plan provides Countywide policies for regulating land use, development, and conservation in the County. Policies relevant to hydrology and water quality in the El Dorado County General Plan include:

Public Services and Utilities Element

Goal 5.4: Storm Drainage - Manage and control stormwater runoff to prevent flooding, protect soils from erosion, prevent contamination of surface waters, and minimize impacts to existing drainage infrastructure.

Objective 5.4.1: Drainage and Flood Management Program - Initiate a Countywide drainage and flood management program to prevent flooding, protect soils from erosion, and minimize impacts on existing drainage facilities.

Policy 5.4.1.1: Require storm drainage systems for discretionary development that protect public health and safety, preserve natural resources, prevent erosion of adjacent and downstream lands, prevent the increase in potential for flood hazard or damage on either adjacent, upstream or downstream properties, minimize impacts to existing facilities, meet the NPDES requirements, and preserve natural resources such as wetlands and riparian areas.

Policy 5.4.1.2: Discretionary development shall protect natural drainage patterns, minimize erosion, and ensure existing facilities are not adversely impacted while retaining the aesthetic qualities of the drainage way.

Conservation Element

Goal 7.1: Soil Conservation - Conserve and protect the County's soil resources.

Objective 7.1.2: Erosion/Sedimentation - Minimize soil erosion and sedimentation.

Policy 7.1.2.1: Development or disturbance of slopes over 30 percent shall be restricted. Standards for implementation of this policy, including but not limited to exceptions for access, reasonable use of the parcel, and agricultural uses shall be incorporated into the Zoning Ordinance.

Policy 7.1.2.2: Discretionary and ministerial projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation. Specific standards for minimizing erosion and sedimentation shall be incorporated into the Zoning Ordinance.

Policy 7.1.2.3: Enforce Grading Ordinance provisions for erosion control on all development projects and adopt provisions for ongoing, applicant-funded monitoring of project grading.

Goal 7.3: Water Quality and Quantity - Conserve, enhance, and manage water resources and protect their quality from degradation.

Objective 7.3.1: Water Resource Protection - Preserve and protect the supply and quality of the County's water resources including the protection of critical watersheds, riparian zones, and aquifers.

Policy 7.3.1.1: Encourage the use of BMPs, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.

Policy 7.3.1.2: Establish water conservation programs that include both drought tolerant landscaping and efficient building design requirements as well as incentives for the conservation and wise use of water.

Objective 7.3.2: Water Quality - Maintenance of and, where possible, improvement of the quality of underground and surface water.

Policy 7.3.2.1: Stream and lake embankments shall be protected from erosion, and streams and lakes shall be protected from excessive turbidity, provided for horticultural and grazing activities on agriculturally zoned lands that utilize "best management practices (BMPs)" as recommended by the County Agricultural Commission and adopted by the Board of Supervisors. Until standards for buffers and special setbacks are established in the Zoning Ordinance, the County shall apply a minimum setback of 100 feet from all perennial streams, rivers, lakes, and 50 feet from intermittent streams and wetlands. These interim standards may be modified in

a particular instance if more detailed information relating to slope, soil stability, vegetation, habitat, or other site- or project-specific conditions supplied as part of the review for a specific project demonstrates that a different setback is necessary or would be sufficient to protect the particular riparian area at issue. For projects where the County allows an exception to wetland and riparian buffers, development in or immediately adjacent to such features shall be planned so that impacts on the resources are minimized. If avoidance and minimization are not feasible, the County shall make findings, based on documentation provided by the project proponent, that avoidance and minimization are infeasible.

Policy 7.3.2.2: Projects requiring a grading permit shall have an erosion control program approved, where necessary.

Objective 7.3.3: Wetlands - Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.

Policy 7.3.3.1: For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers' Wetland Delineation Manual.

Policy 7.3.3.4: The Zoning Ordinance shall be amended to provide buffers and special setbacks for the protection of riparian areas and wetlands. The County shall encourage the incorporation of protected areas into conservation easements or natural resource protection areas.

Policy 7.3.3.5: Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.

Objective 7.3.4: Drainage - Protection and utilization of natural drainage patterns.

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

Policy 7.3.4.2: Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.

4.8.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The criteria used to determine the significance of impacts related to hydrology and water quality are based on Appendix G of the *CEQA Guidelines*. The proposed project would result in a significant impact to hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - Result in substantial erosion or siltation on- or off-site;
 - Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite;
 - 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;
or
 - Impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

General

This environmental analysis of the potential impacts related to hydrology and water quality is based on a review of the results of the site-specific drainage and stormwater quality study, a review of published reports and maps, and the El Dorado County General Plan and ordinances.

The proposed project would be regulated by the various laws, regulations, and policies summarized above in Section 4.8.3, *Regulatory Setting*. Compliance by the proposed project with applicable federal, state, and local laws and regulations is assumed in this analysis and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the regulations is a condition of permit approval.

A significant impact would occur if, after considering the project design features described in Section 3.0, *Project Description*, and the required compliance with regulatory requirements, a significant impact would still occur. For those impacts considered to be significant, mitigation measures are proposed to reduce the identified impacts.

Drainage and Stormwater Study

The addition of hardscape (i.e., houses, sidewalks, and roads) would increase the impervious area within the project site by more than one acre and is therefore required to provide stormwater treatment for the 85th percentile storm event. A drainage and stormwater quality analysis was conducted based on the project design (D&A, 2018). The study concluded that the proposed stormwater drainage system would have sufficient capacity to serve the planned development. The study conducted modeling using the U.S. Army Corps of Engineers HEC-HMS program that simulates hydrologic processes. The input parameters considered the topography of the project site, the points of compliance (i.e., the locations where surface water would exit the project site), the soil types, the volume and extents of new impervious surfaces, and the proposed water quality swales and basins. The analysis was conservative because it did not consider the additional water quantity and quality treatment (i.e., Low-Impact Development or LID) measures described in Section 3.4, *Project Components*. In addition to detention basins, the new stormwater management system would include water quality treatment measures to control the quality of stormwater runoff from the site prior to discharge to the surrounding waters. Typical measures could include bio-filtration planters, bio-filtration basins, infiltration areas, permeable paving, localized rainwater harvesting, where feasible, and other treatment measures as approved by the County.

Water Supply and Sewer System

The project applicant requested that the El Dorado Irrigation District review the proposed project's needs for water supply and sanitary sewer services to verify that the District has the capacity to provide those services. The District provided a Facility Improvement Letter that verified that it does have the capacity to provide water supply by connection to the existing water main in State Route 49 (El Dorado Irrigation District, 2018). The District stated that the District sewage treatment facility has the capacity to treat the sewage from the proposed project and the existing gravity sewer main under State Route 49 has the capacity to carry the sewage. However, the existing onsite sewer lift station, the Deb's Frosty Lift Station, does not have the capacity to lift the sewage to the sewer main under State Route 49. Consequently, the proposed project would need to construct one or two lift stations and possibly add odor control to the Deb's Frosty Lift Station. The District would require the project applicant to submit a Facility Plan Report providing details of the water supply and sewer connections for their review and approval, as a condition of project approval.

Issues Not Discussed in Impacts

Due to the nature of the project and based on the site conditions as discussed in Section 4.8.2, *Environmental Setting*, there would be no impact related to the following topics for the reasons described below:

- ***Flood hazard, tsunami, or seiche zones.*** The proposed project is not located in an area that is subject to flooding, tsunamis, or seiches. Therefore, these significance criteria are not applicable to the proposed project and are not discussed further.
- ***Have a sustainable groundwater management plan.*** The project site is not located within a groundwater basin identified in the Department of Water Resources DWR's Bulletin 118 and

therefore is not subject to the Sustainable Groundwater Management Act. Therefore, this significance criterion is not applicable to the proposed project and is not discussed further.

Impacts and Mitigation Measures

Water Quality

Impact 4.8-1: The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. (*Less than Significant Impact with Mitigation*)

Construction – Overall Project

During the construction phase, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect water quality.

Construction activities would be required to comply with numerous hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies (see Section 4.7.3, *Hazards and Hazardous Materials, Regulatory Setting*). Contractors would be required to prepare and implement Hazardous Materials Business Plans that would require that hazardous materials used for construction would be used properly and stored in appropriate containers with secondary containment to contain a potential release. The California Fire Code would also require measures for the safe storage and handling of hazardous materials.

In addition, the transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release.

Finally, in the event of a spill that releases hazardous materials at the project site, a coordinated response would occur at the federal, state, and local levels, including the El Dorado County Office of Emergency Services and the Fire Department, which is the local hazardous materials response team. In the event of a hazardous materials spill, the fire and police departments would be simultaneously notified and sent to the scene to respond and assess the situation.

As required by the Stormwater Management Plan and Stormwater Quality Ordinance and the state Construction General Permit, construction contractors would be required to prepare an Erosion Sediment Control Plan and a Stormwater Pollution Prevention Plan (SWPPP) for construction activities according to the National Pollutant Discharge Elimination System (NPDES) General Construction Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site runoff.

The required compliance with the numerous laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for creation of hazardous conditions due to the use or accidental release of hazardous materials, and would render this impact **less than significant**.

Construction – State Route 49

As discussed in Section 4.7, *Hazards and Hazardous Materials, Environmental Setting, Onsite Conditions*, the former service station located at 493 Main Street (now Pleasant Valley Road/State Route 49) on the north side of State Route 49 is known to have leaked gasoline into soil and groundwater beneath State Route 49 and possibly further south within the project site. Construction activities in this area could encounter soil and groundwater contaminated with gasoline, which could adversely affect water quality if not handled properly.

To address encountering contaminated materials from the former service station during construction, the proposed project would implement **Mitigation Measures 4.7-3a: Health and Safety Plan and 4.7-3b: Soil and Groundwater Management Plan**, as discussed Section 4.7, *Hazards and Hazardous Materials, Impact 4.7-3*.

Mitigation Measures (Construction)

Mitigation Measure 4.7-3a, Health and Safety Plan: see Section 4.7, *Hazards and Hazardous Materials, Impact 4.7-3*.

Mitigation Measure 4.7-3b, Soil and Groundwater Management Plan: see Section 4.7, *Hazards and Hazardous Materials, Impact 4.7-3*.

Significance After Mitigation (Construction)

Implementation of the mitigation measures would result in construction crews being made aware of the potential to encounter contaminated soil and groundwater, if still present, and trained to respond accordingly. The Health and Safety Plan and Soil and Groundwater Management Plan would describe procedures for the removal and disposal of contaminated soil and groundwater. Once removed, the contaminated materials would no longer pose a threat to water quality and the impact would be reduced to **less than significant with mitigation**.

Operation

Stormwater

The long-term operations of the proposed project could result in long-term impacts to surface water quality from stormwater runoff. The proposed project would result in new impervious areas associated with new residences, roads, and sidewalks. Normal activities at the project site would include the use of various automotive petroleum products (i.e. fuel, oil, and grease); pesticides and fertilizers for landscaping; and paints, thinners, and cleaning products for home maintenance. Human activities have an effect on water quality when chemicals, metals, petroleum hydrocarbons, and other materials are transported with stormwater into drainage systems.

Under the existing conditions, runoff from the project site flows south and eventually reaches Martinez Creek, which flows to the Cosumnes River and then the Sacramento River. The proposed site grading will generally maintain the existing drainage patterns to the south.

The El Dorado County Code provides rules and regulations to manage and control stormwater and discharge. The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance) establishes provisions for public safety and environmental protection associated with grading activities on private property. The discharge of stormwater throughout the project site would be treated through BMPs prior to its discharge in accordance with these and other regulations listed below.

The County's Subdivision Ordinance requires drainage plans to be submitted prior to the approval of tentative maps for proposed subdivision projects. The drainage plans must include an analysis of upstream, onsite, and downstream facilities and pertinent details, as well as details of any necessary offsite drainage facilities. The tentative map must include data on the location and size of proposed drainage structures. In addition, drainage culverts consistent with the drainage plan may be required in all existing drainage courses, including roads. The tentative subdivision map for the proposed project is described in Chapter 3.0, *Project Description*.

The County's Design and Improvement Standards Manual, revised through 2007, identifies required erosion and sediment control measures that are applicable to subdivisions, roadways, and other types of developments. The purpose of the Design and Improvement Standards Manual is to standardize development practices used in the hillside environment that is prevalent in El Dorado County and to minimize the environmental effects of construction.

Volume II of the Manual includes drainage and design criteria for stormwater and Volume III provides guidance on how to implement the erosion and sediment control standards in the El Dorado County Code of Ordinances. Specifically, Volume III: Grading, Erosion and Sediment Control describes the criteria for determining whether an erosion and sediment control plan is required. When an erosion and sediment control plan is required, it must comply with the adopted Stormwater Management Plan and Stormwater Quality Ordinance, and the West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements.

The Drainage Manual provides standard procedures for future designs of drainage improvements. The Drainage Manual supersedes the stormwater drainage system design standards in the County's Design Improvements Standards Manual. The Drainage Manual requires that a hydrologic and hydraulic analysis be submitted for all proposed drainage facilities, including an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. A drainage report for the proposed project was prepared in 2018 that analyzed the proposed drainage and verified the proposed project would handle the runoff volume (D&A, 2018). As discussed above in Section 4.8.4, *Environmental Impacts and Mitigation Measures, Methodology*, the analysis is conservative because it did not consider the additional water quantity and quality treatment (i.e., Low-Impact Development or

LID) measures described in Section 3.4, *Project Components*. In addition to detention basins, the new stormwater management system would include water quality treatment measures to control the quality of stormwater runoff from the site prior to discharge to the surrounding waters. Typical measures could include bio-filtration planters, bio-filtration basins, infiltration areas, permeable paving, localized rainwater harvesting, where feasible, and other treatment measures as approved by the County.

The Western El Dorado County Stormwater Management Plan ensures compliance with the new Small MS4 permit requirements in the entire unincorporated County by setting forth requirements that development projects incorporate BMPs to control the volume, rate, and potential pollutant loading of stormwater runoff. The required BMPs may be contained in any land use entitlement, conditions of approval, grading plans, improvement plans, or any construction or building-related permit to be issued relative to such development. In addition, the proposed project is required to comply with all applicable El Dorado County Slope Development and Redevelopment Standards and Post Construction Stormwater Plan Requirements.

With compliance with the above-listed regulations, BMPs would be implemented to ensure that operation of the project would not violate water quality standards or waste discharge requirements, or otherwise adversely affect water quality. With compliance with the regulatory requirements, impacts relative to water quality during operations would be **less than significant**.

Sanitary Sewage

As discussed above in Section 4.8.4, *Environmental Impacts and Mitigation Measures, Methodology*, the proposed project would construct a sewer system that would connect to the existing sewer main under State Route 49. The construction would include one or two new lift stations because the project site is at a lower elevation than the sewer main. The El Dorado Irrigation District that operates the sewer system would require the project applicant to submit a Facility Plan Report providing details of the connection for their review and approval, including addressing the need for a new lift station. Approval of the Facility Plan Report would be a condition of permit approval. With compliance with the regulatory requirements, impacts relative to water quality during operations would be **less than significant**.

Mitigation Measures (Operation)

None required.

Groundwater Supplies and Recharge

Impact 4.8-2: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. (*Less than Significant Impact*)

As discussed in Section 3.0, *Project Description*, the proposed project would result in the construction of a residential subdivision, which would substantially add impervious surfaces that could impede groundwater recharge. As discussed above in Section 4.8.2, *Environmental Setting*,

Groundwater Basin, the project site is not located within a groundwater basin as delineated in DWR Bulletin 118.

Groundwater Supplies

The proposed project is served by El Dorado Irrigation District for water supply. As described in the El Dorado Irrigation District 2015 Urban Water Management Plan, the District does not utilize groundwater as a supply. As a result, the proposed project would not use groundwater for its water supply needs. The District's existing water supplies include surface water and recycled water. Therefore, the proposed project would not deplete or interfere with groundwater supplies during construction or operation, and the impact would be **less than significant**.

Impervious Surfaces and Recharge

Construction activities would be temporary. Impacts due to recharge and the addition of impervious surfaces would not occur until operations, discussed below. Therefore, relative to recharge and the addition of impervious surfaces during construction, there would be **no impact**.

Proposed project components such as residences, roads, and sidewalks would result in new impervious surfaces that could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types and thicknesses. In general, sandy and silty soils have higher infiltration rates and can contribute to significant amounts of groundwater recharge; clay soils tend to have lower percolation potentials; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff. The amount of new impervious surface and the extent to which it affects infiltration depends on the site-specific soil conditions. The project site is largely underlain by bedrock, and some groundwater in the local area discharges to the surface to creeks, and as seeps and springs (hence, the name of Diamond Springs), rather than as local recharge. Therefore, the net change in groundwater recharge potential due to the development of the proposed project would be negligible. In addition, the proposed project would not construct or utilize groundwater resources, such as water supply wells.

As discussed above in Section 4.8.4, *Environmental Impacts and Mitigation Measures, Methodology*, the new stormwater management system would include water quality treatment measures to control the quantity and quality of stormwater runoff from the site prior to discharge to the surrounding waters. Typical measures could include bio-filtration planters, bio-filtration basins, infiltration areas, permeable paving, localized rainwater harvesting, where feasible, and other treatment measures as approved by the County. Ultimately, the rainwater falling on the project site would be returned to the environment as infiltration into the site's shallow soils and as runoff eventually routed to Martinez Creek, consistent with the current conditions. The runoff to offsite lower elevations would also result in groundwater recharge in the lower elevation areas with thicker soils and the presence of aquifers, also consistent with current conditions. Therefore, proposed project operation would not substantially reduce groundwater recharge, resulting in an impact that would be **less than significant**.

Mitigation Measures

None required.

Erosion or Siltation

Impact 4.8-3: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation on- or offsite. (*Less than Significant Impact*)

As discussed in Section 3.0, *Project Description*, the proposed project would result in the construction of a residential subdivision, which would substantially alter the drainage pattern from surface water sheet flow into drainages with no impervious surfaces, to a controlled curb and gutter stormwater drainage system. Inappropriate design of the drainage system would have the potential to result in substantial onsite or offsite erosion or siltation.

Construction

Construction of the proposed project would have the potential to result in soil erosion during excavation, grading, and soil stockpiling. Because the overall footprint of construction activities would exceed one acre, the proposed project would be required to comply with the *NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ) (Construction General Permit) and the local stormwater ordinances, which are described above in Section 4.8.3, *Regulatory Setting*. These state and local requirements were developed to ensure that stormwater is managed and erosion is controlled on construction sites. The Construction General Permit requires preparation and implementation of a SWPPP, which requires applications of BMPs to control runoff and runoff from construction work sites. The BMPs would include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. With compliance with existing regulations, impacts associated with soil erosion during construction would be **less than significant**.

Operation

As summarized in Section 4.8.3, *Environmental Impacts and Mitigation Measures, Methodology, Drainage and Stormwater Study*, the project design without the inclusion of LID stormwater control measures is sufficient to satisfactorily treat and convey stormwater with the proposed drainage facilities without damage to structures or downstream receiving waters. In particular, the proposed detention basins would meter flows to existing creeks at rates that match pre-project stormwater flows, as required. In addition and as discussed in Section 3.4, *Project Components, Stormwater*, additional LID measures would be constructed to control the quality of stormwater runoff from the site prior to discharge to the surrounding waters. Typical measures could include tree planting, disconnected impervious areas, bioretention facilities and a vegetated swale (e.g., bio-filtration planters, bio-filtration basins, infiltration areas), permeable paving, localized

rainwater harvesting, where feasible, and other treatment measures as approved by the County. As discussed in Section 4.8.3, *Regulatory Setting*, the regional MS4 permit and the local ordinances and regulations implemented to comply with the MS4 permit would require the implementation of LID measures to control stormwater runoff and protect water quality as a condition of permits for the project. With compliance with existing regulations and geotechnical design recommendations, impacts associated with soil erosion and loss of topsoil during operations would be **less than significant**.

The drainage study (D&A 2018) summarized above in Methodology provided some analysis of drainage. However, the drainage study did not include an analysis to verify that post project flows will not exceed pre-project flow rate for the 2-year, 24-hour storm. To complete this requirement, the project applicant shall conduct **Mitigation Measure 4.6-2: 2-Year, 24-Hour Storm Evaluation** (as prescribed in Section 4.6 of this EIR, *Geology, Soils, Seismicity, Paleontological Resources, and Mineral Resources*) to reduce the impacts to **less than significant with mitigation**.

Mitigation Measure

Mitigation Measure 4.6-2, 2-Year, 24-Hour Storm Evaluation: see Section 4.6, *Geology, Soils, Paleontological Resources, and Mineral Resources, Impact 4.6-2*.

Significance After Mitigation

Implementation of Mitigation Measure 4.6-2 would ensure that the project's post-project flows would not exceed its pre-project flows. After mitigation, the project's impact would be **less than significant**.

Surface Runoff Resulting in Flooding

Impact 4.8-4: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite. (*Less than Significant Impact*)

As discussed in Section 3.0, *Project Description*, the proposed project would result in the construction of a residential subdivision, which would substantially alter the drainage pattern from surface water sheet flow into drainages with no impervious surfaces, to a controlled curb and gutter stormwater drainage system. Inappropriate design of the drainage system would have the potential to result in onsite or offsite flooding.

Construction

As previously discussed, because the overall footprint of construction activities would exceed one acre, the proposed project would be required to comply with the *NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ) (Construction General Permit) and the local stormwater ordinances, which are described above in Section 4.8.3, *Regulatory Setting*. These state and local requirements were

developed to ensure that stormwater is managed and erosion is controlled on construction sites. The Construction General Permit requires preparation and implementation of a SWPPP, which requires applications of BMPs to control runoff and runoff from construction work sites. The BMPs would include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. With compliance with existing regulations, impacts associated with onsite and offsite flooding during construction would be **less than significant**.

Operation

As summarized in Section 4.8.3, *Environmental Impacts and Mitigation Measures, Methodology, Drainage and Stormwater Study*, the project design without the inclusion of LID stormwater control measures is sufficient to satisfactorily treat and convey stormwater within the proposed drainage facilities without damage to structures or downstream receiving waters. In particular, the detention basins would meter flows to existing creeks at rates that match pre-project stormwater flows, as required, and would therefore not change the existing rate of surface water flow from the project site. In addition and as discussed in Section 3.4, *Project Components, Stormwater*, additional LID measures would be constructed to control stormwater runoff from the site prior to discharge to the surrounding waters. Typical measures could include tree planting, disconnected impervious areas, bioretention facilities and a vegetated swale (e.g., bio-filtration planters, bio-filtration basins, infiltration areas), permeable paving, localized rainwater harvesting, where feasible, and other treatment measures as approved by the County. As discussed in Section 4.8.3, *Regulatory Setting*, the regional MS4 permit and the local ordinances and regulations implemented to comply with the MS4 permit would require the implementation of LID measures to control stormwater runoff and protect water quality as a condition of permits for the project. With compliance with existing regulations and geotechnical design recommendations, impacts associated with flooding during operations would be **less than significant**.

Mitigation Measures

None required.

Stormwater Drainage Systems and Polluted Runoff

Impact 4.8-5: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would 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. (*Less than Significant Impact*)

As discussed in Section 3.0, *Project Description*, the proposed project would result in the construction of a residential subdivision, which would substantially alter the drainage pattern from surface water sheet flow into drainages with no impervious surfaces, to a controlled curb and gutter stormwater drainage system.

Existing or Planned Stormwater Drainage Systems

The project site does not have an existing stormwater drainage system. As discussed above in Section 4.8.4, *Environmental Impacts and Mitigation Measures, Methodology*, the capacity of the proposed stormwater drainage system was evaluated based on the project design, and conservatively concluded that the proposed stormwater drainage system would have the capacity to handle the anticipated volume of stormwater runoff. In particular, the detention basins would meter flows to existing creeks at rates that match pre-project stormwater flows, as required, and would therefore not change the existing rate of surface water flow from the project site. In addition, the project site is in a rural undeveloped area with no developed stormwater drainage systems located downslope or downstream of the project site. All surface water runoff would eventually be returned to the drainages into Martinez Creek, consistent with existing conditions. Therefore, the impact to existing or planned stormwater drainage systems would be **less than significant**.

Additional Sources of Polluted Runoff

The proposed project use would consist of a residential subdivision and a public park. Normal activities at the residential subdivision would include the use of various automotive petroleum products (i.e. fuel, oil, and grease); pesticides and fertilizers for landscaping; and paints, thinners, and cleaning products for home maintenance. Human activities have an effect on water quality when chemicals, metals, petroleum hydrocarbons, and other materials are transported with stormwater into drainage systems. As analyzed above in Impact 4.8-1, compliance with regulations would ensure that operation of the project would not violate water quality standards or waste discharge requirements, or otherwise adversely affect water quality. Therefore, no additional sources of polluted runoff would be created and the impact would be less than significant.

Mitigation Measures

None required.

Impede or Redirect Flood Flows

Impact 4.8-6: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows. (*Less than Significant Impact*)

Construction and Operation

As discussed above in Section 4.8.2, *Environmental Setting*, the project site is not located in an area subject to flooding. In addition, surface water flow would be managed by the proposed stormwater drainage system to prevent flooding, as analyzed above in Impact 4.8-4. In particular, the proposed detention basins would meter flows to existing creeks at rates that match pre-project stormwater flows, as required, and therefore would not change stormwater flow conditions in downstream area. Therefore, relative to impeding or redirecting flood flows, the impact would be **less than significant**.

Mitigation Measures

None required.

Conflict with a Basin Plan

Impact 4.8-7: The proposed project would not conflict with or obstruct implementation of a water quality control plan. (*Less than Significant Impact, with Mitigation*)

As discussed above in Section 4.8.2, *Environmental Setting*, surface water quality is good since the project site is not developed and has not had any industrial or commercial use since the gold rush days in the late 1800s. Similarly, groundwater quality is also expected to be good with the exception of the local area at and just downgradient of the former service station at 493 Main Street (now Pleasant Valley Road/State Route 49). Groundwater at this localized area is anticipated to have residual levels of gasoline from a leak in service station USTs. Disturbance of this area could result in spreading possible contamination, which would conflict with water quality objectives of the Basin Plan. In addition, chemicals would be used during construction and operation phase, which could adversely affect water quality and conflict with the water quality objectives of the Basin Plan.

Construction – Overall Project

As discussed above in Impact 4.8-1, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect water quality, which would conflict with the water quality objectives of the Basin Plan.

As discussed above in impact 4.8-1, construction activities would be required to comply with numerous hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies. Contractors would be required to prepare and implement HMBPs that would require that hazardous materials used for construction would be used properly and stored in appropriate containers with secondary containment to contain a potential release. The California Fire Code would also require measures for the safe storage and handling of hazardous materials.

In addition, the transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release.

Finally, in the event of a spill that releases hazardous materials at the project component sites, a coordinated response would occur at the federal, state, and local levels, including the El Dorado

County Office of Emergency Services and the El Dorado Hills Fire Department, which is the local hazardous materials response team. In the event of a hazardous materials spill, the fire and police departments would be simultaneously notified and sent to the scene to respond and assess the situation.

As discussed in Section 3.6, *Geology and Soils*, construction contractors would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) for construction activities according to the National Pollutant Discharge Elimination System (NPDES) General Construction Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site runoff.

The required compliance with the numerous laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for the release of pollutants that would conflict with Basin Plan water quality objectives, and would render this impact **less than significant**.

Construction – State Route 49

As discussed in Section 4.7, *Hazards and Hazardous Materials, Environmental Setting, Onsite Conditions*, the former service station located at 493 Main Street (now Pleasant Valley Road/State Route 49) on the north side of State Route 49 is known to have leaked gasoline into soil and groundwater beneath State Route 49 and possibly further south within the project site. Construction activities in this area could encounter soil and groundwater contaminated with gasoline, which could adversely affect water quality if not handled properly, which would conflict with the water quality objectives of the Basin Plan.

As discussed in Impact 4.7-3 in Section 4.7, *Hazards and Hazardous Materials*, to address encountering contaminated materials from the former service station during construction, the proposed project would implement **Mitigation Measures 4.7-3a: Health and Safety Plan and 4.7-3b: Soil and Groundwater Management Plan**, discussed in Section 4.7, *Hazards and Hazardous Materials*, Impact 4.7-3.

Mitigation Measures (Construction)

Mitigation Measure 4.7-3a, Health and Safety Plan: see Section 4.7, *Hazards and Hazardous Materials*, Impact 4.7-3.

Mitigation Measure 4.7-3b, Soil and Groundwater Management Plan: see Section 4.7, *Hazards and Hazardous Materials*, Impact 4.7-3.

Significance After Mitigation (Construction)

Implementation of the mitigation measures would result in construction crews being made aware of the potential to encounter contaminated soil and groundwater, if still present, and trained to respond accordingly. The Health and Safety Plan and Soil and Groundwater Management Plan would describe procedures for the removal and disposal of contaminated soil and groundwater.

Once removed, the contaminated materials would no longer pose a threat to water quality and the impact would be reduced to less than significant with mitigation.

Operation

As summarized in Section 4.8.3, *Environmental Impacts and Mitigation Measures, Methodology, Drainage and Stormwater Study*, the project design without the inclusion of LID storm water control measures is sufficient to satisfactorily treat and convey stormwater within the proposed drainage facilities without damage to structures or downstream receiving waters. In addition and as discussed in Section 3.4, *Project Components, Stormwater*, additional LID measures would be constructed to control the quality of stormwater runoff from the site prior to discharge to the surrounding waters. Typical measures could include tree planting, disconnected impervious areas, bioretention facilities and a vegetated swale (e.g., bio-filtration planters, bio-filtration basins, infiltration areas), permeable paving, localized rainwater harvesting, where feasible, and other treatment measures as approved by the County. As discussed in Section 4.8.3, *Regulatory Setting*, the regional MS4 permit and the local ordinances and regulations implemented to comply with the MS4 permit would require the implementation of LID measures to control stormwater runoff and protect water quality as a condition of permits for the project. With compliance with existing regulations and geotechnical design recommendations, impacts associated with conflicting with Basin Plan objectives would be **less than significant**.

Mitigation Measures (Operation)

None required.

Cumulative Impacts

Impact 4.8-8: Concurrent construction and operation of the proposed project and related projects in the geographic scope would not result in cumulative impacts to hydrology and water quality. (Less than Significant Impact)

This section presents an analysis of the cumulative effects of the proposed project in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. As previously discussed, the proposed project would have no impact with respect to floods, tsunamis, or seiches. Therefore, these significance criteria are not applicable to the proposed project and are not discussed further. The project site is not located within a groundwater basin identified in the Department of Water Resources DWR's Bulletin 118 and therefore is not subject to the Sustainable Groundwater Management Act. Therefore, this significance criterion is not applicable to the proposed project and is not discussed further.

The geographic area affected by the proposed project and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. The geographic scope of analysis for cumulative hydrology and water quality impacts encompasses and is limited to the project site and its immediately downslope and downstream area. This is because impacts relative to hydrology and water quality are generally site-specific. For example, the effect of erosion

would tend to be limited to the localized area of a project and could only be cumulative if erosion occurred as the result of two or more adjacent projects that spatially overlapped.

The timeframe during which proposed project could contribute to cumulative hydrology and water quality impacts includes the construction and operations phases. For the proposed project, the operations phase is permanent. However, similar to the geographic limitations discussed above, it should be noted that impacts relative to hydrology and water quality are generally time-specific. Geologic hazards could only be cumulative if two or more hydrology and water quality impacts occurred at the same time, as well as overlapping at the same location.

Significant cumulative impacts related to hydrology and water quality could occur if the incremental impacts of the proposed project combined with the incremental impacts of one or more of the three cumulative projects identified in Chapter 4.0, *Environmental Setting, Impacts, and Mitigation Measures, Cumulative Impacts*, to substantially increase risk that people or the environment would be exposed to geologic hazards. The cumulative projects include El Mirage Plaza (2 miles to the northwest), El Dorado Senior Village (1.5 miles to the west), Shinn Ranch (3.5 miles to the west), Indian Creek Ranch (5.4 miles to the northwest), and Piedmont Oak Estates and Diamond Village Apartments (both about 1.5 miles to the northeast). Given these distances, the proposed project could not combine with the cumulative projects to result in a cumulatively considerable effect relative to hydrology and water quality.

If the projects are constructed at the same time, the hydrology and water quality effects could be cumulatively significant. However, the state Construction General Permit would require each project to prepare and implement a SWPPP. The SWPPPs would describe BMPs to control runoff and prevent impacts related to water quality and pollutants, erosion and siltation, affecting flood flows, and conflicts with water quality objectives of the Basin Plan for each project. Through compliance with this requirement, the potential for impacts would be reduced. The Construction General Permit has been developed to address cumulative conditions arising from construction throughout the state, and is intended to maintain cumulative effects of projects subject to this requirement below levels that would be considered significant. For example, two adjacent construction sites would be required to implement BMPs to reduce and control the release of sediment and/or other pollutants in any runoff leaving their respective sites. The runoff water from both sites would be required to achieve the same action levels, measured as a maximum amount of sediment or pollutant allowed per unit volume of runoff water. Thus, even if the runoff waters were to combine after leaving the sites, the sediments and/or pollutants in the combined runoff would still be at concentrations (amount of sediment or pollutants per volume of runoff water) below action levels and would not be cumulatively considerable (**less than significant**).

During operations, the proposed project and the cumulative projects would be required to comply with the County MS4 requirements described in the West Slope Development and Redevelopment Standards and Post Construction Stormwater Plan Requirements (see Section 4.8.3, *Regulatory Setting*). These requirements require managing stormwater runoff through the use of stormwater retention and treatment measures as part of LID requirements. The proposed project and each cumulative project would be required to comply with the same regulations as a condition of their permits. The runoff water from the cumulative sites would be required to achieve

the same level of stormwater management as the proposed project and impacts would not be cumulatively considerable (**less than significant**).

Mitigation Measures

None required.

4.8.5 References

- D&A. 2018. *Dorado Oaks Drainage and Stormwater Quality Technical Memo for Tentative Map*. September 27, 2018.
- Department of Water Resources (DWR). 2020. *GSA Map Viewer*.
- El Dorado Irrigation District. 2018. *Facility Improvement Letter (FIL), 2905FIL, Stonehenge Springs (revised) Assessor's Parcel No. 329-310-10,11,12 + 054-402-18+ 329-301-15 &20 (Diamond Springs)*. June 12, 2018.
- Environmental Science Associates (ESA). 2019a. *Draft State Route 49/Pleasant Valley Road at Faith Lane Project Initial Site Assessment*. April, 2019.
- Environmental Science Associates (ESA). 2019b. *Draft Dorado Oaks Tentative Tract Map Project, Faith Lane, Diamond Springs, California, Phase I Environmental Site Assessment*. April, 2019.
- Federal Emergency Management Agency (FEMA). 2008. *National Flood Hazard Layer FIRMette, Panel 06017C0775E*. September 26, 2008.
- Regional Water Quality Control Board (RWQCB) – Central Valley Region. 2018. *Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region*. May, 2018.
- Western Regional Climate Center. 2020. Temperature and Precipitation Data for Placerville Ifg Station. Available: <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6962>. Accessed May 20, 2020.
- YoungDahl Consulting Group. 2018. *Geotechnical Engineering Study Update for Stonehenge Springs, Faith Lane, Diamond Springs, California*. June 4, 2018.

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4.9 Land Use and Planning

The potential effects on land use and planning issues have been assessed in connection with planning, construction, and operation of the proposed project. The section includes a description of the environmental setting to establish baseline conditions for land use and planning, a summary of the regulations related to land use and planning, and an evaluation of the proposed projects' potential effects on land use and planning.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. No comments were received that directly related to land use or planning issues. Topics related to land use and planning are addressed primarily in this section, with similar land use and planning discussions covered within the project design, population and housing, and mobility discussions within the document.

4.9.1 Introduction

Relevant baseline information has been provided, including a description of existing, and planned land uses in and adjacent to the project area, current land uses, land use designations, and zoning. Anticipated future conditions are also provided, with a description of the potential impacts resulting from the project, and identification of feasible mitigation (where applicable) to avoid or lessen the impacts.

CEQA requires the analysis of potential adverse effects of a project on the environment. The potential effects of the environment on the project are not legally required to be analyzed or mitigated under CEQA, except where the project impacts exacerbate the existing conditions. Therefore, this section analyzes potential effects of land uses and planning conditions on the project (as well as other users) as non-CEQA impacts for informational purposes as they relate to consistency with General Plan Policies. The physical environmental effects associated with the project, many of which pertain to issues of land use compatibility (e.g., noise, transportation, air quality) are evaluated in other sections of this EIR.

The primary sources of data referenced for this section include the El Dorado County General Plan (El Dorado County, 2004), and the El Dorado County Zoning Ordinance (El Dorado County, 2018).

Background

The project consists of both on-site improvements and off-site improvements related to a proposed 382-lot residential subdivision, lot-line adjustments, intersection improvements, and roadway improvements. The Dorado Oaks Subdivision component of the project would provide for development of residential and open space uses on a series of parcels that cover a combined area of approximately 142.5 acres. The project would also include new access and circulation to and within the site, as well as infrastructure and roadway improvements.

A Phased Tentative Subdivision Map, consisting of 14 Large Lots, is proposed to subdivide the property, and the project approvals would include several lot line adjustments along portions of the

site's eastern boundary to correct a series of inadvertent encroachments from adjoining properties onto the proposed subdivision site. The project would also include improvements to State Route 49 (SR-49) to provide for the subdivision site's interface with State Route 49 (SR-49).

Project implementation would require a series of interrelated planning and regulatory approvals by El Dorado County, as Lead Agency. Specifically, the County is considering taking the following approval actions:

- Certification of the Dorado Oaks Tentative Subdivision Map project EIR pursuant to CEQA;
- Approval of the Tentative Subdivision Map;
- Adoption of a Planned Development overlay zone for the subdivision project area to accommodate reduced setbacks in the multi-family portion of the site;
- Approval of a Development Agreement;
- Approval of a Public Facilities and Financing Plan (PFFP); and
- Other local approvals that may be required, such as:
 - Grading permits;
 - Demolition permits;
 - Construction Waste Management Plan (for construction waste);
 - Encroachment permits;
 - Building permits; and
 - Other ministerial County approvals as necessary to develop the project.

The project would require review and recommendation by the Planning Commission to the County Board of Supervisors, followed by consideration and action by the Board of Supervisors. This EIR provides the CEQA-required environmental documentation for use in considering County approvals required to implement the project.

4.9.2 Environmental Setting

Existing and Baseline Conditions

El Dorado County is located in Northern California, approximately 30 miles northeast of Sacramento, and 45 miles southwest of Lake Tahoe consisting of rolling hills and mountainous terrain forming the Sierra Nevada Mountains. The proposed project area is located within the unincorporated Diamond Springs Community Region in El Dorado County, about three miles south of Placerville.

Regional access to the area is provided by the U.S. Highway 50 (US-50) corridor that begins in Sacramento and crosses the Sierra Nevada Mountains to South Lake Tahoe and beyond. The US-50 transportation corridor passes through the City of Placerville, connecting many urban and rural communities throughout the County and providing public access to recreational opportunities and

economic activities throughout the region. SR-49 provides access to the area from the north and the south along the western front of the Sierra Nevada Mountains and its foothills. Placerville is the closest incorporated City to the proposed project site, the location of the County’s seat of government, and as of 2019 Placerville has an estimated population of 11,175¹. The project area, and other unincorporated areas are similarly populated rural communities that are mostly made up of single family residential, recreational, and agricultural uses.

General Plan land use and County zoning designations for the project area are shown in **Figures 4.9-1 and 4.9-2**, respectively.

Dorado Oaks Tentative Subdivision Map Site

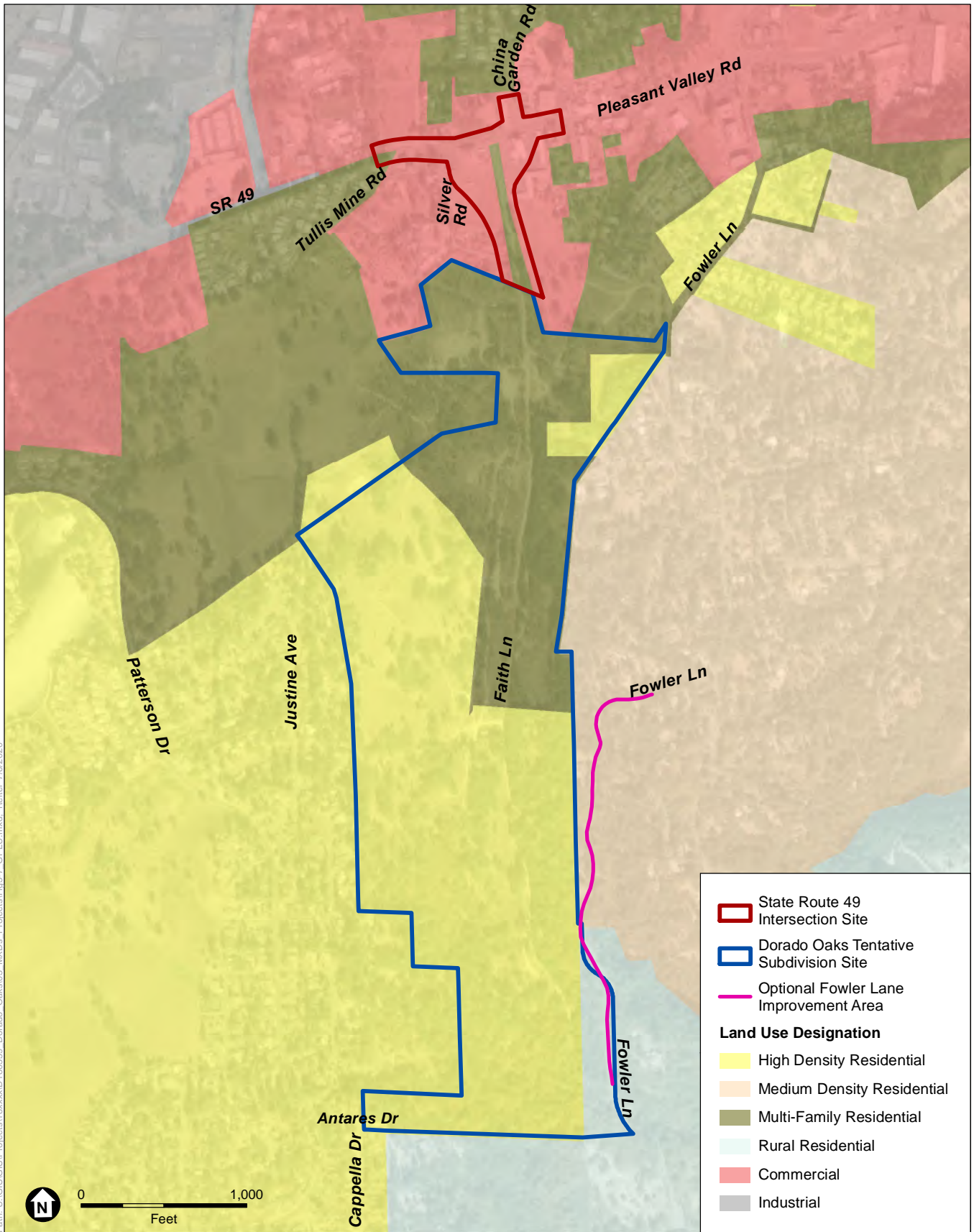
The proposed Dorado Oaks Tentative Subdivision site is currently comprised of three designated land use areas including: 1) Multifamily Residential (MFR); 2) High-Density Residential (HDR); and 3) Rural Residential (RR). The proposed Dorado Oaks Tentative Subdivision project site includes parcels zoned for Single-Unit Residential (R1); Multi-Unit Residential (RM), including a Planned Development (PD) overlay; and zoning for Rural Lands (RL-10). **Table 4.9-1** provides a listing of all the parcels within the Dorado Oaks Tentative Subdivision site and the corresponding land use and zoning designations for reference.

**TABLE 4.9-1
 PROJECT LAND USE AND ZONING DESIGNATIONS**

Assessor’s Parcel Number	Existing Land Use	Land Use Designation	
		General Plan	Zoning Ordinance
Dorado Oaks Tentative Subdivision Map Site			
329301015	Vacant	MFR	RM
329301015	Vacant	MFR	RM
32930120	Vacant	MFR	RM
32931011	Vacant	HDR	R1
32931012	Vacant	HDR	R1
32931012	Vacant	RR	RL-10
32931010	Vacant	HDR	R1
32931010	Vacant	HDR	R1
32931010	Vacant	MFR	RM
32931010	Vacant	MFR	RM

SOURCE: USDA, 2016; El Dorado County, 2019; ESA, 2020

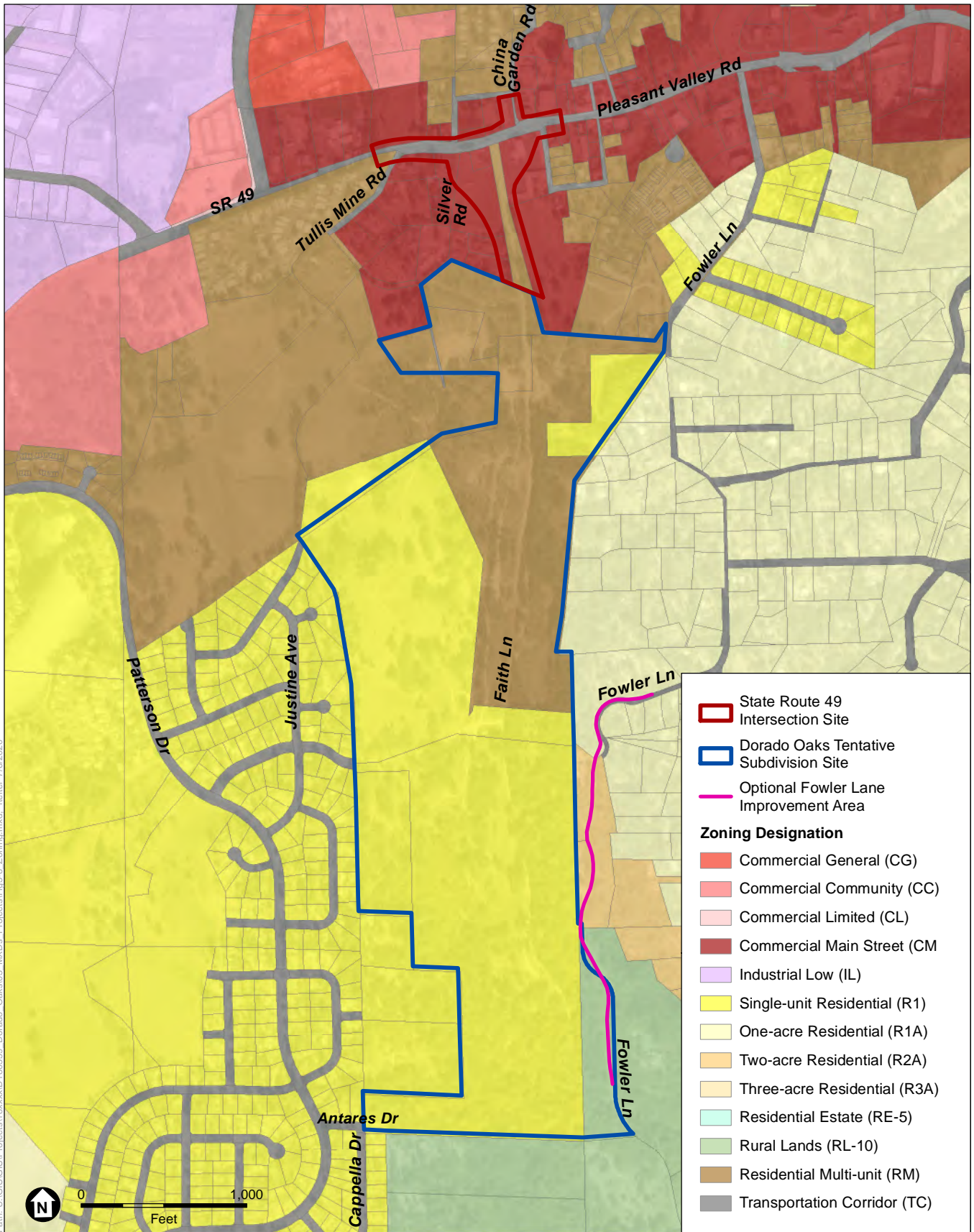
¹ US Census, 2020. Quick Facts: Placerville city, California. Population statistics. Available <https://www.census.gov/quickfacts/fact/table/placervillecitycalifornia>. Accessed May 22, 2020.



SOURCE: USDA, 2016; El Dorado County, 2018; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.9-1
Existing General Plan Land Use Designations



SOURCE: USDA, 2016; El Dorado County, 2019; ESA, 2020

Dorado Oaks Tentative Subdivision Map Project

Figure 4.9-2
Existing Zoning Designations

State Route 49 Intersection Area

The State Route 49 Intersection Area portion of the proposed project is currently designated in the County's General Plan as dedicated right-of ways for SR-49 and attached local roads. The land uses along both sides of SR-49 are designated as Commercial, with the exception of Faith Lane itself, which is surrounded by MFR. The State Route 49 Intersection Area includes parcels categorized by two zoning areas for all areas adjoining SR-49. The zoning for the area surrounding SR-49 includes Commercial Main Street (CM), and Faith Lane is zoned as Residential Multi-Unit.

Optional Fowler Lane Improvement Area

The Optional Fowler Lane Improvement Area portion of the proposed project is currently comprised of two designated land use areas. These use designations include: Medium Density Residential (MDR); and Rural Residential (RR). The proposed project site for the Optional Fowler Lane Improvement Area includes parcels categorized by three zoning areas for One-Acre Residential (R1A); 2) Two-Acre Residential (R2A); and 3) Rural Lands (RL-10).

Land Use Designations

As stated in the General Plan, the following descriptions of the applicable land use designations to the proposed project and immediate area are provided below. (See **Figure 4.9-1**, Existing *General Plan Land Uses*).

Multifamily Residential (MFR): This land use designation identifies those areas suitable for high-density, single family and multifamily design concepts such as apartments, single-family attached dwelling units (i.e., air-space condominiums, townhouses and multiplexes), and small-lot single-family detached dwellings subject to the standards set for in the Zoning Ordinance and which meet the minimum allowable density. Mobile home parks, as well as existing and proposed manufactured home parks, are permitted under this designation. According to the General Plan, lands identified as MFR are in locations with the highest degree of access to transportation facilities, shopping and services, employment, recreation, and other public facilities. Mixed use development within Community Regions and Rural Centers which combine commercial and residential uses are permitted. Except as provided in Objective 2.2.6 (Site Specific Policy), the minimum allowable density is five dwelling units per acre, with a maximum density of 24 dwelling units per acre. Except as provided in Policy 2.2.2.3, this designation is considered appropriate only within Community Regions and Rural Centers. (Resolution 199-2018, September 25, 2018)

High-Density Residential (HDR): This land use designation identifies those areas suitable for intensive single-family residential development at densities from one to five dwelling units per acre. Allowable residential structure types include single-family attached (i.e., air-space condominiums, townhouses) and detached dwellings and manufactured homes. Except as provided in Policy 2.2.2.3, this designation is considered appropriate only within Community Regions and Rural Centers.

Rural Residential (RR): This land use designation establishes areas for residential and agricultural development. These lands will typically have limited infrastructure and public services and will remain for the most part in their natural state. This category is appropriate for lands that are characterized by steeper topography, high fire hazards, and limited or substandard access as well as “choice” agricultural soils. The RR designation shall be used as a transition between LDR and the Natural Resource (NR) designation. Clustering of residential units under allowable densities is encouraged as a means of preserving large areas in their natural state or for agricultural production. Typical uses include single-family residences, agricultural support structures, a full range of agricultural production uses, recreation, and mineral development activities. The allowable density for this designation is one dwelling unit per 10 to 160 acres. This designation is considered appropriate only in the Rural Regions.

Commercial (C): The purpose of this land use category is to provide a full range of commercial retail, office, and service uses to serve the residents, businesses, and visitors of El Dorado County. Mixed use development of commercial lands within Community Regions and Rural Centers which combine commercial and residential uses are permitted. Commercially designated parcels may not be developed with a residential use as the sole use of the parcel unless the residential use is either: 1) a community care facility as described in General Plan Goal HO-4; or 2) part of an approved mixed use development as allowed by General Plan Policy 2.1.1.3 and 2.1.2.5, within an area zoned to allow for a mix of uses. Numerous zone districts are utilized to direct specific categories of commercial uses to the appropriate areas of the County. This designation is considered appropriate within Community Regions, Rural Centers and Rural Regions.

Medium-Density Residential (MDR): This land use designation establishes areas suitable for detached single-family residences with larger lot sizes which will enable limited agricultural land management activities. This designation is applied where the character of an area is single-family residences; where the absence or reduced level of infrastructure including roads, water lines, and sewer lines does not justify higher densities; where the topography poses a constraint to higher densities; and as a transitional land use between the more highly developed and the more rural areas of the County. The maximum allowable density shall be one dwelling unit per 1.0 acre. Parcel sizes shall range from 1.00 to 5.00 acres. Except as provided in Policy 2.2.2.3, this designation is considered appropriate only within Community Regions and Rural Centers.

Zoning Ordinance Designations

As stated in the County’s Zoning Ordinance, the following descriptions of the applicable zoning designations to the proposed project and immediate area are provided below:

Single-unit Residential (R): The Single-unit Residential Zone is used to promote and regulate the development of higher density, single-unit dwellings, and accessory structures and uses. Minimum lot size designations of R1 and R20K are applied to this zone based on surrounding use compatibility, and physical and infrastructural constraints. Said designations represent the minimum lot size of 6,000 and 20,000 square feet, respectively. This zone is applicable to lands designated as High Density Residential (HDR) in the General Plan.

Multi-unit Residential (RM): The RM, Multi-unit Residential Zone identifies those lands which are most capable of supporting the highest density of development within the County, based on topography, infrastructure, and circulation availabilities and constraints, as well as proximity to employment centers, public facilities, recreation, and shopping. It is applied to regulate and promote the development of multi-unit dwellings, including apartments, condominiums, and townhouses, while ensuring compatibility with surrounding lower density residential neighborhoods. Detached or attached residential dwellings are allowed in accordance with defined standards, and providing the minimum density of at least 5 dwelling units per acre is met. This zone is utilized in Community Regions and Rural Centers to meet affordable housing goals identified in the Housing Element of the General Plan. Mobile home and manufactured home land lease development is allowed within this zone (see General Plan Policy 2.2.1.2). This zone is applicable to lands designated as Multi-Family Residential (MFR) in the General Plan.

Rural Lands (RL): The RL, Rural Lands Zone, is intended to identify those lands that are suitable for limited residential development based on topography, access, groundwater or septic capability, and other infrastructural requirements. This zone may be applied where resource-based industries in the vicinity may impact residential uses. Commercial support activities that are compatible with the available infrastructure may be allowed within this zone to serve the surrounding rural and agricultural communities. Although agricultural uses are allowed, these lands generally do not support exclusive agricultural use. This zone is applied to those lands to allow uses which supplement the agricultural use. For special setback purposes, the RL zone is not considered to be an agricultural or timber zone. Minimum lot size designators are applied to this zone based on the constraints of the site, surrounding uses, and other appropriate factors. The designator represents the minimum number of acres in the following increments: 10, 20, 40, 80, and 160.

Commercial, Main Street (CM): The CM, Main Street Commercial Zone, allows a wide range of pedestrian-oriented retail, office, and service uses, and mixed use development comprised of commercial and residential uses. Flexible development standards are applied to facilitate preservation of historic structures and to encourage new development compatible with the identity of each unique community. This zone is generally appropriate for historic downtown areas or town centers.

One-acre Residential (R1A): The R1A, One-acre Residential Zone, is used to create a more dispersed suburban residential character to an area by providing for and regulating medium density residential development at the highest range of one dwelling unit per acre. Accessory structures and uses and low-intensity commercial agricultural pursuits (crop lands, orchards, raising and grazing of domestic farm animals) are considered compatible with this zone. This zone is applicable to lands designated as Medium Density Residential (MDR) in the General Plan and may be applied to High Density Residential lands where infrastructure to serve higher densities is not yet available.

Two-acre Residential (R2A): The R2A, Two-acre Residential Zone, is utilized to create a more dispersed suburban residential character to an area by providing for and regulating medium density residential development at the mid-range of one dwelling unit per two acres. Accessory

structures and uses and low-intensity commercial agricultural pursuits (crop lands, orchards, raising and grazing of domestic farm animals) are considered compatible with this zone. This zone is applicable to lands designated as Medium Density Residential (MDR) in the General Plan.

4.9.3 Regulatory Setting

Federal

No federal plans, policies, regulations, or laws related to land use are applicable to the proposed project area.

State

No state plans, policies, regulations, or laws related to land use are applicable to the proposed project area.

Local

El Dorado County General Plan

The El Dorado County General Plan provides for long-range direction and policy for the use of land within El Dorado County. The County Board of Supervisors adopted the most recent general plan on July 19, 2004 and has most recently amended the General Plan in 2018. The General Plan consists of the following nine elements: Land Use; Transportation and Circulation; Housing, Public Services and Utilities; Health, Safety, and Noise; Conservation and Open Space; Agriculture and Forestry; Parks and Recreation; and Economic Development.

The Land Use Element sets forth specific goals, objectives, and policies to guide the intensity, location, and distribution of land uses. Also, within the General Plan Land Use Element is the Land Use Diagram which geographically depicts the County's goals, objectives, and policies related to land uses. Further, the General Plan Land Use Diagram outlines areas where future growth and urban/suburban activities are directed to, or likely to occur. The Land Use Element establishes an appropriate range of land use designations that guides growth and development in a manner that maintains the rural character of the county, utilizes infrastructure in an efficient, cost-effective manner, and furthers the implementation of the Community Region, Rural Center, and Rural Region concept areas. Provided below is a list of the goals, objectives, and policies determined to have relevance to this proposed project.

Goal 2.1: Land Use: Protection and conservation of existing communities and rural centers; creation of new sustainable communities; curtailment of urban/suburban sprawl; location and intensity of future development consistent with the availability of adequate infrastructure; and mixed and balanced uses that promote use of alternate transportation systems.

Objective 2.1.1: Community Regions: Provide opportunities that allow for continued population growth and economic expansion while preserving the character and extent of existing rural centers and urban communities, emphasizing both the natural setting and built design elements which contribute to the quality of life and economic health of the County.

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

Policy 2.1.1.7: Development within Community Regions, as with development elsewhere in the County, may proceed only in accordance with all applicable General Plan Policies, including those regarding infrastructure availability as set forth in the Transportation and Circulation and the Public Services and Utilities Elements. Accordingly, development in Community Regions and elsewhere will be limited in some cases until such time as adequate roadways, utilities, and other public service infrastructure become available and wildfire hazards are mitigated as required by an approved Fire Safe Plan.

Objective 2.1.2: Rural Centers: Recognize existing defined places as centers within the Rural Regions which provide a focus of activity and provides goods and services to the surrounding areas.

Policy 2.1.2.5: Mixed use developments which combine commercial and residential uses in a single project are permissible and encouraged within Rural Centers. Within Rural Centers, the mixed uses may occur either vertically and/or horizontally. The maximum residential density shall be 10 dwelling units per acre in Rural Centers in identified mixed use areas as defined in the Zoning Ordinance. The residential component of a mixed use project may include a full range of single and/or multi-family design concepts. The maximum residential density of 10 dwelling units per acre may only be achieved where adequate infrastructure, such as water, sewer and roadway are available or can be provided concurrent with development.

Objective 2.1.3: Rural Regions: Provide a land use pattern that maintains the open character of the County, preserves its natural resources, recognizes the constraints of the land and the limited availability of infrastructure and public services, and preserves the agricultural and forest/timber area to ensure its long-term viability for agriculture and timber operations.

Policy 2.1.2.5: All lands not contained within the boundaries of a Community Region or a Rural Center are classified as Rural Regions.

Goal 2.2: Land Use Designations: A set of land use designations which provide for the maintenance of the rural and open character of the County and maintenance of a high standard of environmental quality.

Policy 2.2.1.2: This policy defines land use designations for the General Plan. Land use designations in and around the project area are discussed earlier in this EIR section under *Land Use Designations*.

Policy 2.2.1.3: The General Plan shall provide for the following range of population densities in the respective land use designation based upon the permitted range of dwelling units per acre and number of persons per acre as shown in the table below.

General Plan Table 2-2: Land Use Densities and Residential Population Ranges

Land Use Designation	Units per Acre	Persons per Housing Unit ¹	
Multifamily Residential	5 – 24	2.3	11.5 – 55.2
High-Density Residential	1 – 5	2.8	2.8 – 19.6
Medium-Density Residential	1 - .02	2.8	2.8
Low-Density Residential	0.20 – 0.1 ³	2.8	0.56 – 0.28
Rural Residential	0.1 – 0.025	2.8	0.28 – 0.07
Agricultural Lands	0.05	2.8	0.14
Natural Resource	0.025 – 0.00625	2.8	0.07 – 0.0175
Commercial	20/10 ²	2.3	16/23
Research & Development	-	-	-
Industrial	-	-	-
Open Space	-	-	-
Public Facilities	-	-	-
Tourist Recreational	-	-	-
Notes: 1 – 1990 U. S Census 2 – Maximum of 20 units per acre in Community Regions; maximum of 10 units per acre in Rural Centers. 3 – Policy 5.2.3.5 requires an average of 5-acre minimum parcels if ground water dependent. Parcel may be subdivided to create one new parcel not less than 4.5 acres in size under this policy as allowed by Title 16.44.120(L).			

Policy 2.2.3.1: The Planned Development (PD) Combining Zone District, to be implemented through the zoning ordinance, shall allow residential, commercial, and industrial land uses consistent with the density specified by the underlying zoning district with which it is combined. Primary emphasis shall be placed on furthering uses and/or design that provide a public or common benefit, both on- and offsite, by clustering intensive land uses to minimize impact on various natural resources, avoid cultural resources where feasible, minimize public health concerns, minimize aesthetic concerns, and promote the public health, safety, and welfare. A goal statement shall accompany each application specifically stating how the proposed project meets these criteria.

A. The major components of a Planned Development in residential projects shall include the following:

1. Commonly owned or publicly dedicated open space lands of at least 30 percent of the total site. Within a community area, the commonly owned open space can be developed for recreational purposes such as parks, ball fields, or picnic areas. Commonly owned open space does not include space occupied by infrastructure (e.g., roads, sewer, and water treatment plants).
2. Clustered housing units or lots designed to conform to the natural topography.

B. Non-residential planned developments shall be accomplished through the zoning ordinance.

Objective 2.2.5: General Policy Section

Policy 2.2.5.2: All applications for discretionary projects or permits including, but not limited to, general plan amendments, zoning boundary amendments, tentative maps for major and minor land divisions, and special use permits shall be reviewed to determine consistency with the policies of the general plan. No approvals shall be granted unless a finding is made that the project or permit is consistent with the general plan. In the case of general plan amendments, such amendments can be rendered consistent with the general plan by modifying or deleting the general plan provisions, including both the land use map and any relevant textual policies, with which the proposed amendments would be inconsistent.

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

1. Availability of an adequate public water source or an approved Capital Improvement Project to increase service for existing land use demands;
2. Availability and capacity of public treated water system;
3. Availability and capacity of public waste water treatment system;
4. Distance to and capacity of the serving elementary and high school;
5. Response time from nearest fire station handling structure fires;
6. Distance to nearest Community Region or Rural Center;
7. Erosion hazard;
8. Septic and leach field capability;
9. Groundwater capability to support wells;
10. Critical flora and fauna habitat areas;
11. Important timber production areas;
12. Important agricultural areas;
13. Important mineral resource areas;
14. Capacity of the transportation system serving the area;
15. Existing land use pattern;
16. Proximity to perennial water course;
17. Important historical/archeological sites; and
18. Seismic hazards and present of active faults.

19. Consistency with existing Conditions, Covenants, and Restrictions.

Policy 2.2.5.4: All development applications which have the potential to create 50 parcels or more shall require the application of the PD Combining Zone District. However, in no event shall a project require the application of the PD Combining Zone District if all of the following are true: (1) the project does not require a general plan amendment; (2) the project has an overall density of two units per acre or less; and (3) the project site is designated High-Density Residential.

Policy 2.2.5.5: Parcel Size Exception. All divisions of land must be in compliance with the density and lot standards established in the General Plan and Zoning Ordinance except as follows:

- A. One parcel may be subdivided to create one new parcel of lesser size than is required under policy 2.2.1.2 as implemented by the Zoning Ordinance.
- B. Minimum parcel size as shown on the General Plan land use map shall not apply to parcels occupied by governmental bodies or private or public utilities. When such agencies are acquiring land for their exclusive use, the remaining parcel from the donor property need not comply with the minimums set forth on the General Plan land use map, provided that the donor parcel shall retain sufficient lands so as to comply with the minimum lot size based on the type of water supply and sewage disposal.
- C. Notwithstanding the minimum parcel size requirements set out herein, lot line adjustments may be allowed for existing substandard size parcels. Lot line adjustments may also create a substandard size parcel when there is a need to better consolidate and manage lands with important resources (e.g., agriculture, timber, minerals, environmentally sensitive lands, etc.).
- D. There shall be no parcel size exception granted where other policies herein require specific setbacks and buffers to adjoining parcels.

Policy 2.2.5.11: This policy recognizes the need and importance of managing forest products and natural resources. This policy further recognizes that it is important to provide for an efficient and cost effective means of harvesting and using forest lands. It is further recognized that the forested areas have a need for certain commercial support uses which should be allowed in a manner which is consistent with the forest use and outdoor recreation areas.

Uses which are consistent here may include the processing of forest products and natural resources, overnight individual and group outdoor accommodations, outdoor recreation facilities, including ski resorts, equestrian facilities, and interpretive centers and conference/convention centers. These special support uses shall only be allowed to be established with the approval of a conditional use permit. (Resolution 126-2019, August 6, 2019)

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

Policy 2.2.5.21: Development projects shall be located and designed in a manner that avoids incompatibility with adjoining land uses that are permitted by the policies in

effect at the time the development project is proposed. Development projects that are potentially incompatible with existing adjoining uses shall be designed in a manner that avoids any incompatibility or shall be located on a different site.

Objective 2.2.7: Coordination with Incorporated Cities

Policy 2.2.7.1: The County shall coordinate with the incorporated cities in land use planning and development to:

- A. Provide compatibility and coordination of land use designations;
- B. Provide compatibility and coordination of design and development standards and funding programs;
- C. Provide for a comprehensive and equitable distribution of revenues for all annexations; and
- D. Provide cooperation with the cities regarding shared responsibilities for improved infrastructure.

Goal 2.9: General Plan Monitoring and Review: Monitoring and review of the General Plan on a regular basis to ensure the document addresses and meets the needs of El Dorado County.

Objective 2.9.1: General Plan Monitoring and Review: Procedure for ongoing monitoring of the General Plan and periodic review and update if necessary.

Policy 2.9.1.1: The County shall monitor, on an annual basis, the rate at which the land inventory is developed, the population and employment growth of the County, and other useful indicators of the County's growth.

El Dorado County Zoning Ordinance

The County's zoning ordinance provides a framework for land use regulations and allowed uses within the County. The zoning ordinance establishes zoning districts and development standards to ensure that land use activities and development plans protect and promote the goals, and vision for the county. In addition, the safety, health, and economic prosperity, of residents and businesses in the county are also addressed to be consistent with the General Plan land use designations. The applicable zoning for the project site and analysis provided in this EIR reflects the zoning designations and regulations as set forth in the currently adopted zoning ordinance.

Figure 4.9-2 depicts existing zoning designations within the project area.

El Dorado County Subdivisions Ordinance

County ordinances relating to subdivisions can be found in Title 120 of the County Code. Title 120 lays out the conditions and requirements for a tentative subdivision map, improvement requirements, and other requirements from processing a tentative map.

El Dorado County Design Improvement Standards Manual

The County's Design and Improvement Standards Manual was adopted in 1986 and was revised in 1990. The manual outlines requirements for grading, road standards, drainage, utilities, water

supply, sewers, fire protection, and other physical characteristics of a project. Environmental Impacts and Mitigation Measures

Significance Thresholds

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether land use and planning impacts are significant environmental effects, the following questions are analyzed and evaluated. Based on Appendix G of the CEQA Guidelines, an impact is considered significant if implementing the proposed project would:

- Physically divide an established community;
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Approach to Analysis

The evaluation of the potential project-related land use and planning related impacts have been conducted through GIS data and the El Dorado County Assessor's Online Property Information using GIS site reconnaissance data for the project study area. In addition, review of the applicable land use documents was conducted for the El Dorado County General Plan and the County Zoning Ordinance to identify applicable policies and provisions that pertain to the proposed project.

Impacts and Mitigation Measures

This section discusses potential impacts associated with the construction and use of the proposed project and provides mitigation measures where appropriate. The 2004 El Dorado County General Plan EIR included a general analysis of the land use and planning setting of the project area at a programmatic level. The 2004 El Dorado County General Plan EIR impact assessment and mitigation measures are included where appropriate, since the proposed project must comply with regulations described in the prior programmatic-level EIR. Further analysis or mitigation required beyond that of the 2004 El Dorado County General Plan EIR is included where necessary.

Impact 4.9-1: The project would not physically divide an established community. (*Less than Significant Impact*)

Dorado Oaks Tentative Subdivision Map Site

The entirety of the proposed Dorado Oaks Tentative Subdivision Map Site is currently vacant and undeveloped land. The proposed residential development would not create a physical barrier within the proposed project site, and would not remove existing access to and within existing neighborhoods that are nearby. Typically, the physical division of an established community refers to the construction of a physical feature that would impair the mobility within an existing community, or between a community and outlying areas. Examples of physically dividing a community could be the establishment of a roadway or a set of railroad tracks through a community, or removal of a means of access such as a local road or bridge.

In this instance, the proposed project would result in the development of residential uses and preservation of open space on the privately-owned, vacant, and undeveloped project site. In addition to the proposed residential and open space lots, other components of the project include on-site roadway improvements to facilitate circulation within the development, an on-site public park, and various on-site infrastructure improvements. Access to the site would be provided via four public vehicular access points and one emergency vehicle access point to and from the project site to existing adjoining roadways. These access points and connections to existing roadways would provide admittance to the internal circulation system within the subdivision. As the proposed residential development and roadway improvements would primarily provide access to and through the internal circulation system within the subdivision, it would not create a physical barrier to travel around or within the project site or remove existing means of access to and through existing nearby neighborhoods. Therefore, the Dorado Oaks Tentative Subdivision Map portion of the proposed project would result in a less-than-significant impact in relation to physically dividing an established community.

State Route 49 Intersection Area

The State Route 49 Intersection Area portion of the proposed project is currently dedicated as either right-of way for SR-49 and attached local roads, or as Commercial along both sides of SR-49. There would not be any residential development proposed for this portion of the proposed project. The State Route 49 Intersection Area would not create a physical barrier within the proposed project site, as the proposed improvements would occur within an already dedicated right of way space, and would not remove existing access to and within existing neighborhoods that are nearby. Instead the State Route Intersection Area portion of the proposed project would provide access to the Dorado Oaks Subdivision site from SR-49. Therefore, the State Route 49 Intersection portion of the proposed project would result in a less-than-significant impact in relation to physically dividing an established community.

Optional Fowler Lane Improvement Area

The Optional Fowler Lane Improvement Area portion of the proposed project is a right-of-way that currently passes through a rural residential area that is largely comprised of rural residential homes on large lots. This connection would provide emergency-only access into and out of the site. There would not be any residential development proposed for this portion of the proposed project. The Optional Fowler Lane Improvement Area portion of the proposed project would not create a physical barrier within the proposed project site, as the proposed improvements would occur within an already dedicated right of way space, and would not remove existing access to and within existing neighborhoods that are nearby. Instead the Optional Fowler Lane Improvement Area portion of the proposed project would provide improved access to the Dorado Oaks Subdivision site specifically for residents of existing neighborhoods and emergency vehicle access. Therefore, the Optional Fowler Lane Improvement portion of the proposed project would result in a less-than-significant impact in relation to physically dividing an established community.

Based on each of the above considerations, no aspect of the project would physically divide an established community, and the impact would therefore be **less than significant**.

Mitigation Measures

None required.

Impact 4.9-2: The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect (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. (*Less than Significant Impact*).

In review of the applicable land use plans, policies, or regulations (including the general plan, specific plan, or zoning ordinance), this analysis considers whether or not the proposed project would be in conflict. This analysis is specific to policies adopted for the purpose of avoiding or mitigating potential environmental effects. This environmental determination is limited to a review and analysis of whether the inconsistency would likely result in a significant adverse effect on the environment.

The proposed project includes development of 382 residential lots and associated infrastructure and amenities on the site, as well as associated roadway improvements. Specific to the proposed project location, the most applicable land use plans, policies, and regulations are found within the County's General Plan, and Zoning Ordinance. The proposed project would generally conform to the intent of the general plan and zoning ordinance as described below.

General Plan

Dorado Oaks Tentative Subdivision Map Site

The Dorado Oaks Tentative Subdivision site is currently comprised of three designated land use areas, with approximately 89.6 acres of HDR, approximately 48.6 acres of MFR, and approximately 4.3 acres RR. Of the entitlement requests being made for the proposed project, there would be no amendments to the General Plan land use designations at the project site, and therefore land use designations would remain the same. As stated in General Plan Policy 2.2.3.1, the PD Combining Zone District allows for the density specified by the underlying zoning district to be implemented. The proposed tract map conforms to the existing General Plan land use designations on the site, and there would be no conflict with an applicable plan or policy.

State Route 49 Intersection Area

Within the proposed State Route 49 Intersection Area of the project site, the majority of lands consist of dedicated right-of ways for SR-49 and attached local roads. Lands along both sides of SR-49 are designated as Commercial in the County's General Plan, with the exception of Faith Lane itself, which is designated as MFR. These designations and existing uses would not change as part of the project's implementation. The State Route 49 Intersection Area component of the project would therefore conform to the existing General Plan land use designations in the area, and there would be no conflict with an applicable plan or policy.

Optional Fowler Lane Improvement Area

The Optional Fowler Lane Improvement Area is currently comprised of two land use types, and designated as MDR and RR. Fowler Lane is a right-of-way that currently passes through a rural residential area that is largely comprised of rural residential homes on large lots. This connection would provide emergency-only access into and out of the site. There would not be any residential development proposed for this portion of the project. Existing uses would be unchanged, as would the existing land use designations. The Optional Fowler Lane Improvement Area would therefore conform to the existing General Plan land use designations in the area, and there would be no conflict with an applicable plan or policy.

Zoning Ordinance

Dorado Oaks Tentative Subdivision Map Site

The Dorado Oaks Tentative Subdivision portion of the proposed project includes a PD Combining Zone District with a mix of base zone districts that allow for residential uses at varying densities and intensities of development standards. These base zones consist of R1, RM, and RL. The R1 zoning district is consistent with HDR land use designations in the general plan. This zoning designation allows for development of single-family detached residential uses with a minimum lot size of 6,000 square feet (when served by public water supply and sewer systems). The lot sizes proposed would be consistent with this zoning designation. The PD Combining Zone District allows flexibility in development standards that may not, in all aspects, conform to the existing zoning regulations. However, the project is required to conform to the standards, densities, and other requirements of the base zone of R1, RM, and RL-10. Therefore, the proposed subdivision component of the project would be consistent with the El Dorado County Zoning Ordinance.

Approximately 3.1 acres of the project site would include a public park site with various amenities providing park access to the development and also functioning as a buffer to adjacent developments. These uses would be consistent with the general plan designation of OS, and would meet Policy 2.2.3.1 requirements to dedicate at least 30 percent of the PD portion of a site for commonly owned or publicly dedicated open space lands when applying the PD Combining Zone. Therefore, the proposed project would be consistent with the El Dorado County Zoning Ordinance.

State Route 49 Intersection Area

Within the proposed State Route 49 Intersection Area of the project site, the current zoning is established for Commercial Main Street development, and Transportation Corridor uses along SR-49. The CM zoning district is consistent with Commercial land use designations in the general plan, and this would remain unchanged with implementation of the project. Therefore, the proposed project would be consistent with the El Dorado County Zoning Ordinance. No zoning changes would occur in this area as a result of the proposed project, so the project would be consistent with the El Dorado County Zoning Ordinance.

Optional Fowler Lane Improvement Area

The Optional Fowler Lane Improvement portion of the proposed project site is currently designated as right-of-way, with existing zoning for R1A, R2A, and RL-10 adjacent to the

roadway. With Fowler Lane acting as a connection providing emergency-only access into and out of the proposed project site, much of Fowler Lane would need to be widened to a minimum 20-foot paved width. The widening of the roadway would require that the right-of-way designations would expand, and would therefore reduce the zoning coverage for the adjacent zoning designations adjacent to the roadway. As no new zoning designations would be established along Fowler Lane, and the majority of the proposed project zoning along this portion of the proposed project would remain unchanged, the development related to emergency access improvements within areas designated as R1A, R2A, and RL-10 adjacent to the roadway would be consistent with the general plan.

Summary

The proposed project includes the development of 382 residential lots and associated infrastructure and amenities on the site, as well as offsite roadway improvements. The project as proposed is consistent with the existing land use designations for both onsite and offsite areas of the project.

In addition, the proposed project is consistent with the existing zoning for the property. As stated in General Plan Policy 2.2.3.1, the PD Combining Zone District allows for the density specified by the underlying zoning district to be implemented. Existing zoning for the parcels within the proposed project site are categorized as R1, RM, RL, and a portion as CM. The proposed project would include rezoning of approximately 8.9 acres of the approximately 142.5-acre project site from RM to RM-PD to allow for the development of 382 residential lots and associated infrastructure and amenities on the site. Application of the PD Combining Zone District would be consistent with the County's General Plan land use designation. In addition, the development standards, densities, and other land use requirements are required to conform to the current base zone of R1, RM and RL. Thus, the proposed project would be consistent with the El Dorado County General Plan and zoning ordinance.

Based on each of these considerations, the project's impact would be **less than significant**.

Mitigation Measures

None required.

Cumulative Impacts

Impact 4.9-3: Implementation of the proposed project in combination with other cumulative development in El Dorado County would not result in significant impacts related to land use and planning. (*Less than Significant Impact*)

As concluded in this section, the proposed project would result in less-than-significant impacts with respect to physically dividing an established community or conflicting with any land use plan, policy or regulation adopted for purposes of avoiding or mitigating an environmental effect.

The geographic context considered for cumulative land use impacts include the Diamond Springs community in El Dorado County and the surrounding area that, when combined with the proposed project, could result in cumulative land use, plans, and policy impacts. Present projects would include any projects currently under construction, and reasonably foreseeable future projects are

those that could be developed or occur in the project area by buildout of the El Dorado County General Plan.

Significant cumulative impacts related to land use and planning could occur if the incremental impacts of the proposed project combined with the incremental impacts of one or more of the cumulative projects identified in Chapter 4.0, *Environmental Setting, Impacts, and Mitigation Measures, Cumulative Impacts*, to substantially increase impacts that physically divide an established community, and impacts on applicable land use plans, policies, or regulations. The cumulative projects include El Mirage Plaza (2 miles to the northwest), El Dorado Senior Village (1.5 miles to the west), Shinn Ranch (3.5 miles to the west), Indian Creek Ranch (about 5 miles to the northwest), and Diamond Village Apartments and Piedmont Oak Estates, both about 1.25 miles to the northeast.

The proposed project site is primarily self-contained, because it is establishing a new subdivision, with new roadway connections in and out of the subdivision. Land use impacts from the proposed project would be local and limited to the immediate project area.

The area to the east, and west of the proposed project site is mostly single family residential with a mix of higher density residential and commercial land uses located toward the northern portion of the project site, along SR-49. Although redevelopment of the project site would increase residential densities, these uses would not combine with the developments above to result in cumulative impacts related to physical division of an established community.

The proposed project is designed to be compatible with existing land uses and zoning designations. Other projects in the cumulative study area may individually result in impacts to land use compatibly. These projects would be required to provide mitigation for impacts in accordance with applicable regulations.

Regarding consistency with plans and policies, future development within the project site must be consistent with the County's General Plan and other applicable land use plans and requirements. The cumulative projects also would be subject to the General Plan and the Zoning Ordinance to ensure land use compatibility. The proposed project would therefore not combine with other developments to result in a significant cumulative land use impact associated with conflicts with plans and policies.

Based on each of these considerations, the project's impact would **not result in a significant cumulative land use impact**.

Mitigation Measure: None required.

4.9.4 References

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4.10 Noise and Vibration

4.10.1 Introduction

This section assesses the potential for the project to result in significant adverse noise impacts, or exposing people or structures to vibration impacts, and identifies feasible mitigation measures to avoid or reduce potential adverse impacts. Potential impacts are discussed and evaluated, and appropriate mitigation measures are identified, as necessary

CEQA requires the analysis of potential adverse effects of a project on the environment. The potential effects of the environment on the project are not legally required to be analyzed or mitigated under CEQA, except where the project impacts exacerbate the existing conditions. Therefore, this section analyzes potential effects of noise and vibration conditions on the project (as well as other users) as non-CEQA impacts for informational purposes as they relate to consistency with General Plan Policies.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Comments relevant to noise and vibration included several statements that the development would add to noise pollution.

4.10.2 Environmental Setting

Technical Background

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the “loudness” of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear’s decreased sensitivity to low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of decibels (dBA).¹ Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

¹ All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

Some representative noise sources and their corresponding A-weighted noise levels are shown in **Table 4.10-1**.

**TABLE 4.10-1
 TYPICAL NOISE LEVELS**

Noise Level (dBA)	Outdoor Activity	Indoor Activity
90+	Gas lawn mower at 3 feet, jet flyover at 1,000 feet	Rock Band
80-90	Diesel truck at 50 feet	Loud television at 3 feet
70-80	Gas lawn mower at 100 feet, noisy urban area	Garbage disposal at 3 feet, vacuum cleaner at 10 feet
60-70	Commercial area	Normal speech at 3 feet
40-60	Quiet urban daytime, traffic at 300 feet	Large business office, dishwasher next room
20-40	Quiet rural, suburban nighttime	Concert hall (background), library, bedroom at night
10-20	Remote open space	Broadcast / recording studio
0	Lowest threshold of human hearing	Lowest threshold of human hearing

SOURCE: Modified from Caltrans, 2013

Noise Exposure and Community Noise

An individual’s noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. The noise levels presented in Table 4.10-1 represent noise measured at a given instant in time; however, noise levels rarely persist consistently over a long period of time. Rather, community noise varies continuously over time because of the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and wind. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment varies the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to accurately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

L_{eq}: The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

L_{max}: The instantaneous maximum noise level for a specified period of time.

L₅₀: The noise level that is equaled or exceeded 50 percent of the specified time. This is the median noise level during the specified time. So an L₅₀ represents the noise level exceeded 30 minutes in a given hour. The numerical subscript may be changed to reflect other percentages. For example, a noise level exceeded for 5 minutes in a given hour would be the noise level exceeded 8.3 percent of the time or the L_{8.3}.

L_{dn}: The Day/Night Average Sound Level is the 24-hour day and night A-weighted noise exposure level, which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night. Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance from nighttime noise. (Also referred to as “DNL.”)

CNEL: Similar to the DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dBA “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

Effects of Noise on People

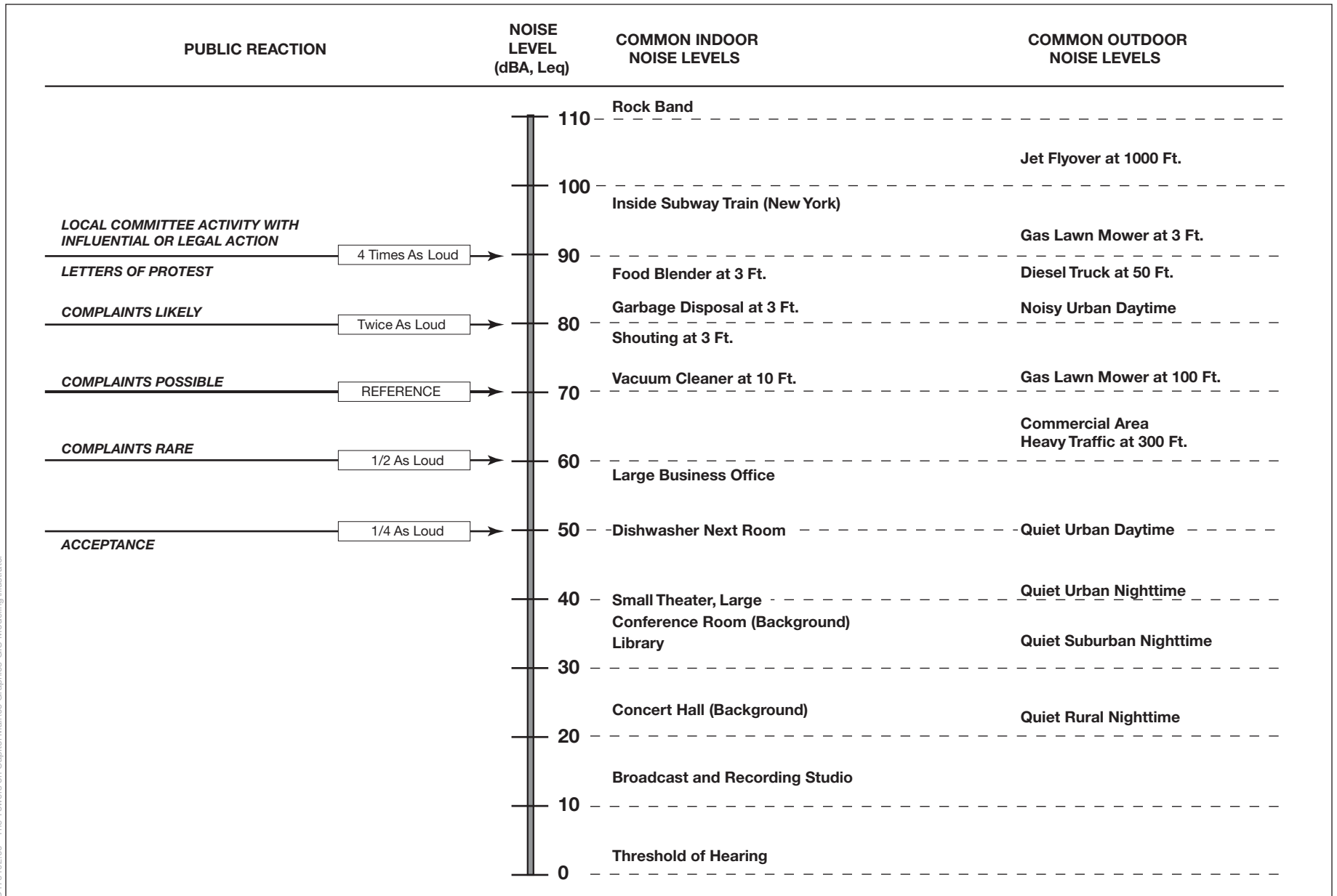
The effects of noise on people can be placed into three categories:

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories (see **Figure 4.10-1**). Workers in industrial plants generally experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual’s past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called “ambient noise” level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Under controlled conditions in an acoustics laboratory, the trained healthy human ear is able to discern changes in sound levels of 1 dBA;
- Outside these controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise;
- It is widely accepted that the average healthy ear, however, can barely perceive changes in the noise level of 3 dBA;
- A change in level of 5 dBA is a readily perceptible increase in noise level; and
- A 10 dBA change is recognized as twice as loud as the original source (Caltrans, 2013).



D:\70192.00 - The Towers on Capitol Mall\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Caltrans Transportation Laboratory Noise Manual, 1982; and modification by ESA

Dorado Oaks Tentative Subdivision Map Project

Figure 4.10-1
Typical Noise Levels



These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 to 7.5 dBA per doubling of distance from the source, depending on the topography of the area and environmental conditions (i.e., atmospheric conditions and noise barriers, vegetative or manufactured, etc.). Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles (known as a “line” source), would typically attenuate at a lower rate, approximately 3 to 4.5 dBA each time the distance doubles from the source, which also depends on environmental conditions (Caltrans, 2009). Noise from large construction sites would exhibit characteristics of both “point” and “line” sources, and attenuation will therefore generally range between 4.5 and 7.5 dBA each time the distance doubles.

Health Effects of Noise

The consequences of exposure of people to excessive noise can include annoyance and disturbance of human activities, as well as effects on human health. The following discussion is provided so that the health implications of noise exposure are fully understood.

Exposure to high levels of noise can cause permanent hearing impairment. The levels at which noise exposure can lead to hearing loss (140 dB) or pain (120 dB) is a common method of measuring health effects or impacts of noise. The federal Safety and Health Administration (OSHA) has established an occupational noise exposure program which includes hearing conservation standards for long-term noise exposure. Employers are required to measure noise levels; provide free annual hearing exams, hearing protection, and training; and conduct evaluations of the adequacy of the hearing protection in use where noise environments exceed 85 dBA for an eight-hour daily exposure.

The World Health Organization (WHO) is a noted source of current knowledge regarding the health effects of noise impacts because European nations have continued to study noise and its health effects, while the United States Environmental Protection Agency all but eliminated its noise investigation and control program in the 1970s. According to WHO, sleep disturbance can occur when intermittent interior noise levels reach 45 dBA, particularly if background noise is low. WHO also notes that maintaining noise levels within the recommended levels during the first part of the night is believed to be effective for the ability of people to initially fall asleep (WHO, 1999). Excessive noise during sleep periods can result in difficulty falling asleep, awakenings, and alterations in sleep stages and depth (e.g., a reduction in proportion of REM-sleep (REM = rapid eye movement)). Exposure to high levels of noise during sleep can also result in increased blood pressure, increased heart rate, increased finger pulse amplitude, vasoconstriction, changes in respiration, cardiac arrhythmia, and an increase in body movements. Secondary physiological effects of exposure to excessive noise during sleep can occur the following day,

including reduced perception of quality sleep, increased fatigue, depressed mood or well-being, and decreased performance of cognitive tasks.

The El Dorado County General Plan has an interior noise level standard of 45 dBA which reflects this recommendation (see Section 4.10.2, *Regulatory Setting*). Additionally, this interior noise level is used in the development of exterior noise standards within the General Plan Noise Element Guidelines published by the Governor's Office of Planning and Research for the purposes of land use compatibility assessment.

Other potential health effects of noise identified by WHO include decreased performance for complex cognitive tasks, such as reading, attention span, problem solving, and memorization; physiological effects such as hypertension and heart disease (after many years of constant exposure, often by workers, to high noise levels); and hearing impairment (again, generally after long-term occupational exposure, although shorter-term exposure to very high noise levels, for example, exposure several times a year to concert noise at 100 dBA, can also damage hearing). Finally, noise can cause annoyance and can trigger emotional reactions like anger, depression, and anxiety. WHO reports that, during daytime hours, few people are seriously annoyed by activities with noise levels below 55 dBA.

Vehicle traffic and continuous sources of machinery and mechanical noise contribute to ambient noise levels. Short-term noise sources, such as truck backup beepers, the crashing of material being loaded or unloaded, contribute very little to 24-hour noise levels but are capable of causing sleep disturbance and annoyance. The importance of noise to receptors depends on both time and context. For example, long-term high noise levels from large traffic volumes can make conversation at a normal voice level difficult or impossible, while short-term peak noise levels, if they occur at night, can disturb sleep.

Noise Sources and Levels

Transportation sources, such as automobiles, trucks, trains, and aircraft, are the principal sources of noise in the urban environment. Along major transportation corridors, noise levels can reach 80 DNL, while along arterial streets, noise levels typically range from 65 to 70 DNL. However, noise levels on roadways, like all areas, can be affected by intervening development, topography, or landscaping. Industrial and commercial equipment and operations also contribute to the ambient noise environment in their vicinities. Primary noise sources in the project site vicinity include vehicle traffic along State Route 49 (SR-49) and Placerville Airport, approximately 3.7 miles to the northeast. The project site is approximately 1,300 feet south of Interstate 880 (I-880).

At the time of this analysis, a statewide shelter in place order is and has been in place in regard to the virus that causes Novel Coronavirus 2019 Disease ("COVID-19"). This shelter in place order has reduced roadway traffic volumes and physical noise monitoring is not useful as its results would be skewed from normal conditions. Consequently, to characterize the noise environment within the project site and surrounding area, existing roadside noise levels along roadway segments near the project site were modeled to provide estimates of existing weekday noise levels along the roadway segments near the project site. **Table 4.10-2** presents existing roadside noise levels during the weekday peak commute hour.

**TABLE 4.10-2
 EXISTING TRAFFIC NOISE ALONG ROADS IN THE PROJECT VICINITY**

Roadway Segment	Existing Hourly (dBA) at 50 feet from Roadway Centerline
Weekday Peak-Hour Noise Levels	
Pleasant Valley Road from Forni Road to Patterson Drive	69.5
Pleasant Valley Road from Patterson Drive to Missouri Flat Road	70.4
Pleasant Valley Road from Missouri Flat Road to China Garden Road	69.9
Pleasant Valley Road from China Garden Road to Fowler Road	67.2
Pleasant Valley Road from Fowler Road to Golden Chain Highway	66.8
Missouri Flat Road from Mother Lode Drive to Forni Road	74.5
Missouri Flat Road from Forni Road to China Garden Road	72.8
Missouri Flat Road from China Garden Road to Pleasant Valley Road	71.8
China Garden Road from Missouri Flat Road to Pleasant Valley Road	56.1
Faith Lane from Pleasant Valley Road to terminus	47.8
Forni Road from Missouri Flat Road to Pleasant Valley Road	62.7

NOTE: dBA = A-weighted decibels
 SOURCES: Traffic data compiled by Prism Engineering in 2019, and noise modeling performed by Environmental Science Associates in 2020.

Additionally, an Environmental Noise Assessment for a previously proposed development of the project site was conducted in 2007 (Bollard and Associates, 2007). This assessment included two short-term (15-minute) noise measurements on the project site at distances of 100 feet and 450 feet from Pleasant Valley Road. These measurements recorded daytime noise levels of 62 dBA and 46 dBA, Leq, respectively. The Assessment noted that these monitored values demonstrated that modeled values over-estimated noise levels by approximately 7 dBA due to attenuation associated with intervening topography, vegetation and commercial structures.

Vibration Background

Vibration is an oscillatory motion through a solid medium in which the motion’s amplitude can be described in terms of displacement, velocity, or acceleration. Several different methods are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe physical vibration impacts on buildings. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors to vibration include people (especially residents, the elderly, and sick people), structures (especially older masonry structures), and vibration-sensitive equipment.

Another useful vibration descriptor is known as vibration decibels or VdB. VdB are generally used when evaluating human response to vibration, as opposed to structural damage (for which PPV is the more commonly used descriptor). Vibration decibels are established relative to a reference quantity, typically 1×10^{-6} inches per second (FTA, 2018). There are no substantial existing vibration sources in the project vicinity.

Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication; physiological and psychological stress; and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hotels, hospitals, and nursing homes are considered to be the most sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive. The nearest sensitive receptors to the project site consist of residential uses along Silver Drive, approximately 70 feet west of Faith Lane and the northernmost project parcels, residences on Arlette Lane.

4.10.3 Regulatory Setting

Federal

Federal Noise Standards

The primary federal noise standards that directly regulate noise related to the operation of the proposed project pertain to noise exposure and workers. The U.S. Occupational Safety and Health Administration enforces regulations to safeguard the hearing of workers exposed to occupational noise. The Occupational Safety and Health Administration has established worker noise exposure limits that vary with the duration of the exposure and require that a hearing conservation program be implemented if employees are exposed to noise levels in excess of 85 dBA.

Federal regulations also establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Code of Federal Regulations Title 40, Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

Federal Transit Authority Vibration Standards

FTA has adopted vibration standards that are used to evaluate potential building damage impacts from construction activities. **Table 4.10-3** shows FTA's vibration damage criteria.

**TABLE 4.10-3
CONSTRUCTION VIBRATION DAMAGE CRITERIA**

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

NOTES:

in/sec = inches per second; PPV = peak particle velocity

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

In addition, FTA has adopted standards related to human annoyance for groundborne vibration impacts for the following three land use categories: Vibration Category 1, High Sensitivity; Vibration Category 2, Residential; and Vibration Category 3, Institutional. FTA defines these categories as follows:

- *Category 1:* Buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes.
- *Category 2:* All residential land uses and any buildings where people sleep, such as hotels and hospitals.
- *Category 3:* Institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.

Under conditions where there is an infrequent number of events per day, FTA has established thresholds of 65 VdB for Category 1 buildings, 80 VdB for Category 2 buildings, and 83 VdB for Category 3 buildings.² Under conditions where there is an occasional number of events per day, FTA has established thresholds of 65 VdB for Category 1 buildings, 75 VdB for Category 2 buildings, and 78 VdB for Category 3 buildings.³ No thresholds have been adopted or recommended for commercial and office uses.

State

California Department of Public Health Noise Standards

The California Department of Public Health has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. **Table 4.10-4** shows these guidelines for land use and noise exposure compatibility. In addition, California Government Code Section 65302(f) requires each county and city in the state to prepare and adopt a comprehensive long-range general plan for its physical development. Section 65302(g) requires the general plan to include a noise element. The noise element must:

- Identify and appraise noise problems in the community;
- Recognize Office of Noise Control guidelines; and
- Analyze and quantify current and projected noise levels.

² FTA defines “infrequent events” as fewer than 30 vibration events of the same kind per day.

³ FTA defines “occasional events” as between 30 and 70 vibration events of the same source per day.

**TABLE 4.10-4
 COMMUNITY NOISE EXPOSURE (DNL OR CNEL)**

Land Use	Normally Acceptable ^a	Conditionally Acceptable ^b	Normally Unacceptable ^c	Clearly Unacceptable ^d
Single-Family Homes, Duplexes, Mobile Homes	50–60	55–70	70–75	above 75
Multifamily Homes	50–65	60–70	70–75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	above 80
Transient Lodging—Motels, Hotels	50–65	60–70	70–80	above 75
Auditoriums, Concert Halls, Amphitheaters	—	50–70	—	above 70
Sports Arenas, Outdoor Spectator Sports	—	50–75	—	above 75
Playgrounds, Neighborhood Parks	50–70	—	67–75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	—	70–80	above 80
Office Buildings, Business and Professional, Commercial	50–70	67–77	above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	above 75	—

NOTES:

CNEL = community noise equivalent level; DNL = day-night average noise level

- Normally Acceptable:** Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
- Conditionally Acceptable:** New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- Normally Unacceptable:** New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
- Clearly Unacceptable:** New construction or development should generally not be undertaken.

SOURCE: Governor's Office of Planning and Research, *State of California General Plan Guidelines*, Appendix D, 2017.

The State of California also establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the state pass-by standard is consistent with the federal limit of 80 dBA. The state pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dBA at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

California Building Code

The California Building Code requires that walls and floor/ceiling assemblies separating dwelling units from each other, or from public or service areas, have a sound transmission class⁴ of 50 dB for all common interior walls and floor/ceiling assemblies between adjacent dwelling units, or between dwelling units and adjacent public areas for multifamily units and transient lodging. The code specifies a maximum interior performance standard of 45 dBA.

⁴ The sound transmission class is used as a measure of a materials ability to reduce sound. The sound transmission class is equal to the number of decibels a sound is reduced as it passes through a material.

The State of California has also established noise insulation standards for new multifamily residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (California Code of Regulations, Title 24). The noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dBA CNEL. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

State Vibration Standards

No state vibration standards are applicable to the proposed project. Moreover, according to the California Department of Transportation's (Caltrans's) *Transportation and Construction Vibration Guidance Manual*,⁵ there are no official Caltrans standards for vibration. However, this manual provides guidelines for assessing the potential for vibration damage to various types of buildings, ranging from 0.08 to 0.12 in/sec PPV for extremely fragile historic buildings, ruins, and ancient monuments to 0.50 to 2.0 in/sec PPV for modern industrial/commercial buildings.

Regional

El Dorado County General Plan

One of the primary objectives of the Public Health, Safety, and Noise Element of the County General Plan is to protect existing noise-sensitive developments (e.g., hospitals, schools, churches and residential) from new uses that would generate noise levels incompatible with those uses and, conversely, discourage noise-sensitive uses from locating near sources of high noise levels. The Noise Element identifies different standards that apply to parcels within "community" or "rural" designations. The project site and all developed parcels within 0.5 mile of the project site exist within a "community" designation as determined by the General {Plan Land Use Diagram. The Element identifies the following policies and actions regarding noise and vibration that are salient to the proposed residential development project inclusive of roadway improvements:

Policy 6.5.1.1: Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in **Table 4.10-5** or the performance standards of **Table 4.10-6**, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

⁵ California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, September 2013.

**TABLE 4.10-5
 MAXIMUM ALLOWABLE NOISE EXPOSURE FOR TRANSPORTATION NOISE SOURCES**

Land Use	Outdoor Activity Areas ¹ L _{dn} /CNEL, dB	Interior Spaces	
		L _{dn} /CNEL, dB	L _{eq} , dB ²
Residential	60 ³	45	--
Transient Lodging	60 ³	45	--
Hospitals, Nursing Homes	60 ³	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls, Schools	60 ³	--	40
Office Buildings	--	--	45
Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

NOTES:

1. In Communities and Rural Centers, where the location of outdoor activity areas is not clearly defined, the exterior noise level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise level criterion of 65 dB L_{dn} shall be applied at the building facade, in addition to a 60 dB L_{dn} criterion at the outdoor activity area. In Rural Regions, an exterior noise level criterion of 60 dB L_{dn} shall be applied at a 100-foot radius from the residence unless it is within Platted Lands where the underlying land use designation is consistent with Community Region densities in which case the 65 dB L_{dn} may apply. The 100-foot radius applies to properties which are five acres and larger; the balance will fall under the property line requirement.
2. As determined for a typical worst-case hour during periods of use.
3. Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

**TABLE 4.10-6
 NOISE LEVEL PERFORMANCE PROTECTION STANDARDS FOR NOISE SENSITIVE LAND USES
 AFFECTED BY NON-TRANSPORTATION* SOURCES**

Noise Level Descriptor	Daytime 7 a.m. – 7 p.m.		Evening 7 p.m. – 10 p.m.		Night 10 p.m. – 7 a.m.	
	Community	Rural	Community	Rural	Community	Rural
Hourly L _{eq} , dB	55	50	50	45	45	40
Maximum level, dB	70	60	60	55	55	50

NOTES:

Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas the exterior noise level standard shall be applied at a point 100 feet away from the residence. The above standards shall be measured only on property containing a noise sensitive land use as defined in Objective 6.5.1. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all effected property owners and approved by the County.

* Note: For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Control of noise from facilities of regulated public facilities is preempted by California Public Utilities Commission (CPUC) regulations. All other noise sources are subject to local regulations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, schools, hospitals, commercial land uses, other outdoor land use, etc.

Policy 6.5.1.3: Where noise mitigation measures are required to achieve the standards of Tables 4.10-5 and 4.10-6, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project and the noise barriers are not incompatible with the surroundings.

Policy 6.5.1.4: Existing dwellings and new single-family dwellings on legal lots of record, as of the date of adoption of this General Plan, are not subject to County review with respect to satisfaction of the standards of the Public Health, Safety, and Noise Element except in areas governed by the Airport Land Use Compatibility Plan for applicable airports.

As a consequence, such dwellings may be constructed in other areas where noise levels exceed the standards of the Public Health, Safety, and Noise Element. It is not the responsibility of the County to ensure that such dwellings meet the noise standards of the Public Health, Safety, and Noise Element, or the noise standards imposed by lending agencies such as HUD, FHA and Cal Vet. If homes are located and constructed in accordance with the Public Health, Safety, and Noise Element, it is expected that the resulting exterior and interior noise levels will conform to the HUD/FHA/Cal Vet noise standards.

Policy 6.5.1.6: New noise-sensitive uses shall not be allowed where the noise level, due to non-transportation noise sources, will exceed the noise level standards of Table 4.10-7 unless effective noise mitigation measures have been incorporated into the development design to achieve those standards.

Policy 6.5.1.7: Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 4.10-7 for noise-sensitive uses.

Policy 6.5.1.8: New development of noise sensitive land uses will not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table 4.10-5 unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified in Table 4.10-5.

Policy 6.5.1.9: Noise created by new transportation noise sources, excluding airport expansion but including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 4.10-6 at existing noise-sensitive land uses.

Policy 6.5.1.11: The standards outlined in **Table 4.10-7** shall not apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally- recognized holidays. Further, the standards outlined in Table 4.10-7 shall not apply to public projects to alleviate traffic congestion and safety hazards.

**TABLE 4.10-7
 MAXIMUM ALLOWABLE NOISE EXPOSURE FOR NON-TRANSPORTATION NOISE SOURCES IN
 COMMUNITY REGIONS AND ADOPTED PLAN AREAS - CONSTRUCTION NOISE**

Land Use Designation ¹	Time Period	Noise Level (dB)	
		L _{eq}	L _{max}
Higher-Density Residential (MFR, HDR, MDR)	7 am–7 pm	55	75
	7 pm–10 pm	50	65
	10 pm–7 am	45	60
Commercial and Public Facilities (C, R&D, PF)	7 am–7 pm	70	90
	7 pm–7 am	65	75
Industrial (I)	Any Time	80	90

NOTE:

1. Adopted Plan areas should refer to those land use designations that most closely correspond to the similar General Plan land use designations for similar development.

Policy 6.5.1.12: When determining the significance of impacts and appropriate mitigation for new development projects, the following criteria shall be taken into consideration.

- A. Where existing or projected future traffic noise levels are less than 60 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 5 dBA L_{dn} caused by a new transportation noise source will be considered significant;
- B. Where existing or projected future traffic noise levels range between 60 and 65 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 3 dBA L_{dn} caused by a new transportation noise source will be considered significant; and
- C. Where existing or projected future traffic noise levels are greater than 65 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA L_{dn} caused by a new transportation noise will be considered significant.

Policy 6.5.1.13: When determining the significance of impacts and appropriate mitigation to reduce those impacts for new development projects, including ministerial development, the following criteria shall be taken into consideration:

- A. In areas in which ambient noise levels are in accordance with the standards in Table 4.10-7, increases in ambient noise levels caused by new non-transportation noise sources that exceed 5 dBA shall be considered significant; and
- B. In areas in which ambient noise levels are not in accordance with the standards in Table 4.10-7, increases in ambient noise levels caused by new non-transportation noise sources that exceed 3 dBA shall be considered significant.

El Dorado County Code

Chapter 9.16, Noise, of the El Dorado County Ordinance Code, prohibits persons from operating an unmuffled internal combustion engine and defines and prohibits “loud and raucous noise.”

Pursuant to the Code, the production of loud and raucous noise that unreasonably interferes with the peace and quiet of private property is prohibited.

4.10.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

For the purposes of this EIR, a noise and vibration impact would be significant if implementing the proposed project would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generate excessive groundborne vibration or groundborne noise levels; or
- For a project located within the vicinity of a private airstrip or 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, expose people residing or working in the project area to excessive noise levels.

Approach to Analysis

The following is a description of the methodology used to evaluate the impacts of project site development relative to each of the significance thresholds cited above.

Criterion 1: Substantial Increase in Noise

The first threshold of significance examines whether project construction and/or operations would generate noise in excess of established noise standards, which are different for stationary, mobile, and construction noise sources. Evaluation of the proposed project relative to this threshold focuses first on increases in ambient noise levels from stationary sources during project operation (Impact 4.10-1a) and their relationship to the General Plan policy noise limits (see Table 4.10-7, *Regulatory Framework*). The contribution of the proposed project to localized increases in traffic-generated noise along roadways (Impact 4.10-1b) was considered relative to General Plan noise limits established by Policy 6.5.1.12 (see Section 4.10-2, *Regulatory Setting*). Finally, construction-related noise generated by the proposed project (Impact 4.10-1c) was evaluated based on the proposed hours of construction and General Plan policy noise limits specific to construction noise (see Table 4.10-7, *Regulatory Setting*). Each of these approaches is described further below.

Stationary-Source Noise

Single-family and multi-family residential uses developed under the proposed project could substantially increase noise levels at noise-sensitive land uses if they would expose existing sensitive receptors to noise levels exceeding standards established by General Plan Policies and presented in Table 4.10-7. The primary potential source from proposed residential land uses would be fixed mechanical equipment such as air conditioning equipment. The following analysis considers the potential for noise from sources such as mechanical equipment, by describing reference noise levels that are documented to be associated with these sources. Existing General

Plan policies that address such sources are identified. Finally, mitigation measures with performance standards to address the potential impacts are identified.

Project-Generated Traffic Noise

General Plan Policy 6.5.1.12 establishes noise limits for transportation sources such as traffic noise. This policy presents criteria based on the findings which show that as ambient noise levels increase, a smaller increase in decibel levels is sufficient to cause significant annoyance. In other words, the quieter the ambient noise level, the more the noise can increase (in decibels) before it causes significant annoyance. The 5 dBA, 3 dBA, and 1.5 dBA noise level increases listed in Policy 6.5.1.12 also correlate directly with noise level increases that Caltrans considers to represent “readily perceivable” and “barely perceivable,” respectively. Thus, the significance of permanent increases in transportation noise levels is evaluated based on the increases identified in by Policy 6.5.1.12.

Traffic noise levels were modeled using the algorithms of the Federal Highway Administration’s Traffic Noise Model for the existing and existing plus project and cumulative plus project scenarios. The resulting noise levels were then compared to existing modeled conditions (Table 4.10-2) to determine significance. Where significant impacts may be projected to occur, mitigation addressing sensitive receptors may also consider the City’s standard of 45 dBA Ldn for interior noise levels for residences, hotels, motels, residential care facilities, and hospitals.

Construction Noise

The El Dorado County General Plan Policy 6.1.5.11 exempts construction noise of a proposed project from the non-transportation noise limits presented in Table 4.10-7 if such construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally- recognized holidays.

Notwithstanding this exemption, construction noise levels were estimated for standard construction equipment at the nearest receptors using the general assessment method published by the Federal Transit Administration for informational purposes. Resultant noise levels exceeding the standards in General Plan Policy 6.1.5.11 or an increase of over 5 dBA exceeding existing noise levels, whichever is lower, would be a significant impact warranting the identification of mitigation measures. However, the resulting post-mitigation assessment of significance was determined based on the duration and intensity of construction activities at any given receptor location and the application of any noise control mitigation measures, acknowledging that construction noise for even the most modest of projects can involve temporary disruption to adjacent receivers.

Criterion 2: Groundborne Vibration

Impacts from groundborne vibration during project site construction are assessed in Impact 4.10-2 using vibration-damage threshold criteria expressed in PPV for architectural damage. Standard construction equipment or activities that typically generate continuous vibration typically include, but are not limited to, excavation equipment, static compaction equipment, and vibratory compaction equipment. There are no vibration standards established in either the County General Plan or the County Code.

As shown in Table 4.10-3, structural impacts to sensitive historic structures may occur if continuous vibration limits of 0.12 in/sec PPV is exceeded. A continuous vibration limit of 0.50 in/sec PPV is applied to minimize the potential for cosmetic damage at buildings of normal conventional construction such as modern single family homes without plaster walls.

Vibration impacts were estimated using reference vibration levels for construction equipment in concert with the vibration propagation equations published by FTA, and estimating the potential for resultant vibration levels in excess of the FTA standards.

Criterion 3: Exposure of People to Excessive Noise Levels

As discussed in Section 4.10-2, Environmental Setting, Placerville Airport is approximately 3.7 miles to the northeast of the project site. As indicated in the Airport Land Use Compatibility Olan for El Dorado County, the Airport Influence area for Placerville Airport extends 9,000 feet (less than two miles) from the runway while the 55 dBA noise contour extends less than 8,000 feet from the runway. Consequently, operations of the airport would not expose future occupants of the proposed residential land uses to excessive noise levels. Therefore, this topic is not further considered in this Draft EIR.

Non-CEQA Planning Considerations (Impact 4.10-3)

Exposure of the proposed development to noise vibration within the existing environment, such as existing roadway noise or existing noise-generating land uses are not considered CEQA impacts. However, as discussed in Section 4.10.2, *Regulatory Setting*, General Plan Policy 6.5.1.1, where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 4.10-5 or the performance standards of Table 4.10-6, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. Therefore, the analysis of noise and vibration exposure of future development allowed by the proposed project is discussed in the context of consistency with relevant policies and regulations.

Cumulative Traffic Impacts

The significance of cumulative impacts related to traffic noise levels is determined using a two-step process. First, similar to the project-level assessment of traffic impacts, the increase in noise levels between cumulative (2027 and 2035) conditions with the project and existing baseline (2019) conditions is compared to an incremental 1.5 dBA, 3 dBA or 5 dBA threshold, as applicable, based on the existing noise level. If the roadside noise levels would exceed this incremental threshold, a cumulative noise impact would be identified.

The second step of the analysis of cumulative roadside noise impacts (if a cumulative noise impact is predicted based on the above methodology) is to evaluate whether the contribution of the project to roadside noise levels would be cumulatively considerable. This second step (if necessary) involves assessing whether the project's contribution to roadside noise levels (i.e., the difference between cumulative conditions and cumulative plus project conditions) would exceed a 1.5 dBA incremental contribution; this is a threshold that is considered to be cumulatively considerable. The 1.5 dBA increase used to represent a cumulatively considerable contribution is conservatively based on the minimum increase identified as potentially significant by FICON (see

Table 3.10-7). As stated above, except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived. Consequently, a cumulatively considerable contribution would reasonably be more than 1 dBA.

Impacts and Mitigation Measures

Impacts

Impact 4.10-1a: Stationary sources associated with operation of the proposed project could result in generation of a permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant with Mitigation*)

Operation of the proposed project would increase ambient noise levels in the immediate vicinity primarily through the on-site use of stationary equipment, such as air conditioning compressors.

Policy 6.5.1.7 of the County General Plan requires that noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 4.10-6 for noise-sensitive uses. The noise limits presented in Table 4.10-6 establish performance standards for exposure to noise from stationary/non-transportation sources at the property line of noise-sensitive uses at different time of day. Specifically, average noise level exposure is limited to 55 dBA, 50 dBA, and 45 dBA, Leq during daytime, evening, and nighttime hours, respectively. Maximum noise levels of 70 dBA, 60 dBA, and 55 dBA, Lmax are allowed for brief periods during these same time periods.

Residential air conditioning units have been demonstrated to generate noise levels ranging from 21 dBA to 55 dBA, depending on the cooling capacity and manufacturer (Air conditioning Systems.com, 2008). Because the mechanical equipment is commonly available with noise attenuating enclosures designed to meet local noise ordinances, the noise generated by air conditioning equipment could be expected to meet the established standards in the County's General Plan policies. However, without specification data this potential impact is identified as significant. To ensure that noise from air conditioning units of the proposed project does not result in impacts at existing receptors or planned residential units, Mitigation Measure 4.10-1a is identified to ensure that the performance standards of the County General Plan are met.

Mitigation Measures

Mitigation Measure 4.10-1a: Performance Standard for Outdoor Fixed Mechanical Equipment.

All outdoor fixed mechanical equipment, such as air conditioning compressor units, installed as part of the project shall be located, shielded and/or designed to generate a noise level of less than 45 dBA at any adjacent residential property. Documentation of achieved this standard though either specification sheets for selected units or through an acoustical analysis shall be provided to the County as a condition of building permit by the applicant or its contractor.

Significance After Mitigation

Implementation of Mitigation Measure 4.10-1a implements a performance standard to be implemented by the project applicant or its contractor. Because methods reasonably exist to

achieve this performance standard, once implemented, potential noise impacts from fixed mechanical equipment would be **less than significant with mitigation**.

Impact 4.10-1b: Project-generated traffic noise could result in permanent increases in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant with Mitigation*)

Vehicle trips generated by the proposed project would generate roadway noise in the project area and surrounding environment. Increases in traffic noise gradually degrade the environment in noise-sensitive areas.

The significance of traffic noise levels is determined by comparing the increase in noise levels (from the traffic contribution only) along roadways used to access the project to increments identified by General Plan Policy 6.5.1.12 as significant.

Traffic noise was developed from the transportation analysis (Prism Engineering, 2020), and assessed in this section for the following scenarios:

1. Existing traffic conditions during the weekday peak commute hour using data generated for the Transportation Analysis; and
2. Existing plus proposed full buildout of project mixed uses during the weekday peak commute hour.

Modeled estimates of weekday noise levels for the most highly affected roadway segments near the project site are presented in **Table 4.10-8** for full buildout of the project during the weekday peak commute hour. In a transportation analysis where the peak hours represent approximately 10 percent of the total daily traffic, the peak hour Leq is roughly equivalent to the Ldn (Caltrans, 2013) and the peak hour Leq values in Table 4.10-8 may be compared directly to the Ldn standards of Policy 6.5.1.12.

Of the 11 roadways analyzed, only Faith Lane would experience an increase that would be characterized as significant. Most project traffic would utilize Faith Lane for ingress and egress to the project site. There are existing residential uses along Silver Drive, approximately 70 feet west of Faith Lane that would experience these predicted increased noise levels. Other receptors to the west and east, such as those on Arlette Lane would be 400 feet or more from the proposed alignment of Faith Lane but would experience a reduced yet likely insignificant noise increase, as proposed residential structures would be constructed between these receptors and Faith Lane that would provide shielding from vehicle traffic noise on Faith Lane. Consequently, the proposed project would result in permanent increases in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan along Faith Lane at receptors on Silver Drive. However, it should be noted that the resultant roadway noise levels at these impacted receptors would be below the General Plan's maximum allowable noise exposure at residential receptors for transportation noise sources presented in Table 4.10-5.

**TABLE 4.10-8
 TRAFFIC NOISE INCREASES ALONG ROADS IN THE PROJECT VICINITY**

Roadway Segment	Existing	Applicable Increase Threshold (dB)	Existing plus Full Buildout of Project	dBA Difference	Significant Increase?
Weekday Peak-Hour Noise Levels					
Pleasant Valley Road from Forni Road to Patterson Drive	69.5	1.5	69.6	0.1	No
Pleasant Valley Road from Patterson Drive to Missouri Flat Road	69.9	1.5	70.0	0.1	No
Pleasant Valley Road from Missouri Flat Road to China Garden Road	69.9	1.5	69.9	0.0	No
Pleasant Valley Road from China Garden Road to Fowler Road	67.6	1.5	67.3	-0.3 ^a	No
Pleasant Valley Road from Fowler Road to Golden Chain Highway	67.0	1.5	66.9	-0.1 ^a	No
Missouri Flat Road from Mother Lode Drive to Forni Road	74.5	1.5	74.7	0.2	No
Missouri Flat Road from Forni Road to China Garden Road	72.8	1.5	73.2	0.4	No
Missouri Flat Road from China Garden Road to Pleasant Valley Road	71.8	1.5	71.8	0.0	No
China Garden Road from Missouri Flat Road to Pleasant Valley Road	56.1	5	56.1	0.0	No
Faith Lane from Pleasant Valley Road to terminus	47.8	5	57.3	9.5	Yes
Forni Road from Missouri Flat Road to Pleasant Valley Road	62.7	3	62.7	0.0	No

NOTES:

dB = decibels; dBA = A-weighted decibels; NA = not applicable

a. Negative values indicate a decrease in roadway noise at these locations that results when traffic distribution changes reduce future traffic volumes compared to the existing conditions, as predicted in the Transportation Analysis.

SOURCES: Traffic data compiled by Prism Engineering in 2019, and modeling performed by Environmental Science Associates in 2020.

A number of options are available to reduce noise from project-generated traffic, depending on the specific circumstances. For example, in some situations where private outdoor-use areas, such as rear yards, are located adjacent to the roadway, new or larger noise barriers can be constructed to provide the additional necessary noise attenuation. However, Policy 6.5.1.3 of the County General Plan states that where noise mitigation measures are required, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project and the noise barriers are not incompatible with the surroundings.

Interior noise levels at residences along Silver Drive would be attenuated by the existing building materials of their structures. Assuming a 15 dBA reduction from standard building construction with open windows,⁶ the predicted 57.4 dBA, Ldn resultant exterior interior noise levels at these receptors would be attenuated below 45 dBA Ldn, which is the interior noise standard for residential uses. Therefore, sound insulation treatments of existing impacted residences are not warranted as a potential mitigation. However, increased noise impacts to rear yards at these receptors would still represent a significant impact.

⁶ Ibid.

Realignment of Faith Lane away from these receptors would not represent feasible mitigation, as the project proposes to construct residences adjacent and to the south of these existing receptors on Silver Drive and will require an ingress point for these proposed residences. Given that neither sound insulation treatments nor realignment of Faith Lane represent feasible methods of mitigating this potential impact, Mitigation Measure 4.10-1b is identified to construct a noise barrier along the west side of Faith Lane to reduce the traffic noise impact to a less than significant level.

Mitigation Measures

Mitigation Measure 4.10-1b: Construction of a Noise Barrier on Faith Lane.

A solid, 5-foot noise barrier shall be constructed on the west side of Faith Lane extending 500 feet south from Silver Drive.

Significance After Mitigation

Implementation of Mitigation Measure 4.10-1b would reduce the increase in exterior noise levels by at least 5 dBA at impacted residences. With this conservatively estimated reduction, the resultant noise level increase would be 4.6 dBA and below the applicable 5 dBA significance threshold and the impact with respect to potential noise impacts from traffic noise would be **less than significant with mitigation**.

Impact 4.10-1c: Construction of the proposed project would result in temporary increases in ambient noise levels in the vicinity of the project in excess of standards established in the local General Plan or Noise Ordinance, or applicable standards of other agencies.
(Significant and Unavoidable, with Mitigation)

Dorado Oaks Tentative Subdivision Site

The subdivision project is expected to be developed in six phases, with mass grading of the site occurring initially, followed by detailed development of the various phases. Work on the SR-49 intersection component could occur concurrent with the initial site grading, and ultimate scheduling for that effort would be confirmed and approved by Caltrans. The Optional Fowler Lane improvements, if selected, would probably not be constructed until the southerly phases of the project (i.e., those phases lying south of the Faith Lane/Argonaut Drive alignment) commence construction. Construction is anticipated to begin in 2021 and complete by 2024.

Construction of the subdivision would commence with mass grading of the entire site occurring first, followed by detailed grading on a phase-by-phase basis. The preliminary earthwork calculations show a shortage of approximately 7,900 cubic yards, which would need to be imported to the site on an as-needed basis. Trenching for utilities would occur within the subdivisions roadbeds, followed by installation of curbs, gutters, and pavement. Building construction would then ensue.

Construction, though typically temporary, short-term, and/or intermittent, can be a substantial source of noise. Construction noise is of greatest concern where it takes place near noise-sensitive land uses, or if it occurs at night or in the early morning hours; however, it can also affect

commercial uses and other receptors. Local governments typically regulate noise from construction equipment and activities by enforcing noise ordinance standards, implementing general plan policies, and/or imposing conditions of approval for building or grading permits. The following analysis addresses potential construction impacts on off-site receptors with respect to standards established in applicable noise ordinances and General Plan policies identified in Section 4.10.2, *Regulatory Setting*. Noise-sensitive land uses proposed by the project and occupied before construction of later phases are also considered potentially affected uses.

Major noise-generating construction activities associated with the project would include site grading and excavation; installation of utilities; construction of building foundations, cores, and shells; paving; and landscaping. Noise levels would be loudest during grading construction of building foundations. Site grading and excavation often require the simultaneous use of multiple pieces of heavy equipment such as dozers, excavators, scrapers, and loaders. Vertical construction would involve the operation of cranes, man lifts, grade-all/forklifts, and pneumatic hand tools. Noise levels are lower when building construction activities move indoors and require less heavy equipment to complete tasks. Construction equipment would typically include, but would not be limited to, earth-moving equipment and trucks; mobile cranes; compressors; pumps; generators; paving equipment; and pneumatic, hydraulic, and electric tools.

Table 4.10-9 shows typical noise levels associated with various types of construction equipment.

**TABLE 4.10-9
 TYPICAL MAXIMUM NOISE LEVELS FROM CONSTRUCTION EQUIPMENT**

Construction Equipment	Noise Level (dBA, L _{max} at 50 feet)
Backhoe	78
Excavator	81
Compactor	83
Scraper	84
Air Compressor	78
Pneumatic Tools	85
Pumps	77
Dozer	82
Crane	81
Grader	85
Paver	77
Roller	80
Front-End Loader	79
Truck	76
Drill Rig	85

NOTES:

dBA = A-weighted decibels; L_{max} = maximum, instantaneous noise level experienced during a given period of time

These are maximum field measured values at 50 feet as reported from multiple samples.

SOURCE: Federal Highway Administration, *Roadway Construction Noise Model User Guide*, 2006.

The El Dorado County General Plan Policy 6.1.5.11 exempts construction noise of a proposed project from the non-transportation noise limits presented in Table 4.10-7 if such construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally-recognized holiday.

The nearest sensitive receptors to the project site consist of residential uses along Silver Drive, approximately 70 feet the northernmost project parcels on Lot A. To the west, existing residences on Crystal Drive, Sandy Court, Justine Court, and Argonaut Drive would be as close as 100 feet from parcels on Lot J and Lot K, while existing residences on Crown Point Drive and Griffith Road would be as close as 100 feet from parcels on Lot N. East of the project site there are residences on Fowler Lane as close as 100 feet from parcels on Lot L.

The FTA methodology for general assessment was applied for proposed construction activities to determine the resultant noise levels at the nearest sensitive receptors described above. Using FTA methodology, the two noisiest pieces of equipment are assumed to operate simultaneously. For the site grading construction phase, these two equipment types were assumed to be a grader and a scraper, while during the vertical construction phase they were assumed to be an excavator and a crane. **Table 4.10-10, Daytime Noise Levels from Construction**, shows the predicted noise levels from the grading phase and the vertical construction phases at each of the nearest sensitive land uses. As shown in Table 4.10-10, construction noise from the worst-case construction stage scenarios would exceed the standards in General Plan Policy 6.1.5.11 (55 dBA during daytime hours) and would result in an increase of more than 5 dBA above existing noise levels at the nearest receptors. Although construction noise would be temporary, because construction phases would be expected to last up to one month for grading phases and up to 8 months for vertical construction phases of a given parcel, the temporary noise impacts to the nearest receptors would be significant and mitigation measures to reduce construction-related noise impacts would be warranted.

**TABLE 4.10-10
DAYTIME NOISE LEVELS FROM CONSTRUCTION**

Receptor	Existing Daytime Noise Level (dBA, Leq) ^a	Loudest Two Noise Sources	Usage Factor ^b (percent)	Distance to Receptor (feet)	Adjusted L _{eq} Level (dBA) ^c	Exceed Exterior 90 dBA daytime standard?	Existing plus Construction Noise Resultant Noise Level (dBA) ^d	Increase over Ambient
Site Grading Phase								
Silver Drive Residences	46	Scraper / Grader	40 40	70	77	No	81	35
Sandy Court Residences	46	Scraper / Grader	40 40	100	77	No	77	31
Griffith Road Residences	46	Scraper / Grader	40 40	100	77	No	77	31
Fowler Lane Residences	46	Scraper / Grader	40 40	100	77	No	77	31

**TABLE 4.10-10
 DAYTIME NOISE LEVELS FROM CONSTRUCTION**

Receptor	Existing Daytime Noise Level (dBA, Leq) ^a	Loudest Two Noise Sources	Usage Factor ^b (percent)	Distance to Receptor (feet)	Adjusted L _{eq} Level (dBA) ^c	Exceed Exterior 90 dBA daytime standard?	Existing plus Construction Noise Resultant Noise Level (dBA) ^d	Increase over Ambient
Vertical Construction Phase								
Silver Drive Residences	46	Excavator / Crane	40 16	70	72	No	75	29
Sandy Court Residences	46	Excavator / Crane	40 16	100	72	No	72	26
Griffith Road Residences	46	Excavator / Crane	40 16	100	72	No	72	26
Fowler Lane Residences	46	Excavator / Crane	40 16	100	72	No	72	26

NOTES:

1. Leq represents the constant sound level. The reported existing level is the lower end estimate of the 2007 on-site daytime monitoring (Bollard and Associates, 2007).
2. Usage factor is the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.
3. The L_{eq} level is adjusted for distance and percentage of usage.
4. Low existing ambient noise levels do not meaningfully contribute to resultant noise levels.

SOURCE: ESA, 2020.

State Route 49 Intersection Area

Work on the SR-49 intersection would vary depending on the option selected. Option A (the roundabout option) would require demolition of buildings on the affected parcels, followed by roadway and roundabout construction. Necessary utility relocations would occur. Temporary detours could be required during the construction period, and would be planned in accordance with Caltrans requirements. Construction would take approximately 9-to 12 months.

Option B (the signalized intersections options) would be more straightforward, as no building demolition would be required. Necessary utility relocations would occur, followed by installation of curb and gutter improvements, then pavement. The two signals would be set, and roadway striping placed. Construction would take approximately 6 to 9 months.

Construction noise would be greatest during the building demolition and grading proposed under Option A. However, the disturbance area under Option A would be 150 from the nearest sensitive receptors and intervening commercial buildings would further reduce noise levels. Option B would require grading for the new alignment of Faith Lane and Silver Drive which would result in relatively brief noise impacts to existing residences on Silver Drive, approximately 50 feet away. Generally, grading for roadway realignments would result in brief periods of noise levels of approximately 72 dBA (with shielding of adjacent commercial buildings) under Option A and 85 dBA under Option B. Existing daytime ambient noise levels in the area which are proximate to SR-49 are on the order of 62 dBA. Consequently, like the subdivision construction, construction

activities for the SR-49 intersection improvements would result in temporary noise level increases of more than 5 dB over existing conditions and Mitigation Measure 4.10-1c would apply.

Optional Fowler Lane Improvement Area

If this option is selected, Fowler Lane would be widened to minimum paved width of 20 feet, starting approximately 450 linear feet from the intersection of Fowler Lane and South Point Road headed southwest, following Fowler Lane to the south for approximately 2,600 feet. The work would likely require the reconstruction of some existing drainage facilities, earthwork (cut and fill slopes where necessary), and the removal of trees where necessary to accommodate the additional pavement width. Any existing connections to Fowler Lane such as driveways or other types of access would be modified as part of the widening work. Some temporary offsite easement may be required to accommodate the work. Construction would take approximately 3 to 6 months.

Excavators, back-hoes and graders would be used in relatively close proximity to some residences during daytime hours. Existing residences along Fowler Lane are as close as 20 feet from some portions of the roadway expansion. Construction would occur over an approximately 3 to 6-month period, although work at any one location along the alignment would likely only occur for a week or two. Generally, grubbing, grading and paving for roadway widening would result in brief periods of noise levels of approximately 85 dBA to 90 dBA. Existing daytime ambient noise levels in the area are about 46 dBA. Consequently, like the subdivision construction, construction activities for the Fowler Lane improvements would result in temporary noise level increases of more than 5 dB over existing conditions, and Mitigation Measure 4.10-1c would apply.

Mitigation Measures

Mitigation Measure 4.10-1c: Construction Noise Reduction Plan

The project applicant or its contractor shall prepare a Construction Noise Reduction Plan, to be implemented as part of each individually contracted project within 900 feet of residential uses. The plan shall be submitted to the El Dorado County Director of Planning, Building and Code Enforcement, or the Director's designee, for review and approval, and implementation of identified measures shall be required as a condition of the permit. This Construction Noise Reduction Plan shall include, at a minimum, the following noise reduction measures:

- All construction equipment and equipment staging areas shall be located as far as possible from nearby noise-sensitive land uses, and/or located such that existing topography blocks line-of-site from these land uses to the staging areas.
- All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.
- Where feasible and consistent with building codes and other applicable laws and regulations, individual operations and techniques shall be replaced with quieter procedures (e.g., using welding instead of riveting, mixing concrete offsite instead of onsite).

- All construction equipment with back-up alarms shall be equipped with either audible self-adjusting backup alarms or alarms that only sound when an object is detected. The self-adjusting backup alarms shall automatically adjust to 5 dBA over the surrounding background levels. All non-self-adjusting backup alarms shall be set to the lowest setting required to be audible above the surrounding noise levels. In addition to the use of backup alarms, the construction contractor shall consider other techniques such as observers and the scheduling of construction activities such that alarm noise is minimized.
- When future noise sensitive uses are within close proximity to prolonged construction noise, noise attenuating buffers such as structures, truck trailers, temporary noise curtains or sound walls, or soil piles shall be located between noise sources and the receptor to shield sensitive receptors from construction noise.
- The applicant or construction contractors shall post visible signs along the perimeter of the construction site that disclose construction times and duration. A contact number for an El Dorado County enforcement officer shall be included where noise complaints can be filed and recorded. The applicant will be informed of any noise complaints and will be responsible for investigating complaints and implementing feasible and appropriate measures to reduce noise at receiving land uses. These may include:
 - Noise-reducing enclosures and techniques shall be used around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors).
 - For construction activity that occurs within direct line-of-sight of existing sensitive land uses, install temporary noise curtains that meet the following parameters:
 - Temporary noise curtains shall be installed as close as possible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s).
 - Temporary noise curtains shall consist of durable, flexible composite material featuring a noise barrier layer bounded to sound-absorptive material on one side. The noise barrier layer shall consist of rugged, impervious, material with a surface weight of at least one pound per square foot.

Significance After Mitigation

Implementation of the mitigation measure would reduce construction noise at receptors surrounding the project site. Construction activities that occur over 900 feet from existing sensitive receptors would not exceed daytime 55 dB, Leq threshold of El Dorado County General Plan Policy 6.1.5.11, were it to apply to construction activities. For construction activities located within 900 feet from existing sensitive land uses, to the mitigation would include noise barriers to further reduce noise at these receptors, which can reduce noise by up to 10 dB (EPA 1971). Although noise reduction would be achieved with implementation of these measures, further reductions of up to 16 dB would be necessary to ensure that noise levels increases from construction would be 5 dBA or less above the relatively quiet 46 dBA ambient noise levels. Reductions of this magnitude are not expected to be achieved under all circumstances with

implementation of Mitigation Measure 4.10-1 and this impact would be **significant and unavoidable**.

Impact 4.10-2: The proposed project could result in the generation of excessive groundborne vibration or groundborne noise levels. (*Less than Significant, with Mitigation*)

This analysis addresses vibration impacts generated by construction activities at existing off-site buildings and at buildings constructed during the early phases of construction. Equipment or activities that typically generate continuous vibration include but are not limited to excavation equipment, impact pile drivers, static compaction equipment, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment.

There are no vibration standards established in either the County General Plan or the County Code. As shown in Table 4.10-3, structural impacts to sensitive historic structures may occur if continuous vibration limits of 0.12 in/sec PPV is exceeded. A continuous vibration limit of 0.50 in/sec PPV is applied to minimize the potential for cosmetic damage at buildings of normal conventional construction such as modern single family homes without plaster walls.

Vibration impacts were estimated using reference vibration levels for construction equipment in concert with the vibration propagation equations published by FTA, and estimating the potential for resultant vibration levels in excess of the FTA standards.

The geotechnical report indicates that pile installation would not be a requirement of building foundations and, therefore pile driving activities would not be required. Consequently, the only potential sources of vibration would be from roadway compaction activities, loaded trucks, large bulldozers, and drill rigs.

Therefore, the analysis of vibration from these sources was conducted using a matrix of vibration from construction activities with distances to receptors. This matrix, presented in **Table 4.10-11**, uses dark-shaded areas to indicate the distances at which vibration levels would exceed the criterion for historic structures or buildings that are documented to be structurally weakened would be exceeded. As shown in Table 4.10-11, the vibration limit of 0.50 in/sec PPV for cosmetic damage at buildings of normal conventional construction such as modern single family homes would not be exceeded. The only historical structure identified in the project vicinity is the 1878 building at 484 Pleasant Valley Road, which, as discussed in Section 4.4 *Cultural Resources*, is recommended as potentially eligible for its association with the development of Diamond Springs from a mining to an agricultural economy. This building would be demolished under Option A of the State Route 49 Intersection component. However, construction activities for lane widening under Option B could be as close as 20 feet from this structure and could involve use of vibratory compaction equipment. As shown in Table 4.10-11, at this distance construction-related vibration levels could exceed the vibration limit of 0.12 in/sec PPV for cosmetic damage at historic buildings. Consequently, the impact of the proposed project under Option B with respect to generation of excessive groundborne vibration or groundborne noise levels would be **Significant**.

**TABLE 4.10-11
 VIBRATION LEVELS FOR CONSTRUCTION ACTIVITY**

Equipment	Estimated Peak Particle Velocity (inches per second)				
	At 25 Feet (reference)	At 50 Feet	At 75 Feet	At 100 Feet	At 170 Feet
Jackhammer	0.035	0.016	0.010	0.008	0.004
Loaded Trucks	0.076	0.035	0.023	0.017	0.009
Caisson Drilling	0.089	0.041	0.027	0.019	0.011
Large Bulldozer	0.089	0.041	0.027	0.019	0.011
Vibratory Roller	0.20	0.100	0.063	0.046	0.025

NOTE:

Dark-shaded areas indicate distances where vibration levels would exceed the criterion for historic structure or buildings that are documented to be structurally weakened would be exceeded.

SOURCES: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, September 2013. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.

Mitigation Measures

Mitigation Measure 4.10-2: Alternative Compaction Methods for Option B.

To reduce potential vibration impacts to the historic structure at 484 Pleasant Valley Road under Option B, Project contractors shall use non-vibratory excavator-mounted compaction wheels and small smooth drum rollers for final compaction of asphalt base and asphalt concrete. If needed to meet compaction requirements, smaller vibratory rollers shall be used to minimize vibration levels during repaving activities where needed to meet vibration standards. These methods shall be employed for construction within 50 feet of the structure at 484 Pleasant Valley Road.

Significance After Mitigation

Implementation of Mitigation Measure 4.10-2 would ensure that vibration levels during construction activities associated with Option B would remain below the 0.12 in/sec PPV for cosmetic damage at historic buildings and the impact with respect to potential vibration impacts to historic structures would be **less than significant with mitigation**.

Impact 4.10-3 (Non-CEQA noise impacts of the environment on the project): The project would not expose people residing or working within the project area to excessive noise levels.

Development of the proposed project could expose future occupants of the project site to existing sources of noise. However, CEQA does not require that potential effects of the environment on the project be analyzed or mitigated. Nevertheless, an analysis of existing noise effects on the project is included to provide information to the public and decision-makers and to comply with General Plan policies.

As discussed in Section 4.10.2, *Regulatory Setting*, General Plan Policy 6.5.1.1, where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels

exceeding the levels specified in Table 4.10-6 or the performance standards of Table 4.10-6, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

An Environmental Noise Assessment for a previously proposed development of the project site was conducted in 2007 (Bollard and Associates, 2007) and estimated on-site noise levels to be below 45 dBA Ldn based on distance of the closest boundary from SR-49. Such noise levels would be well below the 60 dBA, Ldn noise standard applicable to residential uses (shown in Table 4.10-5). Therefore, the proposed project would have a less than significant (non-CEQA) impact with respect to exposure of persons to substantial noise levels exceeding the standards of the County General Plan.

Mitigation Measures

None required.

Cumulative Impacts

Impact 4.10-4: Construction activities for the proposed project combined with cumulative construction noise in the project area would result in a substantial temporary or periodic increase in ambient noise levels in excess of standards established in the General Plan or Noise Ordinance. (Significant and Unavoidable Impact, with Mitigation).

Projects considered in the cumulative analyses include the following currently active residential and commercial projects within the Diamond Springs Community Region:

- Indian Creek Ranch – A Tentative Subdivision Map on a 182-acre site, located on Echo Lane, west of the US-50/El Dorado Road interchange. The project would create 74 residential lots with RE-5-PD (Estate Residential 5-acre planned development) and R3A-PD (Single-Family 3-acre planned development) zoning on lots ranging in size from 1 to 5 acres.
- Diamond Village Apartments – A planned apartment complex on a 10.7-acre site, located on the south side of Black Rice Road, approximately 1,000 feet west of the intersection with SR-49. The project would construct ten multi-unit residential buildings and one community building totaling 80 multifamily residential units and one on-site manager unit.
- Piedmont Oak Estates – A Tentative Subdivision Map on a 26-acre site, located on the northeast corner of SR-49 and Black Rice Road. The project would consist of 75 single family residential lots and one commercial lot.
- El Mirage Plaza – A Large Lot Tentative Map on approximately 28.8 acres, located approximately 1.8 miles northwest of the proposed Dorado Oaks Tentative Subdivision Map site on Runnymede Drive at the southeast corner of the US-50/El Dorado Road interchange. If developed at the maximum levels allowed under those zoning designations, the site could theoretically house up to 435,000 square feet of commercial uses and 260 multi-family residential units.
- El Dorado Senior Village – A senior citizen’s residential facility on approximately 8 acres, located on State Route 49 approximately 1.5 miles west of the proposed Dorado Oaks

Tentative Subdivision Map site. The project would consist of 149 multi-family residential rental units, as well as a 7,500 square-foot commercial building with restaurant, a 2,500 square-foot bed and breakfast inn, and a 3,500 square-foot clubhouse.

- Shinn Ranch – A residential subdivision map on 167.7 acres that would develop 143 single family detached homes. This project is located on Mother Lode Drive approximately 3.5 miles west of the proposed Dorado Oaks Tentative Subdivision Map site.

All three of six cumulative projects are sufficiently distant (1.25 miles or more with intervening structures and topography) from the proposed Dorado Oaks Tentative Subdivision Map site to avoid cumulative construction noise impacts. However, while none of these cumulative projects would contribute considerably to the significant and unavoidable construction noise impacts generated by the proposed project, the impact of the proposed project construction noise would remain **Significant and Unavoidable with Mitigation**.

Mitigation Measures

Mitigation Measure 4.10-1c: Construction Noise Reduction Plan

Significance After Mitigation

Implementation of the mitigation measure would reduce construction noise at receptors surrounding the project site. Construction activities that occur over 900 feet from existing sensitive receptors would not exceed daytime 55 dB, Leq threshold of El Dorado County General Plan Policy 6.1.5.11, were it to apply to construction activities. For construction activities located within 900 feet from existing sensitive land uses, the mitigation would include noise barriers to further reduce noise at these receptors, which can reduce noise by up to 10 dB (EPA 1971). Although noise reduction would be achieved with implementation of these measures, further reductions of up to 16 dB would be necessary to ensure that noise levels increases from construction would be 5 dBA or less above the relatively quiet 46 dBA ambient noise levels. Reductions of this magnitude are not expected to be achieved under all circumstances with implementation of Mitigation Measure 4.10-1c and this impact would be **significant and unavoidable**.

Impact 4.10-5: Operation of the proposed project when considered with other cumulative development would cause a substantial permanent increase in ambient noise levels in excess of standards established in the General Plan or Noise Ordinance (*Less than Significant with Mitigation*).

Operational noise impacts of the proposed project would result primarily from increased traffic on the local roadway network. Cumulative (year 2035) plus project traffic data were used to estimate cumulative operational noise increases.

The significance of cumulative impacts related to traffic noise levels is determined using a two-step process, as discussed in the “Approach to Analysis” section. If a cumulative impact is identified, the second step is to evaluate whether the contribution of the project to roadside noise levels would be cumulatively considerable.

The roadway segments analyzed and the results of the noise increases resulting from modeling are shown in **Table 4.10-12** for 2035 cumulative plus weekday p.m. full buildout of the project.

As shown in Table 4.10-12, cumulative traffic noise impacts would occur along only one of the 11 roadways analyzed and, Faith Lane. The traffic noise associated with the proposed project would represent a cumulatively considerable contribution to this cumulative impact (i.e., there would be an increase of more than 1.5 dBA over the cumulative without project scenario). Therefore, the proposed project's cumulative noise impact would be **significant**, and Mitigation Measure 4.10-1b: Construction of a noise barrier on Faith Lane identified for the proposed project would be required to reduce the impact to a less than significant level. However, mitigation beyond that identified for the significant project-level impact is not required.

Mitigation Measures

Measure 4.10-1b: Construction of a noise barrier on Faith Lane.

Significance After Mitigation

Implementation of Mitigation Measure 4.10-1b would reduce the increase in exterior noise levels by at least 5 dBA at impacted residences. With this conservatively estimated reduction, the resultant cumulative noise level increase would be 5.0 dBA and would not exceed the applicable 5 dBA significance threshold and the impact with respect to potential noise impacts from traffic noise would be **less than significant with mitigation**.

**TABLE 4.10-12
MODELED TRAFFIC NOISE LEVELS YEAR 2035 WITH WEEKDAY P.M. FULL BUILDOUT OF PROJECT MIXED USES**

Roadway Segment	Existing	Applicable Increase Threshold (dB)	2035 plus Full Buildout of Project Mixed Uses	dBA Difference 2035 plus Full Buildout of Project Mixed Uses from Existing	Significant Cumulative Increase?	2035 No Project	dBA Difference 2035 plus Full Buildout of Project Mixed Uses from 2040 No Project	Cumulatively Considerable Project Increase?
Weekday Peak-Hour Noise Levels								
Pleasant Valley Road from Forni Road to Patterson Drive	69.5	1.5	70.0	0.5	No	69.9	0.1	N/A
Pleasant Valley Road from Patterson Drive to Missouri Flat Road	69.9	1.5	69.5	-0.4 ^a	No	69.5	0.0	N/A
Pleasant Valley Road from Missouri Flat Road to China Garden Road	69.9	1.5	69.5	-0.4 ^a	No	69.4	0.1	N/A
Pleasant Valley Road from China Garden Road to Fowler Road	67.6	1.5	67.3	-0.3 ^a	No	67.2	0.1	N/A
Pleasant Valley Road from Fowler Road to Golden Chain Highway	67.0	1.5	67.6	0.6	No	67.5	0.1	N/A
Missouri Flat Road from Mother Lode Drive to Forni Road	74.5	1.5	75.6	1.1	No	75.4	0.2	N/A
Missouri Flat Road from Forni Road to China Garden Road	72.8	1.5	72.8	0.0	No	72.4	0.4	N/A
Missouri Flat Road from China Garden Road to Pleasant Valley Road	71.8	1.5	71.4	-0.4 ^a	No	70.9	0.5	N/A
China Garden Road from Missouri Flat Road to Pleasant Valley Road	56.1	5	55.8	-0.4 ^a	No	55.8	0.0	N/A
Faith Lane from Pleasant Valley Road to terminus	47.8	5	57.2	9.4	Yes	47.3	9.9	Yes
Forni Road from Missouri Flat Road to Pleasant Valley Road	62.7	3	63.3	0.5	No	63.3	0.0	N/A

NOTES:

dB = decibels; dBA = A-weighted decibels; N/A = The cumulative contribution test for the project is not applicable because there is no cumulative impact along this roadway.

a. Negative values indicate a decrease in roadway noise at these locations that result from traffic distribution changes reducing future traffic volumes compared to the existing conditions, as predicted in the transportation analysis.

SOURCE: Traffic data compiled by Prism Engineering in 2020, and modeling performed by Environmental Science Associates in 2020.

4.10.5 References

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4.11 Population and Housing

This section includes a description of the environmental setting to establish baseline conditions for population and housing, a summary of the regulations related to population and housing, and an evaluation of the proposed projects' potential effects on population and housing. The physical environmental effects associated with the project, many of which pertain to issues of population growth, and residential land use compatibility (e.g., noise, transportation, air quality) are evaluated in other sections of this EIR.

4.11.1 Introduction

CEQA requires the analysis of potential adverse effects of a project on the environment. The potential effects of the environment on the project are not legally required to be analyzed or mitigated under CEQA, except where the project impacts exacerbate the existing conditions. Therefore, this section analyzes potential effects of population and housing conditions on the project (as well as other users) as non-CEQA impacts for informational purposes as they relate to consistency with General Plan Policies.

The Notice of Preparation was circulated on July 29, 2019, and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. A number of comment letters were received regarding population and housing issues, with most commenters expressing concern with impacts related to increased housing production and resultant population growth in communities. This section provides a discussion of those concerns related to population growth, along with a description of housing strategies and requirements that El Dorado County and other area agencies are incorporating to address housing issues within the region. Topics related to population and housing are addressed primarily in this section, with related population and housing discussions covered within the project design, land use, public services, utilities, and transportation sections of the document.

The primary sources of data referenced for this section include the El Dorado County General Plan (El Dorado County, 2004a), the General Plan's Draft and Final EIR's (El Dorado County, 2003 and 2004b), the El Dorado County 2013-2021 Housing Element (El Dorado County, 2013), the Sacramento Area Council of Governments (SACOG) Preferred Blueprint Scenario and Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) (SACOG, 2016), the SACOG 2013-2021 Regional Housing Needs Assessment Plan (SACOG, 2020), the U.S. Census Bureau's American Fact Finder (U.S. Census, 2020), and California Department of Finance (DOF) Population and Housing Estimates (Department of Finance, 2020).

4.11.2 Environmental Setting

Existing and Baseline Conditions

The proposed project area is located within the unincorporated Diamond Springs Community Region in El Dorado County, California, about three miles south of Placerville and 40 miles east of downtown Sacramento. The Placerville area and Diamond Springs community of El Dorado

County is a rapidly developing region of the county. Typically characterized by suburban and rural development, much of the housing in the area is built to serve residents that commute westwards to the Sacramento area.

Population

Diamond Springs

The project site is located within the Diamond Spring Census Designated Place (CDP), which covers an area in the central portion of El Dorado County that measures approximately 16.64 square miles, or about 10,650 acres. Per the 2010 U.S. Census, the U.S. Census Bureau estimated that this CDP had a population of approximately 11,037 persons. The U.S. Census Bureau 2014-2018 5-Year American Community Survey estimated that the population of the Diamond Springs CDP was 11,989 in 2018,¹ an increase of approximately 952 people, or about 8 percent over the 2014-2018 time period.

El Dorado County

The California Department of Finance (DOF) estimated that the population of El Dorado County was 181,058 in 2010, and 193,227 in 2020, an increase of about 6.7 percent.² By 2035, the DOF predicts the population of the County will be 205,978. The County's 2013 Housing Element assumed a higher rate of growth, and estimated that the County's population would be 220,384 in 2025.³

The SACOG region includes Sacramento, Sutter, Yolo, Yuba, El Dorado and Placer counties as well as the 22 cities within those counties (Tahoe area excluded). The SACOG 2016 MTP/SCS projections estimate that the larger region's population will reach over 3 million by 2036, resulting in the addition of approximately 810,000 new residents, which would be 37 percent more than the region's population in 2010 of 2,190,000 (SACOG, 2016).

Housing

Diamond Springs

The 2010 Census recorded 4,921 housing units in the Diamond Spring CDP. The U.S. Census Bureau 2013-2018 5-Year American Community Survey estimated that there were 5,072 housing units by 2018, of which 75.4 percent were owner occupied. This was an increase of approximately 290 housing units over an eight-year period.

¹ U.S. Census, 2021. 2019 American Community Survey 5-Year Estimates (2015-2019). Diamond Springs CDP; El Dorado County, California; United States. Available online at <https://data.census.gov/cedsci/profile?q=Diamond%20Springs%20CDP,%20California&g=1600000US0619220>. Accessed April 23, 2021.

² California Department of Finance, 2021a and 2021b. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark. <https://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>. Accessed April 26, 2021.

³ El Dorado County, 2013. 2013-2021 Housing Element Update. Adopted October 29, 2013 by Resolution #161-2013.

El Dorado County

In 2010, the DOF estimated that there were 88,159 housing units in El Dorado County, and 92,508 units in 2020.⁴ The U.S. Census estimated that the County had an owner-occupied housing rate of 75.7 percent during the period between 2015 and 2019.⁵ The DOF estimated that there were 2.56 persons per household in 2010.

**TABLE 4.11-1
DIAMOND SPRINGS CDP POPULATION AND HOUSEHOLDS**

Diamond Springs CDP	2010	2018	2010-2018 Growth (%)
Total Population	11,037	11,989	+ 8.6
Total Housing Units ^a	4,951	5,072	+ 2.4

NOTES:

a "Housing units" are all housing (occupied and unoccupied housing units).

SOURCE: US Census, 2020. American Community Survey, 2010 ACS 5-Year Estimates Data Profiles. Diamond Springs CDP.

**TABLE 4.11-2
HISTORIC AND PROJECTED POPULATION - HOUSEHOLDS**

	2010	2019	2020	2035	2010-2020 Growth (%)	2010-2035 Growth (%)
El Dorado County						
Population ¹	181,058	190,018	193,227	205,978	+ 6.7	+ 13.7
Households ^{a 1}	70,223	74,934	75,383	76,269 ^b	+ 7.3	+ 8.6
Persons Per Household	2.56	2.51	2.54	2.99	- 0.78	+ 16.8

NOTES:

a "Households" are occupied housing units.

b For entire El Dorado County in 2036. If excluding the Tahoe Basin, then 70,071 households for 2036.

SOURCES:

1 California Department of Finance, 2020. P-1 Population and Housing Projections for Counties, 2010-2060. Available at <http://www.dof.ca.gov/forecasting/demographics/projections/P-1/>. Accessed June 3, 2020.

2 SACOG, 2016. MTP/SCS. Jobs and Households by County, 2008 and 2036. Table 9.5. El Dorado County. Households. Available at https://www.sacog.org/sites/main/files/file-attachments/mtpscscs_complete.pdf?1489089196. Accessed June 4, 2020. Page 254.

3 SACOG, 2015. MTP/SCS. Appendix E-3: Land Use Forecast Background Documentation. El Dorado County. Housing Units. Available at https://www.sacog.org/sites/main/files/file-attachments/appendix_e-3_land_use_forecast_background_documentation.pdf?1489089196. Accessed June 4, 2020. Page 156.

Regional Housing Needs

As required by California State law, the Housing Element of the El Dorado County General Plan discusses the County's "fair share allocation" of regional housing need by income group, as distributed to regional councils of governments (COGs) by the California Department of Housing and Community Development (HCD). The COGs are then responsible for developing a Regional

⁴ California Department of Finance, 2021a and 2021b. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark. <https://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>. Accessed April 26, 2021.

⁵ U.S. Census, 2021. Quick Facts, El Dorado County, California. Available online at <https://www.census.gov/quickfacts/fact/table/eldoradocountycalifornia/POP060210>. Accessed April 23, 2021.

Housing Needs Allocation (RHNA) Methodology for allocating the regional determination to each city and county in the COG region. Along with other COGs throughout the state, the SACOG region is currently in the beginning stages of the 6th Cycle (2021-2029) RHNA, and SACOG released its Regional Housing Needs Plan in March, 2020 (SACOG, 2020). The Plan outlined SACOG’s RHNA methodology for the 6th Cycle and made distributions to regional cities and counties.

The Plan allocates housing into four income groups to ensure adequate housing opportunities for all income levels. SACOG’s calculation of the local share of regional housing needs takes into consideration the 2019 MTP/SCS growth forecast, local plans, and a variety of regulatory, market, infrastructure, transportation, and performance factors. The housing allocations for unincorporated El Dorado County (excluding the Tahoe Basin) from 2021 to 2029 are presented by income group in **Table 4.11-3**.

TABLE 4.11-3
6TH CYCLE (2021-2029) SACOG HOUSING ALLOCATIONS FOR UNINCORPORATED EL DORADO COUNTY

Income Category	Unincorporated Countywide Total Housing Units	Portion of Total Allocation
Very Low	1,350	27.0%
Lower	813	16.3%
Moderate	840	16.8%
Above Moderate	1,991	39.9%
Total	4,994	100%

SOURCE: SACOG, March 2020. Adopted 6th Cycle (2021-2029) RHNA Methodology

4.11.3 Regulatory Setting

Federal

No federal plans, policies, regulations, or laws related to population and housing are applicable to the proposed project area.

State

California Housing Element Requirements

California law (Government Code Section 65580, et seq.) requires cities and counties to include a Housing Element as a part of their General Plans to address housing conditions and needs in the community. Housing Elements are prepared approximately every eight years, following timetables set forth in the law. The Housing Element must identify and analyze existing and projected housing needs and “make adequate provision for the existing and projected needs of all economic segments of the community,” among other requirements. The County adopted its current Housing Element in 2013. The County and most other jurisdictions in the state are currently in the process of updating their housing elements as part of the 6th Cycle (2021-2029) Regional Housing Needs Allocation (RHNA) from the California Department of Housing and Community Development (HCD).

Regional Housing Needs Assessment

State law mandates that all cities and counties zone land appropriately to accommodate the increasing needs of regional population growth. The statewide housing demand is determined by the California Department of Housing and Community Development (HCD), while local governments and councils of governments manage their specific regional and jurisdictional housing needs and develop a regional housing needs assessment (RHNA).

In the greater Sacramento region, which includes El Dorado County, SACOG has the responsibility of developing and approving a RHNA and a Regional Housing Needs Plan (RHNP) every eight years (Government Code, Section 65580 et seq.). This document plays a central role in distributing the allocation of housing for every county and city in the SACOG region. Housing needs are distributed for very low income, low income, moderate income, and above moderate households.⁶

Regional

Sacramento Area Council of Governments

As described above, SACOG is an association of local governments in the six-county Sacramento Region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba, as well as 22 cities. SACOG determines the distribution of affordable housing in the region through its Regional Housing Needs Plan. SACOG also assists in planning for transit, bicycle networks, clean air and serves as the Airport Land Use Commission for the region.⁷

SACOG, in partnership with the non-profit organization Valley Vision, undertook the Blueprint Project to build a consensus around a single, coherent, long-term vision for the development of the Sacramento region. The Blueprint was not intended to advocate any particular development pattern; instead, SACOG assumed that if it provided accurate information and forecasting tools to a wide variety of interest groups, a consensus would naturally emerge on what the region as a whole wanted for its future.

The approved Blueprint is based on seven interlocking principles:

- Compact Development that requires less conversion of rural land, shortens travel distances, and reduces the per-unit cost of infrastructure and services.
- Housing Choices, in particular small lot, single-family dwellings and attached products that suit the needs of seniors, empty-nesters, young couples, single-person households, single-parent households and other types of small households. The smaller products fit well with the theme of compact development.
- Mixed-Use Developments that allow people to work and shop near their home.

⁶ Sacramento Area Council of Governments, 2020. *Regional Needs Housing Plan 2021-2029*. Adopted March 20, 2020. pp. ES-3. Summary Table 1.

⁷ Sacramento Area Council of Governments, 2017. About SACOG. Available: <http://www.sacog.org/about/>. Accessed July 25, 2017.

- Use of Existing Assets, in particular the development of sites that are already within the urban footprint and urban services coverage. This includes both infill development of vacant lots as well as re-development of under-utilized sites such as low-density strip retail areas.
- Transportation Choices, in particular the ability to use non-auto modes (transit, bike, walk) for at least some trips. Non-auto modes are most practical in compact, mixed-use communities.
- Quality Design in terms of aesthetic buildings but also in terms of providing attractive, walkable public spaces that create a sense of community.
- Conservation of Natural Resources through less conversion of land to urban use, slower growth of demand for water, and reduction in the amount of per-capita auto travel.

Following the principles of the Blueprint, SACOG adopted the 2036 horizon for Growth Projections for the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), a plan for improving regional transportation. The MTP/SCS links land use, air quality, and transportation needs for the greater Sacramento region. Goals include shortening commute times, reducing traffic congestion, lessening dependence on automobiles, improving air quality, reducing greenhouse gas emissions, reducing distances traveled between jobs and housing, and providing for housing choices more aligned with the changing demographic. While the MTP/SCS is not a housing or population growth plan, it does include assumptions for population and housing development trends.

Local

El Dorado County General Plan

The El Dorado County General Plan provides for long-range direction and policy for the use of land within El Dorado County, including the maximum intensity and density of future development within the unincorporated areas under the County's jurisdiction. This includes identifying the maximum allowed residential densities.

As part of local general plans, the Housing Element is one of several mandated elements, and each Housing Element must be certified by the State of California. Housing Element law, enacted in 1969, mandates that local governments adequately plan to meet the existing and projected housing needs for all economic segments of the community. Though required by state law, this element is implemented at the local level. The Housing Element of the County's General Plan sets forth specific goals, policies, and implementation measures to specifically identify ways in which the housing needs of the existing and future resident population can be met. The Housing Element is updated every four to eight years, and identifies strategies and programs that focus on conserving and improving existing affordable housing, providing adequate housing sites, assisting the development of affordable housing, and promoting equal housing opportunities. Forecasts of residential growth conducted as part of the General Plan Housing Element Update process must accommodate the County's Regional Housing Needs Allocation for an additional 4,994 homes in

the very low, low, moderate, and above moderate categories in the unincorporated portion of the County through 2029.⁸

The Housing Element includes the following housing-related policies applicable to development of the proposed project:

Goal HO-1: To provide for housing that meets the needs of existing and future residents in all income categories.

Policy HO-1.1: When adopting or updating programs, procedures, or Specific Plans or other planning documents, the County shall ensure that the goals, policies, and implementation programs are developed with the consideration of achieving and maintaining the County's regional housing allocation.

Policy HO-1.2: To ensure that projected housing needs can be accommodated, the County shall maintain an adequate supply of suitable sites that are properly located based on environmental constraints, community facilities, and adequate public services.

Policy HO-1.5: The County shall direct higher density residential development to Community Regions and Rural Centers.

Policy HO-1.6: The County will encourage new or substantially rehabilitated discretionary residential developments to provide for housing that is affordable to very low-, low- and moderate-income households.

Policy HO-1.11: To the extent feasible, affordable housing in residential projects shall be dispersed throughout the project area.

4.11.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether population and housing impacts are significant environmental effects, the following questions are analyzed and evaluated. Based on Appendix G of the CEQA Guidelines, an impact is considered significant if implementing the proposed project would:

- Induce substantial population growth in an area, either directly or indirectly;
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Approach to Analysis

The following is a description of the methodology used to evaluate the impacts of project site development relative to each of the significance thresholds cited above.

The evaluation of the potential project-related population and housing impacts have been conducted for current conditions relative to population and housing in El Dorado County through

⁸ Sacramento Area Council of Governments, 2020. *Regional Needs Housing Plan 2021-2029*. Adopted March 20, 2020. pp. ES-3. Summary Table 1.

the review of regional population growth projections, housing needs assessments, along with federal and state population statistics. The analysis provided in this section compares the additional residences generated from the proposed project, and the associated population growth, to the projections used in applicable planning documents. This comparison is used to determine if the project would or would not induce substantial population growth.

Issues or Potential Impacts Not Discussed Further

There are no existing residences within the proposed project site, and the project would not displace existing housing or people such that replacement housing would be necessary. These issues are not discussed further within this document.

Impacts and Mitigation Measures

This section discusses potential impacts associated with the construction and use of the proposed project and provides mitigation measures where appropriate. As required by Section 15126.2(d) of the State CEQA Guidelines, an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Although growth inducement itself is not considered an environmental effect, it could potentially lead to adverse environmental effects.

Some examples of projects that are likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems to serve beyond what is needed for project-specific demand, and “leap-frog” development in areas that are only sparsely developed or are underdeveloped. Typically, development projects on sites that are designated for development and that are surrounded by existing suburban uses are not considered growth-inducing on an adverse level because growth in areas that already have development and infrastructure available to serve new development are generally considered in planning documents like general plans.

The 2004 El Dorado County General Plan EIR included a general analysis of the population and housing setting of the project area as a growth forecast for the environmental impact analysis. Specifically, the growth forecasts in the 2004 El Dorado County General Plan EIR are for the planning horizon year (2025) and provide the foundation for much of the environmental analysis by estimating the extent and location of future development within El Dorado County. As part of the analysis, the level of development at General Plan buildout was estimated, and all land uses designated on the General Plan’s land use map were assumed to be developed to maximum densities permitted. However, full buildout is not expected to occur by 2025 for any of the alternatives evaluated in the General Plan EIR. Therefore, as the proposed project would be built prior to the assumed full buildout scenario of the General Plan growth assumptions, the proposed project would be consistent with the analysis assumed within the General Plan EIR.

Impact 4.11-1: The project would not directly or indirectly induce substantial population growth during construction or operation. (*Less than Significant Impact*)

Construction

All proposed project components

As the project site is located in close proximity to more urban areas (Placerville, Folsom, and the City of Sacramento) with a substantial construction workforce, it is expected that workers would be drawn from the local labor pool first, and that a sufficient number of construction workers would be available in the County and adjacent communities to meet the demand. Construction employees could commute from other nearby communities outside El Dorado County; however, if this was to occur, it would be unlikely for construction workers to change residences when assigned to a new construction site. Therefore, a substantial permanent relocation of construction workers to the area is not anticipated. This impact would be **less than significant**.

Operation

Dorado Oaks Tentative Subdivision Map Site

In terms of housing, the Dorado Oaks Subdivision would provide for the development of 382 residential lots. As noted previously, the average household size in El Dorado County was 2.56 individuals per household in 2010, with the estimated 2020 average being 2.54 persons per household. Using the higher factor of 2.56 and multiplying it by the number of units proposed for the project (382), it could be assumed that the proposed project would result in a project population of approximately 978 persons. This population growth on the site was assumed when the County established the site's current land use and zoning designations. These additional residential uses would accommodate population growth in the unincorporated community of Diamond Springs that is consistent with the growth projections in the El Dorado County General Plan and the current (2015-2021) Housing Element, and would help the County meet its regional housing allocation requirements in unincorporated portions of the County. As such, the project would not induce substantial population growth, and the impact would be **less than significant**.

State Route 49 Intersection Area

The project would be developed in an area of existing suburban development and would connect to existing infrastructure, with an established transportation network already provided in the project area that offers local and regional access to the project site. The development of onsite infrastructure for circulation would be constructed with the development of internal streets on the proposed subdivision site. The improvements proposed to connect the site with State Route 49 (SR-49) is an important consideration when evaluating growth-inducing potential of a project. However, these roadway connections were already identified in the County's circulation element and would primarily support existing development as well as future development identified in the General Plan. Development of the proposed roadway facilities would therefore not indirectly induce any population growth that was not already anticipated in the General Plan. As such, this impact would be **less than significant**.

Optional Fowler Lane Improvement Area

Undeveloped properties adjacent to Fowler Lane are designated Medium-Density Residential, or Rural Residential. With the proposed optional improvements to the southerly reaches of Fowler

Lane, it can be reasonably anticipated that the improved access to these existing residential properties would result in providing more effective and safer emergency service access and mobility to the surrounding area for existing and future residents. Such a condition could be considered growth-inducing, in that it could make the area more attractive to future development. The proposed improvements, however, would be limited in their extent in that only about a half-mile of roadway would be widened to a minimal service standard for emergency vehicle access. The improvements would not substantially increase the carrying capacity of the roadway, and the road would still dead-end in an area with few opportunities for additional development. While it is possible that the parcels on either side of the roadway could be subdivided at some point in the future, the minimal improvements to Fowler Lane being considered for the project would be unlikely to be of such magnitude to induce substantial numbers of new residents. Further, to the extent that the improvements made to Fowler Lane would promote development of properties in the area, such development would be constrained by existing land use and zoning designations, which currently provide only for lower density residential uses. As such, this impact would be **less than significant**.

Summary

As the proposed project would be developed in a location where residential uses, utility infrastructure, and public services already exist, the project would not indirectly induce growth. In addition, because the project site is already surrounded by existing residential development, proposed utility connections and extensions would serve only the proposed development and would not contribute to, or cause, additional growth to occur outside of the Community Region boundaries or elsewhere within the vicinity of the project site. In addition, the development of residential uses would adequately accommodate population growth in the unincorporated community of Diamond Springs because the growth is consistent with the growth projections in the County's General Plan and the current Housing Element, and development and growth assumptions would also be consistent with the County's General Plan EIR analysis. Therefore, the project would not directly or indirectly induce substantial population growth during construction or operation, and would be considered **less than significant**.

Mitigation Measures

None required.

Cumulative Impacts

Project effects on population and housing must be considered in light of other past, present, and future projects that could add to the effects of the project, creating cumulative effects. Within the cumulative context, the geographic extent for the cumulative impacts associated with population and housing is focused on the unincorporated communities located in western El Dorado County and the City of Placerville. These jurisdictions are both expected to undergo population growth over the next few decades, and this growth has been anticipated in regional planning documents.

Therefore, the cumulative context for the project is based on the El Dorado County General Plan, and how the growth pattern from the General Plan focuses on development of underutilized

properties, and encouraging balanced growth that reflects the character and scale of the community. Further, the proposed project includes a zoning change to apply a PD zoning district to fulfill the development strategies of the County's General Plan. The General Plan encourages uses within the PD zoning district that provide benefit to the public through consolidation of land uses, minimizing impacts to natural resources, while also promoting the public health, safety, and welfare of the community.

The adopted plans that establish and assess the land use pattern and goals for housing development, population growth, and employment in El Dorado County include the following:

- SACOG MTP/SCS Adopted February 18, 2016 and EIR, certified April 19, 2012 (SCH No. 2011012081).
- SACOG RHNP, Adopted March 2020.
- El Dorado County General Plan (adopted July 19, 2004) and General Plan Housing Element, adopted October 29, 2013;
- El Dorado County General Plan EIR, certified 2004 (SCH No. 2001082030)

As discussed above, the project would be consistent with the growth projections used in the SACOG 2016-2036 MTP/SCS. These same growth projections were assumed for the cumulative analysis in this EIR and account for the population and housing development framework contemplated in the County's General Plan. To reiterate, the growth projections are derived from the SACOG 2016-2036 MTP/SCS, for the surrounding jurisdictions of Sacramento, Sutter, Yolo, Yuba, El Dorado and Placer Counties (the Tahoe area excluded).

Impact 4.11-2: Implementation of the proposed project in combination with other cumulative development in El Dorado County, would not result in significant impacts related to population growth and housing. (*Less than Significant Impact*)

Development of the project, present projects, and reasonably foreseeable future projects, when added to past development in the County, would result in population, housing, and employment growth. "Substantial" growth is defined as unplanned growth, for which infrastructure, services, and housing have not been planned. So long as the cumulative project scenario generates cumulative population, housing, and employment conditions that are within the projections of the County and SACOG, there would be no significant adverse growth impact related to population, housing, or employment.

The increase in housing and population associated with the project would not have a significant cumulative impact on population, housing or employment growth. El Dorado County's growth projections in the General Plan are based on regional estimates provided by SACOG that reflect growth in the unincorporated El Dorado County area as a whole. These projections inform the policies of the General Plan to ensure that infrastructure and government services are expanded accordingly. The General Plan currently assumes that residential uses will be developed at the project site, within the surrounding area, and in other locations throughout the County. This growth is anticipated at a regional level by SACOG and DOF, which envisions the population within the County reaching 205,978 by 2035, an increase of 13,966 people from 2020.

As the proposed project includes a residential component, it is anticipated that new residential populations would be located at the proposed project site. With the population from the project, plus related projects being assumed as within SACOG's projections, any new population generated by the project has already been anticipated by the various utilities and public service providers and other agencies that rely on SACOG's population projections for anticipating future impacts on various services. The project, in accordance with the County's General Plan, and in combination with the development of cumulative projects in the area, would accommodate planned growth, rather than induce unplanned growth.

As discussed in the impact analysis above, the project would result in less-than-significant impacts with respect to substantial unanticipated population growth in an area, either directly or indirectly during construction and operation at the project site. In line with this analysis, the El Dorado County General Plan anticipates continued growth. Therefore, the project, in combination with other past, present, and reasonably probable future projects, would not generate the unplanned population growth. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

4.11.5 References

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4.12 Public Services and Recreation

4.12.1 Introduction

This section evaluates the project's potential effect on fire protection, law enforcement, schools, and park and recreation facilities. Descriptions and analysis in this section are primarily based on information obtained through consultation with public service providers, including the Diamond Springs-El Dorado Fire Protection District, the El Dorado County Sheriff's Office, the Mother Lode Union School District, and the El Dorado Union High School District. Additional information was obtained from the El Dorado County General Plan (El Dorado County 2004).

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Relevant comments expressed concern regarding potential effects of the proposed project on fire protection, law enforcement, schools, and park facilities.

4.12.2 Environmental Setting

Fire Protection

The project site is within the Diamond Springs-El Dorado Fire Protection District, which provides fire suppression, rescue, and emergency medical services to the communities of Diamond Springs, El Dorado, Sleepy Hollow, Logtown, Missouri Flat, Nashville, and Sandridge. The District serves approximately 35,000 residents and covers 95 square miles. District personnel are made up of career employees. The District has a total of five fire stations, with only one of them staffed full time. Station 49, which is the District's main station and administrative headquarters, is located at 501 Pleasant Valley Road, less than 500 feet east of the main point of entry for proposed Dorado Oaks Subdivision via Faith Lane. Station 49 is staffed 24 hours per day. The District also provides mutual aid for fire, rescue, and emergencies to 12 other fire districts in the County that serve a greater population of 180,000 and cover 2,000 square miles.

Law Enforcement

The proposed project would be served by the El Dorado County Sheriff's Office for police protection. The County Sheriff's Office has a force of 392, including 181 sworn officers, and provides service to approximately 1,700 square miles of unincorporated areas of El Dorado County, which encompasses a population of approximately 192,843. The El Dorado County Sheriff's Office is located at 200 Industrial Drive in Placerville, approximately 0.5 mile north of the project site.¹

Schools

The project site is within the jurisdictions of the Mother Lode Union School District and the El Dorado Union High School District. These districts and school facilities are described below.

¹ Sorey, Alexander, Sergeant, El Dorado County Sheriff's Office, email communication, August 24, 2020.

Mother Lode Union School District

The project site is within the Mother Lode Union School District, which operates two schools: Indian Creek Elementary and Herbert C. Green Middle School.

Indian Creek Elementary is located at 6701 Green Valley Road in Placerville, approximately 3.5 miles northwest of the project site. The school provides kindergarten through fourth grade education. The school has a design capacity for 624 students and a current enrollment of 508 students.²

Herbert Green Middle School is located at 3781 Forni Road in Placerville, approximately 1.5 miles north of the project site. The school provides fifth through eighth grade education. The school has a design capacity for 662 students and a current enrollment of 424 students.³

El Dorado Union High School District

The project site is located within the Union Mine High attendance area of the El Dorado Union High School District. Union Mine High is located at 6530 Koki Lane in El Dorado, approximately 1 mile west of the project site. The school provides ninth through twelfth grade education. The school has a design capacity for 1,454 students and a current enrollment of 1,132 students.⁴

Parks and Recreation

Parks and trails are provided for El Dorado County residents and visitors by a diverse array of recreation focused agencies and jurisdictions and include County parks and recreation facilities and existing and proposed major regional trails, including County, state, and federal trails.

El Dorado County Recreational Facilities

El Dorado County is responsible for managing and maintaining six public recreational facilities and owns additional land to be developed into four future parks. The County's existing park and recreational space include neighborhood, community, and regional parks. As shown in Table 4.12-1, El Dorado County has a total of approximately 274 acres of existing and proposed park and recreational facilities, of which 139 acres are existing and approximately 134 acres are proposed. El Dorado County also maintains the El Dorado Trail with the City of Placerville and the Rubicon Trail. El Dorado County uses a standard of 1.5 acres per 1,000 residents for regional and community parks, and a standard of 2 acres per 1,000 residents for neighborhood parks as guidelines for acquisition and development of park facilities.

² Guthrie, Marcy M, Superintendent, Mother Lode Union School District, email communication, October 8, 2020.

³ Guthrie, Marcy M, Superintendent, Mother Lode Union School District, email communication, October 8, 2020.

⁴ Augino, Daniel J, Director, Maintenance, Operations & Facilities, El Dorado Union High School District, email communication, October 8, 2020.

**TABLE 4.12-1
 EL DORADO COUNTY EXISTING AND PROPOSED PARK AND RECREATION AREAS**

Type of Park	Existing		Proposed	
	Number of Parks	Acres	Number of Parks	Acres
Neighborhood Parks	1	2.7	0	0.0
Community Parks	3	73.0	1	26.0
Regional Parks	2	63.7	3	108.3
Total	6	139.4	4	134.3

SOURCE: El Dorado County Parks and Trails Master Plan (2012), Appendix A

There are currently no County-operated parks or recreational facilities in the community of Diamond Springs or in the vicinity of the project site. The nearest parks are regional, community, and neighborhood parks located more than two miles north of the project site in Placerville.

The El Dorado County Parks and Trails Master Plan includes recommendations for the County to assist with the establishment of neighborhood parks, implementing neighborhood park standards, and providing neighborhood park access. The recommendations direct the County to provide neighborhood parks in more densely populated areas of the County not served by a community services or other special district. The areas identified include Diamond Springs, El Dorado, Shingle Springs, Camino/Pollock Pines, and the areas surrounding the City of Placerville (El Dorado County, 2012).

The Placerville Area Parks and Recreation Master Plan Update includes an inventory of park and recreation facilities, recreation program participation, demographics, and levels of service regarding El Dorado County parks that serve residents of Placerville and the surrounding unincorporated areas of El Dorado County, including the communities of Diamond Springs, Coloma, Lotus, Gold Hill, Camino, Pollock Pines, and portions of Rescue. The Master Plan Update provides specific guidance for the City of Placerville and supporting analysis for the County to better understand how best to cooperatively manage and develop new facilities and recreation programs to meet the needs of the current and future population (Foothill Associates, 2017).

National Park Service Trails

The National Park Service has designated two National Historic Trail (NHT) alignments that pass through El Dorado County. These are the California National Historic Trail and the Pony Express National Historic Trail. The California Historic Trail is a route of approximately 5,700 miles including multiple routes and cutoffs, extending from Independence and Saint Joseph, Missouri, and Council Bluffs, Iowa, to various points in California and Oregon. The Pony Express National Historic Trail commemorates the route used to relay mail via horseback from Missouri to California before the advent of the telegraph.

In western El Dorado County both trails generally follow routes adjacent to the U.S. Highway 50 corridor to Mother Lode Drive and Pleasant Valley Road to the community of Diamond Springs. The Pony Express NHT then veers north to Placerville and generally follows U.S. Highway 50 to the Echo Lake area, where it splits into several spurs heading north towards Stateline and south to Highway 88. At Diamond Springs, the California NHT continues east generally following Pleasant Valley Road, Starkes Grade Road, and Sly Park Road to the Gold Ridge area (El Dorado County, 2012).

4.12.3 Regulatory Setting

Federal

No federal plans, policies, regulations, or laws related to law enforcement, school, or parks and recreation are applicable to the proposed project area. However, for fire protection services, there are federal fire protection standards used for response times through the National Fire Protection Association (NFPA). The NFPA publishes a number of standards that are useful to the El Dorado County Fire Department, including:

NFPA 1710: Provides standards for response time; including a call processing time of 60 seconds; a personnel turnout time of 60 seconds for medical, and one minute twenty seconds for fires; and a travel time of 4 minutes (240 seconds). This equates to a 6 minute 20 second response time standard for fire calls.

State

Uniform Fire Code

The Uniform Fire Code (UFC) provides regulations relating to construction, maintenance, and use of buildings. Topics addressed in the UFC include fire department access, fire hydrants, automatic storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The code contains specialized technical regulations relation contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. Specifically, regulations are for building standards as described in the California Building Code (CBC), fire protection and notification systems, fire protection devises (such as extinguishers and smoke alarms), high-rise buildings, childcare facility standards, and fire suppression training.

Division of Occupational Safety and Health

In accordance with California Code of Regulations, Title 8, Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Equipment, the Division of Occupational Safety and Health (DOSH) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hosing sizing requirements, restrictions on the use of compressed air,

access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Quimby Act

The Quimby Act (California Government Code Section 66477) preserves open space and parkland in urbanizing areas of the state by authorizing local governments to establish ordinances requiring developers of new subdivisions to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two. The Quimby Act provides two standards for the dedication of land for use as parkland. If the existing area of parkland in a community is 3 acres or more per 1,000 persons, then the community may require dedication based on a standard of 5 acres per 1,000 persons residing in the subdivision. If the existing amount of parkland in a community is less than 3 acres per 1,000 persons, then the community may require dedication based on a standard of only 3 acres per 1,000 persons residing in the subdivision. The Quimby Act requires a City or County to adopt standards for recreational facilities in its general plan recreation element if it is to adopt a parkland dedication/fee ordinance.

The amount of land dedicated or fees paid shall be based upon the residential density, which shall be determined on the basis of the approved or conditionally approved tentative map or parcel map and the average number of persons per household. There shall be a rebuttable presumption that the average number of persons per household by units in a structure is the same as that disclosed by the most recent available federal census or a census taken pursuant to Chapter 17 (commencing with Section 40200) of Part 2 of Division 3 of Title 4.

California Code of Regulations

The California Code of Regulations, Title 5 Education Code, governs all aspects of education within the state.

Leroy F. Greene School Facilities Act of 1998

This bill, commonly known as “SB 50,” was passed in 1998 and placed limitations on cities and counties with respect to mitigation requirements for school facilities. SB 50 permits school districts to levy fees, based on justification studies, for the purposes of funding construction of school facilities, subject to established limits. The limits were set in 2000, can be adjusted annually for inflation, and can be leveled based on the square footage of residential (up to \$1.93 per square foot in 2000) and commercial-industrial square footage (up to \$0.31 per square foot in 2000).

Local

El Dorado County General Plan

The El Dorado County General Plan provides for long-range direction and policy for the use of land within El Dorado County. General Plan polices applicable to public services and recreation are addressed in the Public Facilities Element, the Economic Development Element, and the Parks and Recreation Element. Applicable goals and policies from these elements are listed below.

Public Facilities Element

Goal 5.1: Provision of Public Services. Provide and maintain a system of safe, adequate, and cost-effective public utilities and services; maintain an adequate level of service to existing development while allowing for additional growth in an efficient manner; and, ensure a safe and adequate water supply, wastewater disposal, and appropriate public services for rural areas.

Policy 5.1.2.1: Prior to the approval of any discretionary development, the approving authority shall make a determination of the adequacy of the public services and utilities to be impacted by that development. Where, according to the purveyor responsible for the service or utility as provided in Table 5-1 [of the general plan], demand is determined to exceed capacity, the approval of the development shall be conditioned to require expansion of the impacted facility or service to be available concurrent with the demand, mitigated, or a finding made that a Capital Improvement Program project is funded and authorized which will increase service capacity.

Policy 5.1.2.2: Provision of public services to new discretionary development shall not result in a reduction of service below minimum established standards to current users, pursuant to Table 4.13-3. The following Levels of Service shall apply to the review of discretionary projects:

**TABLE 4.12-2
 EL DORADO COUNTY GENERAL PLAN- MINIMUM LEVELS OF SERVICE**

	Community Region	Rural Center and Rural Region
Schools	As determined appropriate by the school districts	As determined appropriate by the school districts
Parks	Specific plan for new communities or Quimby Fee/dedication program for tentative maps	Quimby Fee/dedication program for tentative maps
Fire district response	8-minute response to 80% of the population	15 to 45-minute response
Sheriff	8-minute response to 80% of the population	No standard
Ambulance	10-minute response to 80% of the population	0-minute response in Rural Regions and "as quickly as possible" in wilderness areas*

SOURCE: El Dorado County, 2004

Policy 5.1.3.1: Growth and development and public facility expenditures shall be primarily directed to Community Regions and Rural Centers.

Policy 5.6.1.2: Reserve adequate rights-of-way to facilitate expansion of services in a timely manner. **Goal 5.7: Emergency Services.** Adequate and comprehensive emergency services, including fire protection, law enforcement, and emergency medical services.

Policy 5.7.1.1: Prior to approval of new development, the applicant will be required to demonstrate that adequate emergency water supply, storage, conveyance facilities, and access for fire protection either are or will be provided concurrent with development.

Policy 5.7.3.1: Prior to approval of new development, the Sheriff's Department shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.

Policy 5.7.4.1: Prior to approval of new development, the applicant shall be required to demonstrate that adequate medical emergency services are available and that adequate emergency vehicle access will be provided concurrent with development.

Policy 5.7.4.2: Prior to approval of new development, the Emergency Medical Services Agency shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.

Policy 5.8.1.1: School districts affected by a proposed development shall be relied on to evaluate the development's adverse impacts on school facilities or the demand therefore. No development that will result in such impacts shall be approved unless:

1. To the extent allowed by State law, the applicant and the appropriate school district(s) have entered into a written agreement regarding the mitigation of impacts to school facilities; or
2. The impacts to school facilities resulting from the development are mitigated, through conditions of approval, to the greatest extent allowed by State law.

Policy 5.8.2.2: The affected school district shall be relied upon to review development applications to determine the ability of the district to serve the new development. The level of educational services shall not be reduced below acceptable levels as a consequence of new development to the extent permitted by State law.

Economic Development Element

Goal 10.2: Public Services and Infrastructure. Provide adequate levels of public services and infrastructure for existing residents and targeted industries and establish equitable methods to assure funding of needed improvements to existing infrastructure and services and new facilities to further economic development consistent with the County's custom, culture, and economic stability.

Policy 10.2.1.5: A public facilities and services financing plan that assures that costs burdens of any civic, public, and community facilities, infrastructure, ongoing services, including operations and maintenance necessitated by a development proposal, as defined below, are adequately financed to assure no net cost burden to existing residents shall be submitted with the following development applications:

- A. Specific plans; and
- B. All residential, commercial, and industrial projects located within a Community Region or Rural Center which exceed the following thresholds:
 - 1. Residential 50 units
 - 2. Commercial 20 acres or 100,000 square feet
 - 3. Industrial 20 acres or 250,000 square feet

Parks and Recreation Element

Goal 9.1: Parks and Recreation Facilities. Provide adequate recreation opportunities and facilities including developed regional and community parks, trails, and resource-based recreation areas for the health and welfare of all residents and visitors of El Dorado County.

Policy 9.1.1.1 The County shall assist in the development of regional, community, and neighborhood parks, ensure a diverse range of recreational opportunities at a regional, community, and neighborhood level, and provide park design guidelines and development standards for park development. The following national standards shall be used as guidelines for the acquisition and development of park facilities:

Guidelines for Acquisition and Development of Park Facilities	
Parks Types	Developed
Regional Parks	1.5 ac/1,000 population
Community Parks	1.5 ac/1,000 population
Neighborhood Parks	2.0 ac/1,000 population
<i>Specific Standards (Neighborhood and Community Parks)</i>	
Cameron Park Community Services District	1.5 ac/1,000 population
El Dorado Hills Community Services District	1.5 ac/1,000 population
Planned Communities	1.5 ac/1,000 population

The parkland dedication/in-lieu fees shall be directed towards the purchase and funding of neighborhood and community parks.

Policy 9.1.1.2 Neighborhood parks shall be primarily focused on serving walk-to or bike-to recreation needs. When possible, neighborhood parks should be adjacent to schools. Neighborhood parks are generally 2 to 10 acres in size and may include a playground, tot lot, turf areas, and picnic facilities.

Policy 9.1.1.3 Community parks and recreation facilities shall provide a focal point and gathering place for the larger community. Community parks are generally 10 to 44 acres in size, are for use by all sectors and age groups, and may include multi-purpose fields, ball fields, group picnic areas, playground, tot lot, multi-purpose hardcourts, swimming pool, tennis courts, and a community center.

Goal 9.2: Funding. Secure an adequate and stable source of funding to implement a comprehensive County-wide parks and recreation plan.

Objective 9.2.2: Quimby Act. Land dedicated to the County under the Quimby Act and Quimby in-lieu fees shall continue to be used primarily to meet neighborhood park needs but may assist in meeting the community park standards as well.

Policy 9.2.2.1 The Parks and Recreation Commission shall review all tentative subdivision maps of 50 parcels or more outside community service districts and special recreation district boundaries and will provide recommendations to the Planning Commission for appropriate provision of recreation services.

Policy 9.2.2.2 New development projects creating community or neighborhood parks shall provide mechanisms (e.g., homeowners associations, or benefit assessment districts) for the ongoing development, operation, and maintenance needs of these facilities if annexation to an existing parks and recreation service district/provider is not possible.

Policy 9.2.2.5 The County shall establish a development fee program applicable to all new development to fund park and recreation improvements and acquisition of parklands such that minimum neighborhood, community, and regional park standards are achieved. This fee is in addition to Quimby Act requirements that address parkland acquisition only. The fee will be adjusted periodically to fully fund the improvements identified in the Parks and Capital Improvement Program concurrent with development over a five-year period.

4.12.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The criteria used to determine the significance of impacts related to public services and recreation are based on Appendix G of the *CEQA Guidelines*. Implementation of the proposed project could have a significant impact on the environment if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government 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 following public services: fire protection, police protection, schools, parks, or other public facilities.

- 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, or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Methodology and Assumptions

Evaluation of potential impacts to public services and recreation are based on information obtained through consultation with public service providers, including the Diamond Springs-El Dorado Fire Protection District, the El Dorado County Sheriff's Office, the Mother Lode Union School District, and the El Dorado Union High School District. Additional information was obtained from the El Dorado County General Plan and the El Dorado County Parks and Trails Master Plan. In determining the level of significance, this analysis assumes that the proposed project would comply with relevant state and local ordinances and regulations, as well as the General Plan policies presented above.

Impacts and Mitigation Measures

Impact 4.12-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government 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 following public services. (*Less than Significant Impact*)

Fire Protection

The Diamond Springs-El Dorado Fire Protection District provides fire suppression and emergency medical services, as previously described, to the project site. The project site would be served primarily by Station 49, located at 501 Pleasant Valley Road, less than 500 feet east of the main point of entry for the proposed Dorado Oaks Subdivision via Faith Lane.

Policy 5.1.2.2 of the County General Plan (El Dorado County 2004) identifies that the minimum level of service for fire response should be an 8-minute response to 80 percent of the population. Travel times vary widely by population area within the District. The project site, however, is located within close proximity to Station 49 and the District estimates that the travel time to the site would be within the required response time.⁵

The project would be required to provide access for fire and emergency medical services to the project site consistent with the El Dorado County General Plan, State Fire Safety Regulations, as adopted by El Dorado County, and the California Fire Code, as amended locally. All of the above provisions also require compliance with Diamond Springs-El Dorado Fire Protection District fire standards including, but not limited to location of and specifications for fire hydrants; emergency

⁵ Earle, Kenneth, Deputy Chief / Fire Marshal, Diamond Springs-El Dorado Fire Protection District, email communication, September 23, 2020.

vehicle access including roadway widths and turning radii; fire flow and sprinkler requirements; and defensible space and wildland fire-safe plans. Project-specific measures include two-lane road improvements and emergency-only access from either Antares Drive at the southwest corner of the subdivision site or from Fowler Lane at the southeast corner of the site. If the Fowler Lane option is chosen, that roadway would be widened along its southernmost extent to meet County standards for emergency access. Regardless of the option chosen, the roadway would be accessible via an Emergency Vehicle Access (EVA) gate located at the southern end of the roadway.

Impact fees from new development are collected by the County based upon projected impacts from each development. The adequacy of impact fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the project, would fund equipment and labor costs associated with fire protection services. In addition, the proposed project has been conditioned to enter into a Community Facilities District (CFD) by the Diamond Springs-El Dorado Fire Protection District to support additional staff and expenses generated by the development. The Diamond Springs-El Dorado Fire Protection District staff indicated that the District would be able to maintain acceptable fire services with implementation of the proposed project.⁶ No additional fire facilities (e.g., new fire stations) are proposed as part of the project, nor does the project require development of new or expanded facilities that would cause a physical environmental impact not already addressed in the impact analyses in this EIR. Therefore, the environmental impact of the proposed project on the need for additional fire service facilities is **less-than-significant**.

Mitigation Measures

None required.

Law Enforcement

The proposed project would be served by the El Dorado County Sheriff's Office for law enforcement protection, as previously described. Annual staffing levels for the Sheriff's Office are determined by the County on an annual basis to maintain acceptable service levels.

Impact fees from new development are collected by the County based upon projected impacts from each development. The adequacy of impact fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the project, would fund capital and labor costs associated with law enforcement services. While additional patrols may be required to serve the project, it is anticipated that the existing Sheriff's Office facilities are sufficient to serve the proposed project and the project is not anticipated to require development of new or expanded facilities.⁷

⁶ Earle, Kenneth, Deputy Chief / Fire Marshal, Diamond Springs-El Dorado Fire Protection District, email communication, September 23, 2020.

⁷ Sorey, Alexander, Sergeant, El Dorado County Sheriff's Office, email communication, September 14, 2020.

Consequently, physical environmental impacts associated with law enforcement protection would be **less-than-significant**.

Mitigation Measures

None required.

Schools

The project site is within the jurisdictions of Mother Lode Union School District for kindergarten through eighth (K-8) grade education and the El Dorado Union High School District.

The Mother Lode Union School District operates two schools: Indian Creek Elementary and Herbert C. Green Middle School. Indian Creek Elementary is located at 6701 Green Valley Road in Placerville, approximately 3.5 miles northwest of the project site. The school provides kindergarten through fourth grade education. The school has a design capacity for 624 students and a current enrollment of 508 students. Herbert Green Middle School is located at 3781 Forni Road in Placerville, approximately 1.5 miles north of the project site. The school provides fifth through eighth grade education. The school has a design capacity for 662 students and a current enrollment of 424 students. The current K-8 student generation rate for the Mother Lode Union School District is 0.198 per residential unit. Therefore, the proposed project could be expected to yield approximately 76 K-8 students.⁸

The project site is located within the Union Mine High School attendance area of the El Dorado Union High School District. Union Mine High School is located at 6530 Koki Lane in El Dorado, approximately 1 mile west of the project site. The school provides ninth through twelfth grade education. The school has a design capacity for 1,454 students and a current enrollment of 1,132 students. The student generation rate for the El Dorado Union High School District is 0.139. Therefore, the proposed project could be expected to yield approximately 54 high school students.⁹

Under the provisions of SB 50, a project's direct impacts on school facilities are fully mitigated via the payment of the requisite new school construction fees established pursuant to Government Code Section 65995. On behalf of districts in El Dorado County, the El Dorado County Office of Education collects developer fees associated with building permits.

The proposed project is not anticipated to result in the need for construction of new school facilities or the expansion of existing facilities. Payment of the applicable impact fees by the project applicant, and ongoing revenues that would come from property taxes and other sources of revenue, would fund capital and labor costs associated with school services. Payment of school facility mitigation fees has been deemed by the State (Government Code Section 65995(h)) to constitute full and complete mitigation of impacts of a development project on the provision of

⁸ Guthrie, Marcy M, Superintendent, Mother Lode Union School District, email communication, October 8, 2020.

⁹ Augino, Daniel J, Director, Maintenance, Operations & Facilities, El Dorado Union High School District, email communication, October 8, 2020.

adequate school facilities. Therefore, the impact of the proposed project on the need for additional school facilities which may cause substantial adverse physical environmental impacts is **less-than-significant**.

Mitigation Measures

None required.

Impact 4.12-2: The proposed project would not 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, or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (*Less than Significant Impact*)

There are currently no County-operated parks or recreational facilities in the community of Diamond Springs or in the immediate vicinity of the project site. The nearest parks are regional, community, and neighborhood parks located more than two miles north of the project site in Placerville.

As discussed above, the proposed project would develop 382 residential lots on 142.5 acres. The project would include a 3.1-acre public park in the northern portion of the project site and could include features such as a soccer field, playground, and possibly an interactive trail adjacent to the existing wetlands. The park would be administered by the El Dorado County Parks and Recreation District. In addition, approximately 68.7 acres of the project site would be dedicated to public open space. A pedestrian trail system would be constructed within the subdivision and would generally provide pedestrian access through the open space areas of the site.

As discussed in Impact 4.11-1 of section 4.1, *Population and Housing*, of this Draft EIR, the proposed project would result in a population of approximately 978 persons. The El Dorado County General Plan uses a standard of 5 acres of neighborhood and community parks per 1,000 residents. While the proposed project's inclusion of a 3.1-acre public park would not alone meet this standard, Section 120.52.125 of the El Dorado County Ordinance Code specifies the dedication of land, the payment of fees in lieu thereof, or a combination of both for park and recreational purposes is required as a condition of approval for any parcel map which creates parcels less than 20 acres in size. Consequently, the proposed project's inclusion of a 3.1-acre public park, public open space uses, a pedestrian trail system, and payment of required in-lieu parkland dedication fees as a condition of project approval would ensure that the project would meet applicable County parkland dedication requirements. The environmental effects associated with the development of the aforementioned park and open space uses within the project site are evaluated in the various topical sections of this EIR, and impacts have been determined to be less than significant or less than significant with implementation of mitigation measures. In addition, due to the amount of onsite recreational amenities that would be provided, the proposed project would not be anticipated to create a need for new or expanded off-site park or recreation facilities, result in the physical deterioration of existing park or recreation facilities, or require the rehabilitation of parks and recreation facilities that would result in a significant impact on the

environment. Consequently, impacts related to parks and recreation would be **less than significant**.

Mitigation Measures

None required.

Cumulative Impacts

Impact 4.12-3: The proposed project, in combination with other cumulative development, would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government 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 following public services. (*Less than Significant Impact*)

Fire Protection

The impact of the proposed project on fire protection and emergency medical services must be analyzed in conjunction with past, present, and future development projects which could contribute to the impacts of the proposed project and create cumulative impacts. The geographic context for the cumulative analysis of fire protection is represented by the service area boundary of the Diamond Springs-El Dorado Fire Protection District, which covers approximately 95 square miles and includes the communities of Diamond Springs, El Dorado, Sleepy Hollow, Logtown, Missouri Flat, Nashville, and Sandridge.

As discussed above under Impact 4.12-1, the Diamond Springs-El Dorado Fire Protection District staff indicated that the District would be able to maintain acceptable fire services with implementation of the proposed project. No additional fire facilities (e.g., new fire stations) are proposed as part of the project, nor does the project require development of new or expanded facilities, which would cause a physical environmental impact not already addressed in the impact analyses in this EIR.

Also discussed above under Impact 4.12-1, impact fees from new development are collected by the County based upon projected impacts from each development. The adequacy of impact fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the project applicant and other development projects within the service area boundary of the Diamond Springs-El Dorado Fire Protection District, combined with ongoing revenues that would come from property taxes, sales taxes, and other revenues would continue to fund facilities, equipment, and labor costs associated with fire protection services. New development and associated construction or expansion of new fire facilities would be required to comply with existing laws and regulations that are in place to avoid or lessen those effects. Consequently, collection of development impact fees and other revenue sources that fund facilities, equipment, and labor costs associated with fire protection services, combined with required compliance with existing laws and regulations that are in place to avoid or lessen adverse environmental impacts associated with the development or expansion of fire protection

facilities, ensure that cumulative impacts related to fire protection services would be **less than significant**.

Mitigation Measures

None required.

Law Enforcement

The impact of the proposed project on law enforcement and police protection services must be analyzed in conjunction with past, present, and future development projects which could contribute to the impacts of the proposed project and create cumulative impacts. The geographic context for the cumulative analysis of law enforcement and police protection is represented by the service area boundary of the El Dorado County Sheriff's Office, which covers 1,700 square miles of unincorporated areas of El Dorado County, which encompasses a population of approximately 183,000.

As discussed above under Impact 4.12-1, the project does not propose construction of any new law enforcement facilities, nor would it directly trigger the need for a new or expanded facility. However, additional patrols may be required to serve the proposed project.

Also as discussed above, impact fees from new development are collected by the County based upon projected impacts from each development. The adequacy of impact fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the project applicant and other development projects within the service area boundary of the El Dorado County Sheriff's Office, combined with ongoing revenues that would come from property taxes, sales taxes, and other revenues would continue to fund facilities, equipment, and labor costs associated with police protection services. New development and associated construction or expansion of new police facilities would be required to comply with existing laws and regulations that are in place to avoid or lessen those effects. Consequently, collection of development impact fees and other revenue sources that fund facilities, equipment, and labor costs associated with police protection services, combined with required compliance with existing laws and regulations that are in place to avoid or lessen adverse environmental impacts associated with the development or expansion of police facilities, ensure that cumulative impacts related to police protection services would be **less than significant**.

Mitigation Measures

None required.

Schools

The study area for the cumulative impact to schools is the service areas for the school districts that would serve the proposed project. As discussed above under Impact 4.12-1, the project site is within the jurisdictions of Mother Lode Union School District for K-8 grade education and the El Dorado Union High School District. Also as discussed under Impact 4.12-1, the proposed project is not anticipated to result in the construction of new school facilities or expansion of existing

facilities. Payment of the applicable impact fees by the project applicant, and ongoing revenues that would come from property taxes and other sources of revenue, would fund capital and labor costs associated with school services. Payment of school facility mitigation fees has been deemed by the State (Government Code Section 65995(h)) to constitute full and complete mitigation of impacts of a development project on the provision of adequate school facilities. Therefore, cumulative impacts related to schools would be **less than significant**.

Mitigation Measures

None required.

Impact 4.12-4: The proposed project, in combination with other cumulative development, would not 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, or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (*Less than Significant Impact*)

The study area for the cumulative impact to park and recreation facilities is the planning area of the general plan for recreation amenities. As discussed above under Impact 4.12-2, the proposed project's inclusion of a 3.1-acre public park, public open space uses, a pedestrian trail system, and payment of required in-lieu parkland dedication fees as a condition of project approval would ensure that the proposed project would meet applicable County parkland dedication requirements. The environmental effects associated with the development of the aforementioned park and open space uses within the project site are evaluated in the various topical sections of this EIR, and impacts have been determined to be less than significant or less than significant with implementation of mitigation measures. In addition, due to the amount of onsite recreational amenities that would be provided, the proposed project would not be anticipated to create a need for new or expanded off-site park or recreation facilities, result in the physical deterioration of existing park or recreation facilities, or require the rehabilitation of parks and recreation facilities that would result in a significant impact on the environment. Consequently, cumulative impacts related to parks and recreation would be **less than significant**.

Mitigation Measures

None required.

4.12.5 References

El Dorado County, 2004. El Dorado County General Plan: A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief. Adopted by the Board of Supervisors July 19, 2004 Resolution Number 235-2004.

El Dorado County, 2012. Final El Dorado County Parks and Trails Master Plan. March 27, 2012. Available at: <https://www.edcgov.us/Government/Parks/Pages/masterplan.aspx>. Accessed: June 17, 2020.

Foothill Associates, 2017. Draft Placerville Area Parks and Recreation Master Plan Update.
Prepared for City of Placerville and El Dorado County. Available at:
<https://evogov.s3.amazonaws.com/media/17/media/70743.pdf>. Accessed: June 17, 2020.

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4.13 Transportation

4.13.1 Introduction

This section describes the applicable federal, state, and local regulations and policies related to transportation and circulation; discusses the existing roadway network and transportation facilities in the County; and analyzes the potential impacts from implementation of the project on transportation and circulation. This section summarizes information presented in the *Dorado Oaks Transportation Impact Study* (PRISM Engineering, 2021) and the *Dorado Oaks VMT Analysis Technical Memorandum* (Fehr & Peers, 2021). Both of these documents are included as Appendix H to this Draft EIR.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Comments relevant to transportation and circulation included concerns from residents and business owners in the project area regarding potentially increased congestion on roadways that could result from the proposed project. Roadways of concern included Pleasant Valley Road (State Route 49), Missouri Flat Road, China Garden Road, Fowler Lane, and other local streets. Comments were also received expressing concerns regarding potential impacts to fire and emergency response and evacuation routes that could result from the proposed project. In addition, the California Department of Transportation (Caltrans) submitted a comment letter that identified items it requested to be addressed in the Transportation Impact Study prepared for the proposed project, including evaluation of transportation impacts in accordance with applicable Caltrans methods. The Caltrans letter also identified encroachment, construction, maintenance, and operational requirements that could be applicable to the proposed project to meet Caltrans requirements.

California Code of Regulations (CCR) Section 15064.3, *Determining the Significance of Transportation Impacts*, which was certified on December 28, 2018, states that local agencies such as El Dorado County may no longer rely on vehicular delay or capacity-based analyses for CEQA impact determination. Rather, local agencies must base their significance determinations on vehicle miles traveled (VMT). Accordingly, the project's impacts with respect to VMT are presented in this section of the EIR.

The delay-based traffic operations analysis for the proposed project is included in Appendix H and is summarized further below in Section 4.13.5, *Non-CEQA Traffic Operations Analysis*, below. This information is provided solely for the purpose of determining the project's consistency with policies in the County's General Plan and other applicable transportation plans/policies, and for these non-CEQA impacts, the EIR recommends "conditions of approval."

4.13.2 Environmental Setting

This section describes the existing environmental setting, which is the baseline scenario upon which project-specific impacts are evaluated. The environmental setting for transportation

includes baseline descriptions for vehicle miles traveled, roadway, bicycle, pedestrian, and transit facilities.

Vehicle Miles Traveled

With mandatory implementation of Senate Bill (SB) 743 in 2018, local agencies such as El Dorado County may no longer rely on vehicular delay or capacity-based analyses (traditionally referred to as level of service or “LOS” analysis) for CEQA impact determination. Accordingly, a project’s impacts to LOS may no longer constitute a significant impact under CEQA. Instead, agencies must analyze transportation impacts utilizing VMT, a measure of the total distance traveled by vehicles for trips beginning or ending in the County on a typical weekday. **Table 4.13-1** shows the 2018 Baseline VMT for unincorporated El Dorado County, as formulated using the El Dorado County Travel Demand Forecasting Model (EDCTDM).

**TABLE 4.13-1
 UNINCORPORATED EL DORADO COUNTY 2018 BASELINE VMT**

Scenario	Analysis Geography	VMT	Total Population	VMT per Capita
2018 Baseline	Unincorporated El Dorado County	3,088,005	136,108	22.7

SOURCE: Fehr & Peers, 2021

Area Transportation Facilities

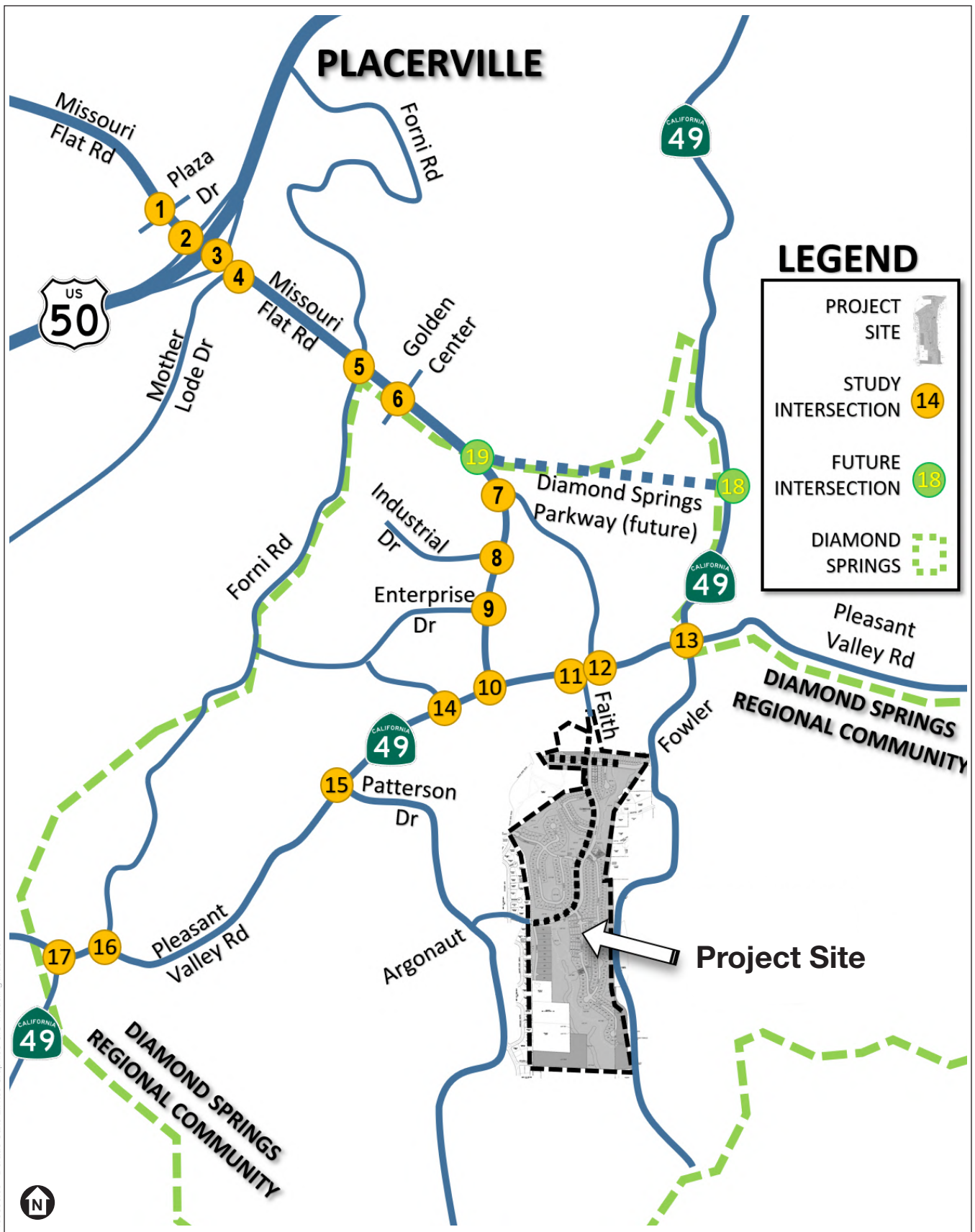
Roadway Network

Descriptions of key roadways within the project area that would serve project-generated trips are provided below. The locations of these and other roadways are shown in **Figure 4.13-1**.

US-50 is an east-west freeway located north of the project site and generally connects between El Dorado County’s major population centers, Sacramento County to the west, and the State of Nevada to the east. Access to the project site from US-50 is provided via the interchange at Missouri Flat Road.

State Route 49 (SR-49) is a north-south state highway that begins at Oakhurst in Madera County and extends in a generally northwest direction, weaving through the counties of Mariposa, Tuolumne, Calaveras, Amador, El Dorado, Placer, Nevada, Yuba, Sierra, and Plumas, where it reaches its northern terminus at State Route 70, in Vinton. In El Dorado County, SR-49 passes through the towns of Nashville, El Dorado, and Diamond Springs (the latter two as Pleasant Valley Road) before entering Placerville. SR-49 traverses downtown Placerville on Pacific Street and Main Street before continuing onto Spring Street, where it intersects with US-50 at-grade before continuing north as Georgetown Road.

Missouri Flat Road is an arterial roadway that extends from Green Valley Road west of Placerville to its south terminus at SR-49/Pleasant Valley Road approximately 0.25 mile west of the entry for proposed Dorado Oaks Subdivision via Faith Lane. Access to the project site from US-50 is provided via the interchange at Missouri Flat Road.



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SOURCE: Prism Engineering

Dorado Oaks Tentative Subdivision Map Project

Figure 4.13-1
Transportation Study Area



Bicycle and Pedestrian Facilities

Sidewalks in the area currently provide walking facilities along Missouri Flat Road in the vicinity of US-50 and towards the south just past Golden Center (south of the Walmart shopping center). After this point there are no sidewalks all the way down to Pleasant Valley Road. Pleasant Valley Road is without sidewalks in both east and westbound directions with few exceptions such as at the immediate vicinity of the signalized intersections at SR-49/Fowler Lane, as well as at Patterson Drive. Bike lanes, however, are striped along Missouri Flat Road north of Golden Center Drive, but generally not to the south of that location or on Pleasant Valley Road except in the immediate vicinity of Patterson Drive. The pavement width of Pleasant Valley Road is generally 24 feet from edge to edge.

Transit Facilities

El Dorado Transit serves the Diamond Springs community south of Golden Center Drive via Bus Routes 30 (weekdays) and 35 (Saturdays). At the Missouri Flat Transfer Center (located in front of the Walmart shopping center along Missouri Flat Road), there are several bus routes that interact at this location, including 60 to Pollock Pines, 20 to Placerville, 30 to Diamond Springs, 50 to US-50. Weekday and Saturday schedules to Diamond Springs are generally 1-hour headways between buses, running from 6:00 a.m. to 6:00 p.m. The nearest bus stops to the project site are located on SR-49 immediately north of the project site.

4.13.3 Regulatory Setting

Federal

No federal plans, policies, regulations, or laws related to transportation and circulation are applicable to the project.

State

Senate Bill 743

Passed in 2013, California Senate Bill (SB) 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change is being made by replacing LOS with VMT. This shift in transportation impact focus is intended to better align transportation impact analysis and mitigation outcomes with the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through development of multimodal transportation networks. Level of service or other delay metrics may still be used to evaluate the impact of projects on drivers as part of land use entitlement review and impact fee programs.

In December, 2018, the Natural Resources Agency finalized updates to Section 15064.3 of the CEQA Guidelines, including the incorporation of SB 743 modifications. The Guidelines' changes were approved by the Office of Administrative Law and as of July 1, 2020 are now in effect statewide.

To help aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced the *Technical Advisory on Evaluating Transportation Impacts in*

CEQA (OPR, 2018) that provides guidance about the variety of implementation questions they face with respect to shifting to a VMT metric. Key guidance from this document includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a "per rate" basis.
- OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold. In other words, an office project that generates VMT per employee that is more than 85 percent of the regional VMT per employee could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the State's emissions goals.
- OPR recommends that where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.
- Lead agencies have the discretion to set or apply their own significance thresholds.

Caltrans has also issued its own guidance for implementation of SB 743 for projects that could impact Caltrans facilities. Caltrans issued its Transportation Analysis Framework (TAF) in September, 2020 which details methodology for calculating induced demand for capacity increasing transportation projects on the State Highway System (Caltrans, 2020a). Caltrans also issued its Transportation Analysis Under CEQA (TAC) guidance in September, 2020 which describes significance determinations for capacity increasing projects on the State Highway System.

Caltrans Construction and Safety Requirements

Caltrans has adopted procedures to oversee construction activities on and around its facilities. The Caltrans Construction Manual (Caltrans, 2020b) describes best practices for construction activities, including personnel and equipment safety requirements, temporary traffic control, signage, and other requirements aimed at reducing construction-related hazards and constructing projects safely and efficiently. Any work proposed on Caltrans facilities would be required to abide by these requirements.

Local

El Dorado County Resolution 141-2020

The El Dorado County Board of Supervisors adopted a resolution adopting VMT significance thresholds for purposes of analyzing transportation impacts under CEQA (El Dorado County, 2020). The adopted thresholds are discussed in detail in the *Methodology* discussion further below.

El Dorado County General Plan

The El Dorado County General Plan policies and strategic actions that are relevant to the transportation and circulation impacts analyzed in this EIR are listed below. The General Plan was last amended on September 25, 2018.

Policy TC-3c: The County shall encourage new development within Community Regions and Rural Centers to provide appropriate on-site facilities that encourage employees to use alternative transportation modes. The type of facilities may include bicycle parking, shower and locker facilities, and convenient access to transit, depending on the development size and location.

Policy TC-4e: The County shall require that rights-of-way or easements be provided for bikeways or trails designated in adopted master plans, as a condition of land development when necessary to mitigate project impacts.

Policy TC-4i: Within Community Regions and Rural Centers, all development shall include pedestrian/bike paths connecting to adjacent development and to schools, parks, commercial areas and other facilities where feasible. In Rural Regions, pedestrian/bike paths shall be considered as appropriate.

Policy TC-5b: In commercial and research and development subdivisions, curbs and sidewalks shall be required on all roads. Sidewalks in industrial subdivisions may be required as appropriate.

El Dorado County 2040 Regional Transportation Plan

The El Dorado County Transportation Commission (EDCTC) is the Regional Transportation Planning Agency (RTPA) for El Dorado County (excluding the Tahoe Basin) and is responsible for the preparation of the El Dorado County Regional Transportation Plan (RTP). The current El Dorado County Regional Transportation Plan 2020 – 2040 was developed to guide the systematic development of a balanced, comprehensive, multi-modal transportation system. The RTP was developed to provide a clear vision of the regional transportation goals, objectives, and policies, complemented by short-term and long-term strategies for implementation. The El Dorado County RTP also serves as the El Dorado County portion of the Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan (MTP).

El Dorado County Active Transportation Plan

The EDCTC, developed and adopted Active Transportation plans for the County and the City of Placerville on February 6, 2020. The plans will serve as the update to the Bicycle Transportation Plan. The plans outline the existing conditions and proposed development of a bicycle transportation system on the western slopes of El Dorado County, as well as improvements to pedestrian facilities. Planned improvements in the project vicinity include the addition of sidewalks and a Class II bicycle lane to SR-49, and Class III bicycle lands to the northerly portions of Tullis Mine Road and Patterson Drive. The updated plans demonstrate compliance with the California Streets and Highway Code, enabling the County to be eligible for State Bicycle Transportation Account Funds.

El Dorado County Traffic Impact Fee Program (Formerly the Traffic Impact Mitigation Fee Program)

The County utilizes its Capital Improvement Program (CIP) to identify and prioritize future transportation investments to meet the County's existing and future transportation needs. CIP projects can include roadways, intersections, sidewalks, bicycle lanes, traffic calming treatments, transit service improvement projects, and ongoing administrative costs for transportation monitoring programs, including traffic model update costs, traffic study guideline updates, and updates to the Circulation Element to the County's General Plan. Funding for most CIP projects is provided from a variety of sources including state and/or federal grants, and the County's Traffic Impact Fee (TIF) Program. This program is required by General Plan Policy TC-Xb. The TIF Program is used to fund needed improvements including roadway widening, new roadways, roadway intersection improvements, and transit to deal with future growth during a defined period of time.

Major updates to the CIP and TIF Program are made by the County every five years as required by State law and General Plan policies. The most recent update to the Western Slope Roadway CIP and TIF Program was completed and certified by the County Board of Supervisors in 2020. The current TIF Program is based on 20 years of growth and TIF Program-funded improvements are part of the CIP.

Western El Dorado County Short Range and Long Range Transit Plan Study

The Western El Dorado County Short Range and Long Range Transit Plan outlines long-term planning steps necessary for public transit service in the County to respond to continued growth. The study considers the portion of El Dorado County to the west of the Sierra Crest. The plan recommends a focus on commuters traveling to Sacramento County, as well as key markets such as elderly/disabled services and activity center shuttles.

4.13.4 Environmental Impacts and Mitigation Measures

This section describes the analysis techniques, assumptions, and results used to identify potential significant impacts of the proposed project on the transportation system. Transportation/traffic impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant.

Methodology

State CEQA Guidelines Section 15064.3, added to address the requirements SB 743, is intended to change the focus from congestion to, among other things, reduction in greenhouse gas emissions, encouraging mixed use development, and other factors.

State CEQA Guidelines Section 15064.3(b) identifies four criteria for analyzing the transportation impacts of a project. To determine how the project should be considered, each of the criteria is discussed below:

- Section 15064.3(b)(1) addresses land use projects. The proposed project would include residential uses. Section 15064.3(b)(1) describes that projects with specified proximity to "major" or "high quality" transit should be presumed to cause a less than significant

transportation impact. El Dorado County does not have transit service that meets these criteria and therefore this presumption would not apply to the project. This section also describes that projects that would decrease VMT in the project area as compared to existing conditions should also be presumed to have a less than significant effect. This criterion also does not apply to the project.

- Section 15064.3(b)(2) addresses Transportation Projects. The proposed project includes a transportation component in the form of the improvements proposed for SR-49. However, and as demonstrated, the project overall would not have a less-than-significant impact to VMT, and the impact of the transportation component of the project would therefore also have a less-than-significant impact to VMT. Accordingly, this section does not apply to the project.
- Section 15064.3(b)(3), Qualitative Analysis, explains that there may be conditions under which a qualitative rather than quantitative analysis of VMT is appropriate. This section states that if existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may qualitatively analyze VMT generated by a project. Additionally, this section notes that for many projects, a qualitative analysis of construction traffic may be appropriate. This section does not apply to the project.
- Section 15064.3(b)(4), *Methodology*, explains that the County has discretion to choose the most appropriate methodology to evaluate VMT subject to other applicable standards such as CEQA Guidelines Section 15151 (standards of adequacy for EIR analyses).

In support of CEQA Guidelines Section 15064.3, OPR issued a Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018). The Technical Advisory noted by way of background (page 2) that there are three primary ways of reducing GHG emissions for the transportation sector: increasing vehicle efficiency, reducing fuel carbon content, and reducing the amount of vehicle travel. Local jurisdictions are not able to influence or control the first two, but through careful land use planning, local governments can ensure reductions in vehicle travel. The Technical Advisory highlights the relationship between reduction of VMT and reduction of GHG emissions, which is a key component of SB 743.

The Technical Advisory notes that some local agencies have developed screening thresholds to indicate when detailed analysis is needed and includes recommendations related to VMT screening thresholds for small projects. The Technical Advisory states that absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact (OPR, 2018). As detailed in the *Dorado Oaks Transportation Impact Study*, the project is estimated to generate approximately 2,792 new daily trips. Therefore, this assumption would not apply to the project.

The Technical Advisory outlines recommended procedures and methods for evaluating transportation impacts for residential, office, and retail projects. For mixed-use projects, the Technical Advisory states that lead agencies can evaluate each component of a mixed-use project independently and apply the significance threshold for each project type included (e.g., residential and retail). Alternatively, the Technical Advisory also notes that a lead agency may consider only

the project's dominant use and that combining different land uses and applying one threshold to those land uses may result in an inaccurate impact assessment.

Additionally, the Technical Advisory provides recommended numeric thresholds for residential, office, and retail projects. For office projects the Technical Advisory recommends a CEQA significance threshold of 15 percent below existing regional VMT per employee. The recommended CEQA significance threshold for retail projects as detailed in the Technical Advisory is a net increase in total VMT.

In 2019, the El Dorado County Transportation Commission completed the *El Dorado County and City of Placerville SB 743 Implementation Plan* (El Dorado County Transportation Commission, 2019) to support El Dorado County and the City of Placerville with implementation of SB 743, including the selection of VMT analysis methodology, setting thresholds of significance, and potential mitigation.

With Resolution 141-2020 (El Dorado County, 2020), the Board of Supervisors of the County of El Dorado adopted VMT thresholds of significance for purposes of analyzing transportation impacts under CEQA. The County's VMT thresholds consider the VMT performance of residential and office components of a project separately, using the efficiency metrics of VMT per capita and VMT per employee, respectively. For retail components of a project, the county-wide VMT effect is analyzed. The El Dorado County VMT thresholds of significance are summarized below for each of these components:

- Residential – 15 percent below baseline unincorporated Countywide VMT per Capita.
- Commercial Office – 15 percent below baseline unincorporated Countywide VMT per Employee.
- Commercial Retail – No net increase in VMT

Consistent with Resolution 141-2020, the project's VMT estimation was conducted using the El Dorado County Travel Demand Forecasting Model (EDCTDM). The VMT estimation process generates estimates in a manner that is consistent with OPRs Technical Advisory and the selected VMT significance thresholds outlined above. To provide a full accounting of vehicle travel, the EDCTDM provides VMT estimates that include the VMT from intrazonal vehicle trips and trip length adjustments for the trips that enter or exit the area covered by the EDCTDM. Specific details describing the technical methodology used to consider VMT can be found in the *Dorado Oaks VMT Analysis Technical Memorandum*, prepared by Fehr & Peers (2021) and included with this Draft EIR in **Appendix H**.

Thresholds of Significance

The criteria used to determine the significance of impacts related to transportation and circulation are based on Appendix G of the CEQA Guidelines, the OPR Technical Advisory on Evaluating Transportation Impacts in California, El Dorado County Resolution 141-2020, and professional judgement. Implementation of the proposed project could have a significant impact on the environment if it would:

- Result in an increase in VMT that is greater than 15 percent below the baseline unincorporated Countywide VMT per capita;
- Substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with a program, plan, ordinance or policy addressing transit, bicycle, and pedestrian facilities.

Issues Not Discussed Further

All roadway improvements associated with development of the proposed project would be constructed in accordance with applicable Caltrans and County design and safety guidelines. Consequently, the project would not increase hazards because of a design feature or incompatible uses. With respect to construction impacts, potential hazards during construction would be effectively mitigated through compliance with standard County and Caltrans requirements related to safety and design. Further, Mitigation Measure 4.7-5 in Section 4.7 of this EIR, *Hazards and Hazardous Materials*, the project would be required to prepare and implement a Construction Traffic Control/Traffic Management Plan to avoid traffic-related hazards during project construction. Therefore, no project-specific or cumulative impact to roadway design safety would occur, and this issue is not discussed further in this EIR.

Impacts and Mitigation Measures

Impact 4.13-1: The project would not result in an increase in VMT that is greater than 15 percent below the baseline unincorporated Countywide per capita VMT. (*Less Than Significant Impact*)

The project's VMT was forecasted for both existing (2018) and future (2040) conditions with and without the project. The following steps outline the methods used to forecast VMT under existing and cumulative conditions:

- Existing Conditions (2018) – For existing conditions (i.e., baseline conditions), the base year model land use and transportation network were used to estimate baseline (2018) average VMT per capita and average VMT per employee for unincorporated El Dorado County. For existing plus project conditions, the project's land use was added to the model, increasing the base year population and employment to provide project-generated average VMT per capita.
- Cumulative Conditions (2040) – For cumulative conditions, the future year model was used to estimate cumulative (2040) average VMT per capita. For cumulative plus project conditions, the project's land use was added to the model, increasing the cumulative year population and employment to provide project-generated average VMT per capita.

As proposed, the project includes single family and multi-family residential land use. **Table 4-13-2** summarizes the project's trip generating land uses.

**TABLE 4.13-2
 DORADO OAKS PROJECT TRIP GENERATING LAND USES**

Land Use Category		Units	Quantity
Residential	Single Family	Dwellings	157
	Multi-Family		225
	Total		382

Table 4.13-3 summarizes the VMT analysis for the project. The VMT calculations for all scenarios are included in Appendix H of this Draft EIR.

**TABLE 4.13-3
 DORADO OAKS PROJECT FORECASTED VMT**

Scenario	Analysis Geography	VMT	Total Population	VMT per Capita
2018 Baseline	Unincorporated El Dorado County	3,088,005	136,108	22.7
2018 Baseline Threshold (85% of Unincorporated El Dorado County Total Average VMT per Capita)				19.3
2018 Baseline Plus Project	Project Area	8,544	847 ¹	10.1
VMT Threshold Exceeded?				No
2040 Baseline	Unincorporated El Dorado County	3,102,953	181,914	17.1
2040 Baseline Threshold (85% of Unincorporated El Dorado County Total Average VMT per Capita)				14.5
2040 Baseline Plus Project	Project Area	5,981	847 ¹	7.1
VMT Threshold Exceeded?				No

SOURCE: Fehr & Peers, 2021

NOTES: 1 – This population estimated is derived from the County’s VMT forecasting model; specifically, the cross-classified household file that the County uses to estimate household trip generation. The cross-classification is based on Census data for different areas of the County, so some areas will be higher/lower than the average for the County.

As shown, the project’s VMT per Capita would not exceed the VMT threshold under existing or cumulative conditions. Therefore, the project’s impact on VMT would be **less than significant**.

Mitigation Measures

None required.

Impact 4.13-2: The project would not result in inadequate emergency access. (*Less Than Significant Impact*)

The Diamond Springs-El Dorado Fire Protection District provides fire suppression and emergency medical services, as previously described, to the project site. The project site would be served primarily by Station 49, located at 501 Pleasant Valley Road, less than 500 feet east of the main point of entry for the proposed Dorado Oaks Subdivision via Faith Lane.

Policy 5.1.2.2 of the County General Plan (El Dorado County 2004) identifies that the minimum fire response time should be an 8-minute response to 80 percent of the population. Travel times vary widely by population area within the District. The project site, however, is located within close proximity to Station 49 and the District estimates that the travel time to the site would be within the required response time.¹

The project would be required to provide access for fire and emergency medical services to the project site consistent with the El Dorado County General Plan, State Fire Safety Regulations, as adopted by El Dorado County, and the California Fire Code, as amended locally. All of the above provisions also require compliance with Diamond Springs-El Dorado Fire Protection District fire standards including, but not limited to emergency vehicle access including roadway widths and turning radii. Project-specific measures include the provision of one of two options for emergency access to the southern portion of the site, with the first deriving from the southern terminus of “G” Street and exiting the subdivision site to the southwest, connecting to Antares Drive. The second emergency access option would derive from “H” Court and connect to Fowler Lane. If selected, the Fowler Drive option would require offsite widening of the southerly offsite portions of Fowler Drive to meet County Fire Department requirements. Regardless of the option selected, either could be used for emergency ingress/egress to/from the site. Thus, the project would provide adequate emergency access to and from the project site and would be located in an area that is adequately served by existing emergency services. Based upon these considerations, and on a cumulative basis, the project would not contribute to a cumulatively considerable impact to emergency access. This impact would be **less than significant**.

Mitigation Measures

None required.

Impact 4.13-3: The project would not conflict with a program, plan, ordinance or policy addressing transit, bicycle, and pedestrian facilities. (*Less Than Significant Impact*)

El Dorado Transit serves the Diamond Springs community south of Golden Center Drive via Bus Routes 30 and 35. At the Missouri Flat Transfer Center (located in front of the Walmart shopping center along Missouri Flat Road), there are several bus routes that interact at this location,

¹ Earle, Kenneth, Deputy Chief/Fire Marshal, Diamond Springs-El Dorado Fire Protection District, email communication, September 23, 2020.

including Route 60 to Pollock Pines, Route 20 to Placerville, Route 30 to Diamond Springs, and Route 50 to US-50. Weekday and Saturday schedules to Diamond Springs are generally 1-hour headways between buses, running from 6:00 a.m. to 6:00 p.m.

Sidewalks currently provide walking facilities along Missouri Flat Road. Pleasant Valley Road is without sidewalks in both east and westbound directions with few exceptions such as at the immediate vicinity of the signalized intersections at SR-49 and Fowler Lane, as well as at Patterson Drive. Bike lanes are provided along Missouri Flat Road north of Golden Center Drive, but generally not to the south of that location or on Pleasant Valley Road (except in the immediate vicinity of Patterson Drive). As identified in the County's Active Transportation Plan, installation of sidewalks and a Class II bicycle path are planned as future improvements to SR-49. The project's improvements to the SR-49 Intersection Improvement Area would be required to consider and integrate those plans into the intersection's design so as to not conflict with those proposed improvements.

Consistent with El Dorado County General Plan Policy TC-3c, and as detailed in Chapter 2 of this EIR, *Project Description*, the proposed project would include appropriate on-site facilities that encourage residents to use alternative transportation modes, including trails and sidewalks that would increase alternative modes of travel (other than car). These include provision of sidewalks along all internal roadways, an 8-foot-wide Class I multiuse pathway along the project's main roadway through the site (Faith Lane/Argonaut Drive), and a system of pedestrian trails through the site's open space areas. These project components would be designed to integrate with existing and planned alternative transportation improvements in the area. Cumulatively, the project would result in an overall beneficial impact to the area's alternative transportation network. As such, the project would not conflict with a program, plan, ordinance or policy addressing transit, bicycle, and pedestrian facilities, and the impact would be **less than significant**.

Mitigation Measure

None required.

4.13.5 Non-CEQA Traffic Operations Analysis

This section evaluates the potential automobile delay-based (i.e., LOS) traffic operations effects of the project on the roadway system. California Code of Regulations (CCR) Section 15064.3, *Determining the Significance of Transportation Impacts*, states that "a project's effect on automobile delay shall not constitute a significant impact." Accordingly, the information presented below is provided for informational purposes only, and carries with it no determination of significance under CEQA.

This section summarizes information presented in the *Transportation Impact Study* prepared by PRISM Engineering (included in Appendix H of this Draft EIR). The traffic study followed the methodology and procedures outlined in the 2014 version of the Transportation Impact Study

Guidelines document prepared by the El Dorado Community Development Agency, Long Range Planning Division. The traffic analysis focused on a specific project study area for transportation and circulation, which is defined below.

Study Area and Study Parameters

PRISM Engineering was directed by the County to assess a study area for the project consisting of Missouri Flat Road starting at Plaza Drive on the north (just north of the US-50 freeway westbound ramps) to Pleasant Valley Road/SR-49 on the south terminus. In addition, Pleasant Valley Road was also studied beginning with its SR-49 (south) intersection on the west to its Fowler Lane/SR-49 (north) intersection on the east. The Missouri Flat Road study corridor is a 1.9-mile segment with 10 existing study intersections (and two future intersections). The Pleasant Valley Road study corridor is a 2.2-mile segment with seven additional existing study intersections. A total of 19 study intersections were assessed in the study, and are shown in Figure 4.13-1. Seventeen of these are existing intersections and two are future study intersections, as listed below and as numbered in Figure 4.13-1.

1. Missouri Flat Road at Plaza Drive
2. Missouri Flat Road at US-50 WB Ramps
3. Missouri Flat Road at US-50 EB Ramps
4. Missouri Flat Road at Mother Lode Drive
5. Missouri Flat Road at Forni Road
6. Missouri Flat Road at Golden Center Drive
7. Missouri Flat Road at China Garden Road
8. Missouri Flat Road at Industrial Drive
9. Missouri Flat Road at Enterprise Drive
10. Missouri Flat Road at Pleasant Valley Road
11. Pleasant Valley Road at Faith Lane
12. Pleasant Valley Road at China Garden Road
13. Pleasant Valley Road at SR-49 N/Fowler Lane
14. Pleasant Valley Road at Commerce Way
15. Pleasant Valley Road at Patterson Drive
16. Pleasant Valley Road at Forni Road
17. Pleasant Valley Road at SR-49 South
18. Diamond Springs Parkway at SR-49 (future)
19. Diamond Springs Parkway at Missouri Flat Road (future)

The study also considered all roads that are contiguous to the project site that would connect the site into the local street system. For example, the project would connect on its west side into Argonaut Drive, which connects to Patterson Drive which connects to Pleasant Valley Road. The project would connect on its east side to Fowler Lane which connects to Pleasant Valley

Road/SR-49. On the north, the project connects directly with Faith Lane which connects to Pleasant Valley Road just west of China Garden Road.

In addition, the US-50 mainline freeway operations were studied in the vicinity where the Missouri Flat Road freeway on and off-ramps intersect the mainline freeway to determine the effect of the project on mainline freeway flows. The sections of US-50 studied as a part of the traffic study were from the El Dorado Road interchange on the west to the Forni Road interchange on the east, inclusive of the Missouri Flat Road interchange. **Figure 4.13-1** depicts the project study area roadway, highway, and intersection locations.

The traffic study evaluated the trip generation and resulting traffic effects from the project site within the context of existing and future scenarios as follows:

- Existing (2018) conditions unmitigated based on current traffic counts in 2018 and existing roadway geometry and traffic control.
- Existing (2018) plus project conditions unmitigated based on current traffic counts in 2018 and existing roadway geometry and traffic control.
- Year 2027 Near-Term Base Traffic Condition (10 years out), unmitigated based on anticipated growth in baseline traffic volumes determined by straight-line interpolation between Year 2018 existing counts and Year 2035 traffic projections.
- Future Year Cumulative Long-Term (2035) Conditions, unmitigated based on 2035 future year traffic forecasts from the El Dorado County Demand Forecast model. Future year will correspond with development assumptions of County's General Plan.
- Future Year Cumulative Long-Term (2035) Conditions, with Mitigation – Based on 2035 future year traffic forecasts from El Dorado County's Travel Demand Forecast model plus project. Future year will correspond with approximate development assumptions of County's General Plan.

The traffic study identified intersections and road segments that are expected to have congestion and unsatisfactory traffic conditions in the future, determined if the project would result in a substantial contribution to these conditions, and identified measures that could address potential future unsatisfactory traffic conditions.

Operating Conditions for Intersections

Analysis of intersection operations is based on the concept of Level of Service (LOS). The LOS of an intersection is a qualitative measure used to describe operational conditions, and ranges from LOS A (best, minimal delay), to LOS F (worst, heavy delays) where the intersection is operating at or near its functional capacity. Levels of Service for the traffic study were determined using the Highway Capacity Manual, 2010 (HCM) methodologies which are implemented in the Synchro (Version 9) traffic analysis software including SimTraffic micro-simulation. **Table 4.13-4** relates the operational characteristics associated with each LOS category for signalized and unsignalized intersections.

**TABLE 4.13-4
 INTERSECTION LEVEL OF SERVICE DEFINITIONS**

Level of Service	Description	Avg. delay per vehicle, sec/veh	
		Signalized	Un-Signalized
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream	≤ 10	≤ 10
B	Stable traffic. Traffic flows smoothly with few delays.	> 10 – 20	> 10 – 15
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	> 20 – 35	> 15 – 25
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours.	> 35 – 55	> 25 – 35
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	> 55 – 80	> 35 – 50
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	> 80	> 50

SOURCES: Transportation Research Board, Highway Capacity Manual 2010, National Research Council, 2010.

County Criteria for Intersections

A project’s traffic effect at an intersection is considered to be adverse under El Dorado County guidelines if the project causes an intersection to change from LOS E to LOS F. In other words, LOS E is considered acceptable by El Dorado County for roadways and state highways within the unincorporated areas of the County in the Community Regions and LOS D in the Rural Center and Rural Regions except as specified in the General Plan; the project is located within a Community Region. Worsening of conditions at facilities already operating at unacceptable levels of service is also considered an adverse effect. The County’s General Plan Policy TC-Xe defines “worsen” as any of the following conditions:

- A. A two percent increase in traffic during the a.m. peak hour, p.m. peak hour or daily trips, or
- B. The addition of 100 or more daily trips, or
- C. The addition of 10 or more trips during the a.m. peak hour or the p.m. peak hour.

When an adverse effect is identified on the County’s roadway network for a scenario with or without the project, a separate analysis must be done to identify what improvements are needed for mitigation and when the improvements must be in place. The timing of the proposed mitigation must be in compliance with General Plan Policy TC-Xf:

At the time of approval of the tentative map for a single family residential subdivision of five or more parcels that worsens (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall do one of the following:
 (1) condition the project to construct all road improvements necessary to maintain or

attain LOS standards as detailed in this Transportation and Circulation Element based on existing traffic plus traffic generated from the development plus forecasted traffic growth at 10-years from project submittal; or (2) ensure the commencement of construction of the necessary road improvements are included in the County's 10-year Capital Improvement Program (CIP).

For all other discretionary projects that worsen (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall do one of the following:

- 1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards as detailed in this Transportation and Circulation Element; or
- 2) ensure the construction of the necessary road improvements are included in the County's 20-year CIP.

Projects that have effects to Caltrans facilities are required to use Caltrans LOS standards and thresholds in conjunction with the requirements of El Dorado County General Plan Circulation Policy TC-Xd.

The effects of vehicle queuing were also analyzed, and the 95th percentile queue is reported in the traffic study for all study intersections. The 95th percentile queue length represents a condition where 95 percent of the time during the peak period, traffic volumes and related queuing will be at, or less, than the queue length determined by the analysis. This is referred to as the "95th percentile queue." Average queuing is generally less. Queuing is considered a potentially adverse effect since queues that exceed turn pocket length can create potentially hazardous conditions by blocking or disrupting through traffic in adjacent travel lanes. However, these potentially hazardous queues are typically associated with left-turn movements.

Locations where the right turn pocket storage is exceeded is not considered potentially hazardous because the right turn movement will execute at the same time as the through movement and the additional vehicles that spill out over the turn pocket will not hinder or disrupt the adjacent through traffic as would be the case in most left turn pockets. Thus, for purposes of this analysis, an adverse queuing effect is considered to occur under conditions where project traffic causes the queue in a left turn pocket to extend beyond the turn pocket by 25 feet or more (i.e., the length of one vehicle) into adjacent traffic lanes that operate (i.e., move) separately from the left turn lane. Where the vehicle queue already exceeds that turn pocket length under pre-project conditions, an adverse project effect would occur if project traffic lengthens the queue by 25 feet or more.

Year 2018 Existing Conditions with and without the Proposed Project

The project's trip generation is summarized in **Table 4.13-5** which shows that in the PM peak hour the project would generate 273 trip ends, with 177 inbound to the project site and 96 outbound from the project site.

**TABLE 4.13-5
 PROJECT TRIP GENERATION**

Description/ITE Code	Units	Trip Rates			Directionality				Dwelling Units	Trip Ends			Directionality			
		Week Day	AM	PM	AM In	AM Out	PM In	PM Out		Daily	AM	PM	AM In	AM Out	PM In	PM Out
Single Family Homes	DU	9.52	0.75	1.00	25%	75%	63%	37%	157	1495	118	157	29	88	99	58
Condo/Townhouse	DU	5.81	0.44	0.52	17%	83%	67%	33%	225	1307	99	117	17	82	78	39
Total									382	2802	217	274	46	170	177	97

NOTES:

1. ITE Landuse Code: 210
2. ITE Landuse Code: 230

SOURCE: ITE Trip Generation Manual, 9th ed.

This trip generation was assigned to the surrounding roads. **Table 4.13-6** below shows operating conditions for the AM and PM peaks under 2018 conditions both with and without the project. As shown, the existing Year 2018 LOS at all study intersections *without* the project is at an acceptable LOS E or better conditions, with a range of LOS A to LOS E conditions for the overall LOS at all intersections. The side street LOS at unsignalized intersections ranges from LOS C to LOS D, with LOS D side street conditions at the intersection of Missouri Flat Road and China Garden Road. Per El Dorado County General Plan Policy TC-Xa, Missouri Flat Road is allowed to operate at LOS F, provided ratios of volume to capacity do not exceed 1.12 from US-50 to Motherlode Drive or 1.20 from Motherlode Drive to China Garden Road.

Table 4.13-6 also summarizes the capacity analysis calculations for the Year 2018 scenarios *with* the project and *without* intersection improvements. As shown in the table, when the project traffic is added, the Pleasant Valley Road/Faith Lane (Intersection 11) would go from LOS E to LOS F conditions for the Faith Lane approach (side street). The project would therefore create an adverse effect on traffic operations at this intersection if intersection improvements are not undertaken. The project would not substantially change the LOS at any of the other 14 existing study intersections.

Future Conditions (Year 2027 and Year 2035)

To accurately capture future traffic levels, and consistent with the growth projections in the County’s travel demand model, the background traffic for the Year 2027 and 2035 future scenarios was increased by an average of 0.7 percent per year (a detailed description and table of this process is in the *Analysis* section of the traffic study in Appendix H). On Missouri Flat Road, this yearly projected growth rate was higher at about 1.6 percent per year. On average in the study area, in 2035 there would be a projected 13 percent growth on top of existing traffic levels. The growth on Missouri Flat Road north and south of Forni Road, however, was projected to be substantially higher, ranging from 25 to 28 percent greater than existing levels. These growth factors were applied to various study area roadways. **Table 4.13-7** below shows the Capacity Analysis Summary for the worst-case future condition, Year 2035, without intersection improvements.

**TABLE 4.13-6
YEAR 2018 CAPACITY ANALYSIS SUMMARY**

Intersection Location	Control	Year 2018 AM Peak				Year 2018 PM Peak			
		No Project		With Project		No Project		With Project	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1. Missouri Flat Rd at Plaza Dr	S	C	20.3	C	20.7	C	27.4	C	28.7
2. Missouri Flat Rd at US 50 WB Ramps	S	B	15.9	B	15.9	B	18.3	B	18.3
3. Missouri Flat Rd at US 50 EB Ramps	S	B	16.6	B	16.6	C	24.6	C	24.6
4. Missouri Flat Rd at Mother Lode Dr	S	A	9.0	A	9.1	C	22.0	C	22.0
5. Missouri Flat Rd at Forni Rd	S	C	20.5	C	23.5	C	26.0	C	26.0
6. Missouri Flat Rd at Golden Center Dr	S	C	28.9	C	28.9	C	25.6	C	25.6
7. Missouri Flat Rd at China Garden Rd	TW	A	2.8	A	3.1	A	2.3	A	2.4
	WB	D	25.5	D	31.8	C	22.5	D	26.2
8. Missouri Flat Rd at Industrial Dr	S	A	3.6	A	3.7	B	10.6	B	11.5
9. Missouri Flat Rd at Enterprise Dr	S	A	4.7	A	4.9	B	15.1	B	15.1
10. Missouri Flat Rd at Pleasant Valley Rd	S	B	13.9	B	15.2	C	28.1	D	42.5
11. Pleasant Valley Rd at Faith Ln	TW	A	0.1	A	8.4	A	0.5	B	13.5
	NB	C	17.1	F	84.1	E	47.9	F	254
12. Pleasant Valley Rd at China Garden Rd	TW	A	0.3	A	0.3	A	0.8	A	0.8
	SB	C	20.2	C	20.3	D	29.5	D	30.3
13. Pleasant Valley Rd at SR 49 N / Fowler	S	E	62.3	E	62.3	D	41.1	D	45.1
14. Pleasant Valley Rd at Commerce Way	TW	A	1.4	A	1.4	A	2.8	A	2.8
	SB	C	21.5	C	21.6	C	23.5	C	23.9
15. Pleasant Valley Rd at Patterson Dr	S	A	6.5	A	7.0	A	7.6	A	8.5
16. Pleasant Valley Rd at Forni Rd	TW	A	4.3	A	4.4	A	3.8	A	3.9
	SB	C	21.2	C	22.0	C	15.1	C	15.5
17. Pleasant Valley Rd at SR 49 S	AW	C	24.3	D	25.1	C	22.3	C	24.0
18. Diamond Springs Parkway at SR 49		FUTURE				FUTURE			
19. Diamond Springs Parkway at Missouri Flat		FUTURE				FUTURE			

NOTES:

Calculations based on HCM 2010 methodology for intersection level of service (signal, two-way, and all-way stop)

Control: S=Signal, AW=All-Way Stop, TW=Stop Sign Side Street, NB=NB Approach Stop

**TABLE 4.13-7
 YEAR 2035 UNMITIGATED CAPACITY ANALYSIS SUMMARY**

Intersection Location	Control	Year 2035 AM Peak				Year 2035 PM Peak			
		No Project		With Project		No Project		With Project	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1. Missouri Flat Rd at Plaza Dr	S	C	21.7	C	21.7	D	46.6	D	46.6
2. Missouri Flat Rd at US 50 WB Ramps	S	B	15.9	B	15.9	C	25.5	C	34.2
3. Missouri Flat Rd at US 50 EB Ramps	S	B	14.2	B	18.0	C	30.3	D	39.0
4. Missouri Flat Rd at Mother Lode Dr	S	B	10.5	B	10.8	B	14.3	B	16.3
5. Missouri Flat Rd at Forni Rd	S	C	29.9	C	30.2	C	34.2	D	49.4
6. Missouri Flat Rd at Golden Center Dr	S	C	28.8	C	31.0	D	48.6	D	48.6
7. Missouri Flat Rd at China Garden Rd	TW	A	2.2	A	2.3	A	1.9	A	1.9
	WB	C	18.3	C	21.8	C	18.9	C	21.1
8. Missouri Flat Rd at Industrial Dr	S	A	4.1	A	7.9	A	2.6	A	4.5
9. Missouri Flat Rd at Enterprise Dr	S	A	4.6	A	6.0	A	3.7	A	3.7
10. Missouri Flat Rd at Pleasant Valley Rd	S	B	14.4	B	19.6	B	13.8	C	22.9
11. Pleasant Valley Rd at Faith Ln	TW	A	0.1	A	6.8	A	0.4	A	8.3
	NB	C	16.3	F	65.2	E	36.6	F	142
12. Pleasant Valley Rd at China Garden Rd	TW	A	0.4	A	0.4	A	0.7	A	0.7
	SB	C	18.4	C	18.5	C	23.6	C	24.3
13. Pleasant Valley Rd at SR 49 N / Fowler	S	B	18.8	C	22.7	C	33.5	D	37.9
14. Pleasant Valley Rd at Commerce Way	TW	A	1.7	A	1.7	A	3.5	A	3.6
	SB	D	25.9	D	26.0	D	29.9	D	30.3
15. Pleasant Valley Rd at Patterson Dr	S	A	8.1	A	8.1	A	7.8	A	8.0
16. Pleasant Valley Rd at Forni Rd	TW	A	5.5	A	5.7	A	4.5	A	4.5
	SB	D	30.1	D	32.0	C	18.2	C	18.8
17. Pleasant Valley Rd at SR 49 S	AW	E	41.1	E	42.7	E	37.8	E	41.1
18. Diamond Springs Parkway at SR 49	S	B	11.3	B	11.5	B	14.5	B	17.4
19. Diamond Springs Parkway at Missouri Flat	S	B	16.5	B	17.6	C	33.9	C	33.9

NOTES:

Calculations based on HCM 2010 methodology for intersection level of service (signal, two-way, and all-way stop)

Control: S=Signal, AW=All-Way Stop, TW=Stop Sign Side Street, NB=NB Approach Stop

Conclusions

Project Effects on Intersections

Tables 4.13-6 and 4.13-7 showed that based on the outcome of the LOS analysis for intersections, 18 out of 19 study intersection locations would be at acceptable levels of service for the year 2035. The exception is:

- Pleasant Valley Road at Faith Lane: LOS A (8.3) / LOS F (142)

After the project's traffic is added in, the intersection of Pleasant Valley Road at Faith Lane drops to LOS F conditions for the Faith Lane approach. The intersection of Pleasant Valley Road and Faith Lane is not anticipated in the County's CIP, so the project would need to address this effect. The proximity of this intersection to China Garden Road's intersection with Pleasant Valley Road adds a level of complexity to addressing the project's effects. For example, traffic signals cannot be installed at these existing intersection locations without widening Pleasant Valley Road to make room for left turn pockets to turn into Faith Lane or into China Garden Road. This would require the installation of two close signals designed to operate as one system, and left turn pocket storage under such a scenario would be too short to be back-to-back. Under such a scenario, there would need to be two median lanes for each left turn pocket, and these lanes could then only be 100 feet long each. This means that Pleasant Valley Road would need to be widened to at least a four-lane cross section for at least two hundred feet west of Faith Lane and 200 feet east of China Garden Road to accommodate tapering of lanes back to a two-lane cross section. There is currently insufficient right-of-way to accomplish this solution without impacting numerous buildings directly fronting Pleasant Valley Road on several different properties (possibly more than 10 properties). Based on these constraints, the traffic study included the following recommend options to address LOS effects at the intersection of Pleasant Valley Road and Faith Lane.

- Creation of a four-way roundabout at the intersection of China Garden Road/SR-49, to the east of the existing Faith Lane alignment.
- Realignment of the existing Faith Lane alignment westwards to connect with Silver Drive, and installation of two coordinated signals at the intersections of Silver Drive/SR-49 and China Garden Road/SR-49.

As described in Chapter 3, *Project Description*, of this EIR, the above options are under consideration as part of the project. Implementation of either option would address the adverse project effect to the intersection.

Project Effects on Intersection Turn Pocket Queues

The County's Traffic Impact Study Guidelines state that it is necessary to use the SimTraffic software to analyze traffic operations when the following conditions exist (or could exist in the future): "Over-capacity conditions (queues spill out of storage pockets)." PRISM Engineering used this software to analyze intersection queues and found that for Year 2035, project traffic would create no adverse effects to queue overflow conditions, and in nearly all cases, would add at most one car length to a queue over the 95th percentile. Accordingly, no adverse effects to intersection queues were identified.

4.13.6 References

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4.14 Tribal Cultural Resources

4.14.1 Introduction

This section characterizes and discusses the tribal cultural resources that could be affected by the proposed Project.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Comments were received during the public meeting related to maintaining the indigenous cultural heritage of the project vicinity and the recognition of Miwok burial grounds, if identified. In addition, Kara Perry, Cultural Outreach Coordinator for the Shingle Springs Band of Miwok Indians, requested a meeting to discuss the project.

This section was developed based on the cultural resources analysis completed by PAR (2008) and supplemented by ESA for this project. Additional information can be found in Section 4.4, *Cultural Resources*.

4.14.2 Environmental Setting

Definitions

As defined in Public Resources Code (PRC) Section 21074, *tribal cultural resources* are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either listed on or eligible for listing on the California Register of Historical Resources (California Register) or a local historic register. Alternately, a lead agency, at its discretion, may choose to treat the resource as a tribal cultural resource if such a designation is supported by substantial evidence.

Natural and Cultural Environment

Section 4.4, *Cultural Resources*, describes the natural and cultural background for the cultural resources and tribal cultural resources analysis as well as a summary of the background research, survey effort, and an evaluation of potential tribal cultural resources (refer to Section 4.4.2, *Environmental Setting*).

In summary, two archaeological resources in the project area (both prehistoric bedrock mortar outcrops – CA-ELD-1342 and CA-ELD-1343) are recommended eligible for listing in the National and California registers and are considered historical resources and tribal cultural resources for the purposes of CEQA.

Native American Consultation

In 2006, PAR sent letters requesting information about the project area to the Native American Heritage Commission (NAHC), the United Auburn Indian Community, the Shingle Springs Band of Mi-Wok Indians, the El Dorado County Indian Council, the Miwok Maidu, the Todd Valley

Miwok-Maidu Cultural Foundations, the El Dorado Miwok Tribe, and the Ione Band of Miwok Indians. PAR sent additional letters in 2008, indicating changes that were made to the project since the 2006 letters.

In 2019, ESA sent a letter to the NAHC requesting a search of the sacred lands file. The NAHC responded on November 19, 2019 that the search of the sacred lands file resulted in negative findings. Prior to conducting the archaeological survey in November 2018, ESA contacted Ramona Tripp-Verbeck from the El Dorado County Indian Council. Ms. Tripp-Verbeck, and her son Joseph, accompanied ESA archaeologists during the survey effort. Ms. Tripp-Verbeck provided information on the general area and specifically on the use of the project area in more recent years.

According to the requirements of PRC Section 21080.3, the County of El Dorado conducted consultation outreach efforts to Native American tribes. On October 29, 2018 the Community Development Services Planning and Building Department of El Dorado County contacted the Colfax-Todds Valley Consolidated Tribe, the Ione Band of Miwok Indians, the Nashville-El Dorado Miwok, the Shingle Springs Band of Miwok Indians, the T'si-Akim Maidu, the United Auburn Indian Community (UAIC) of Auburn Rancheria, the Washoe Tribe of Nevada and California, and Wilton Rancheria. The certified letter included information on the project, a link to project documentation, and a formal invitation to consult according to the provisions of PRC Section 21080.3.

On November 8, 2018, the UAIC responded by letter that the tribe would like to initiate consultation according to the provisions of PRC Section 21080.3. The UAIC also sent an email to the County on November 13, 2018 requesting existing cultural resource assessments, results of records searches and GIS data, and a site visit. Additional consultation efforts are on-going with the County and will be completed prior to the certification of the EIR according to the provisions of PRC 21082.3(d)(1). The County did not receive any additional requests for consultation within 30 days, as required by PRC Section 21080.3.1(d).

4.14.3 Regulatory Setting

Federal

There are no federal regulations specifically applicable to tribal cultural resources. Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (U.S. Code Title 54 Section 306108) discusses traditional cultural properties (TCPs) as historic properties. Section 4.4.3 of the *Cultural Resources* section of this EIR discusses the National Register of Historic Places (National Register) and the NHPA.

State

In September 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 requires lead agencies to analyze project impacts on “tribal cultural resources” separately from archaeological resources (PRC Section 21074; 21083.09). The bill defines “tribal cultural

resources” in a new section of the PRC Section 21074. AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC Section 21080.3.1, 21080.3.2, 21082.3).

Specifically, PRC Section 21084.3 states:

- a) Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.
- b) If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process provided in Section 21080.3.2, the following are examples of mitigation measures that, if feasible, may be considered to avoid or minimize the significant adverse impacts:
 - 1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - 2) Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - (A) Protecting the cultural character and integrity of the resource.
 - (B) Protecting the traditional use of the resource.
 - (C) Protecting the confidentiality of the resource.
 - 3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - 4) Protecting the resource.

Pursuant to AB 52, the Office of Planning and Research updated Appendix G of the CEQA Guidelines to provide sample questions regarding impacts on tribal cultural resources (PRC Section 21083.09).

Regional and Local

No applicable regional or local regulations specifically address tribal cultural resources.

4.14.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

For purposes of this analysis, an impact on cultural resources is considered significant if implementation of the proposed project would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - a. Listed or eligible for listing in the California Register, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
 - b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impacts and Mitigation Measures

Impacts

Impact 4.14-1: The project could cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe. (*Less than Significant Impact with Mitigation*)

Based on the natural environment, the prehistoric and ethnohistoric context, the records search results, and the archaeological survey efforts completed for the proposed project, there are two identified prehistoric archaeological resources in the project area that are eligible for the California Register. These resources (designated CA-ELD-1342 and CA-ELD-1343) are both bedrock outcrops with mortars. These resources are, therefore, considered historical resources and unique archaeological resources for the purposes of CEQA. These resources are also considered tribal cultural resources for the purposes of CEQA.

Prior to certification of the EIR, the County will continue consultation with the UAIC and include information in the Final EIR related to the follow items:

- The eligibility determination of CA-ELD-1342 and CA-ELD-1343 as significant historical resources and tribal cultural resources;
- The results of a site visit with the UAIC (if requested by the tribe); and
- The adequacy of the proposed mitigation measures.

To reduce impacts to tribal cultural resources to a less-than-significant level, the resources are to be avoided during all construction activities. Currently, the project plans include avoiding the areas of known significant archaeological resources. In addition, implementation of **Mitigation Measure 4.4-2a (Archaeological and Native American Monitoring)** would ensure that the resources areas are avoided during construction activities. This measure requires archaeological and Native American monitoring within 200 feet of the boundaries of known tribal cultural resources.

The Optional Fowler Lane Improvement Area was not subject to intensive archaeological survey due to access restrictions outside of the existing right-of-way. If selected as the project's emergency vehicle access route, segments of right-of-way within the Optional Fowler Lane Improvement Area would need to be acquired from adjacent property owners prior to construction of the improvements. Although there are no previously identified tribal cultural resources in the alignment, the area has not been surveyed by an archaeologist. Based on this uncertainty, project construction could cause impacts to as-yet-unknown tribal cultural resources, which would be a significant impact. **Mitigation Measure 4.4-2b (Cultural Resources Assessment for the Optional Fowler Lane Improvement Area)**, would reduce the potential for such impacts through a pre-construction cultural resources identification study to determine whether previously unrecorded tribal cultural resources are present. The results of the study would provide additional recommendations including site avoidance, construction monitoring, evaluation efforts, or inadvertent discovery protocol, in compliance with applicable regulations.

In addition, if cultural materials are inadvertently identified in the project area during construction and the materials are determined to be tribal cultural resources, damage to the resource would be a potentially significant impact. Impacts to previously undiscovered tribal cultural resources would be reduced to a less-than-significant level by implementation of **Mitigation Measure 4.4-2c (Inadvertent Discovery of Cultural Resources)**, which would ensure that any resources identified during construction activities would be treated in compliance with applicable regulations.

Mitigation Measures

Mitigation Measure 4.4-2a: Archaeological and Native American Monitoring.

Mitigation Measure 4.4-2b: Cultural Resources Assessment for the Optional Fowler Lane Improvement Area.

Mitigation Measure 4.4-2c: Inadvertent Discovery of Cultural Resources.

Significance After Mitigation

Implementation of the above mitigation measures would reduce impacts to a **less-than-significant** level by ensuring that known significant tribal cultural resources are avoided during construction and providing protocol to follow in the event of an inadvertent discovery of cultural materials.

4.14.5 References

PAR Environmental Inc. (PAR), *Cultural Resources Inventory of the Stonehenge Springs Project, Diamond Springs, El Dorado County, California*. Prepared for Stonehenge Properties, February 2008.

4.15 Utilities and Service Systems

This section assesses the potential effects on utilities and service systems associated with the planning, construction, and operation of the proposed project. This section includes a description of the environmental setting to establish baseline conditions for utility and service systems, a summary of the regulations related to utility and service systems, and an evaluation of the proposed project's potential effects on utility and service systems.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relevant to utilities and service systems were received.

4.15.1 Introduction

CEQA requires the analysis of potential adverse effects of a project on the environment. The potential effects of the environment on the project are not legally required to be analyzed or mitigated under CEQA, except where the project impacts exacerbate the existing conditions. Therefore, this section analyzes potential effects of public services and recreation facility conditions on the project (as well as other users) as non-CEQA impacts for informational purposes as they relate to consistency with General Plan Policies.

The physical environmental effects associated with the project, many of which pertain to issues of utility and service system infrastructure capacity, future demand, and land use compatibility (e.g., noise, and transportation) are evaluated in other sections of this EIR.

The information and analysis provided in this section is based on general research and information gathered in relation to utility service providers to the proposed project, including the El Dorado Irrigation District (EID), El Dorado Disposal, El Dorado County Environmental Management Department (EDCEMD), Western El Dorado County Materials Recovery Facility (MRF), and Pacific Gas & Electric (PG&E). Additional information was obtained from the El Dorado County General Plan (El Dorado County 2004), and the El Dorado County General Plan Draft EIR (EDAW 2003). The primary sources of data referenced for this section include:

- El Dorado County 2035 General Plan;
- El Dorado County 2035 General Plan Master Environmental Impact Report;
- Sacramento Area Council of Governments (SACOG) Preferred Blueprint Scenario and Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS);
- El Dorado County 2015 Urban Water Management Plan; and
- El Dorado Irrigation District Facilities Improvement Letter (see **Appendix I** of this EIR).

4.15.2 Environmental Setting

Potable Water

Within El Dorado County, the major water supply source is surface water diverted from streams and reservoirs, which is then conveyed to water users after treatment. Groundwater access is relatively limited in comparison to surface waters as a result of geologic conditions found in the County. However, groundwater remains the primary source of water in rural areas.

The El Dorado Irrigation District (EID) is an irrigation special district, organized under the California Irrigation District Law. As one of five water purveyors in El Dorado County, the EID provides water service to the project area. Specifically, the EID helps plan, and manage water usage throughout the County along with the El Dorado County Water Agency. Originally formed to supply irrigation water for farming, over time the EID's service area has become more urbanized, requiring expanded services to meet the needs of a growing population. The EID's service area covers approximately 220 square miles, resulting in municipal and agricultural water services to approximately 110,000 people.

As part of EID operations, hydroelectric power is utilized, as well as dams, reservoirs, and 23 miles of flumes, canals, siphons, and tunnels that deliver water to the service area. Service is provided to 14 contiguous service zones and two satellite water systems areas from Jenkinson and Folsom Lakes. EID manages facilities and delivery infrastructure for drinking water that includes 1,200 miles of pipeline, 40 miles of ditches, six treatment plants, 33 storage reservoirs, and 21 pumping stations. The project site is located in Division 2, Service Zone 7. Existing EID infrastructure within the project area includes a 6-inch and 8-inch waterline within a portions of the State Route 49 (SR-49) right-of-way (ROW), and a 12-inch waterline within SR-49 near Pleasant Valley Road. EID's facilities within the project area have been identified as undersized.

As noted in the EID's 2015 Urban Water Management Plan (2015 UWMP), water management planning efforts are documented to ensure adequate water supply is available to meet the demands over the next 25 years. The 2015 UWMP specifically assesses the availability of supplies to meet future demands during normal, single-dry and multiple dry years. Within the EID, there are two primary interconnected potable water systems in its contiguous service area: The El Dorado Hills system and the Western/Eastern system. The El Dorado Hills system obtains its primary supplies under rights and entitlements from Folsom Reservoir. The El Dorado Hills Water Treatment Plant (EDHWTP) serves the El Dorado Service Zone, which includes Diamond Springs, and treats water supplied from Folsom Reservoir.

Surface Water Supply

Surface water on the west slope of El Dorado County is contained in three principal watersheds: the Middle Fork American River, the South Fork American River, and the Cosumnes River. Specifically, the Western/Eastern system derives its supplies from sources under rights and entitlements emanating from further up the South Fork American River watershed and the Cosumnes River watershed.¹ Surface water from the South Fork American River watershed encompasses the central region of the

¹ El Dorado Irrigation District, 2016. The 2015 Urban Water Management Plan. June 2016. Available https://wuedata.water.ca.gov/uwmp_plans.asp. Accessed June 7, 2020.

County with peak runoff from this watershed typically from March through June occurring primarily as snowfall precipitation in the upper elevations of the watershed and rainfall in the lower elevations. The Cosumnes River watershed encompasses the southern region of El Dorado County and the northwestern region of Amador County. The peak runoff from the Cosumnes River, where precipitation occurs primarily as rainfall, is from January through April.

Ground Water Supply

As previously noted above, the EID does not typically utilize groundwater as a supply due to the geology in the area making access to groundwater relatively limited. Due to the geology and limited access of groundwater, the long-term reliability of groundwater cannot be estimated with the same level of confidence as surface water. Water, if present, is usually found most abundantly in the first 250 feet of depth.

Recycled Water Supply

As stated in the 2015 UWMP, the EID uses recycled water to meet some current non-potable demands within its service area, and may expand its development and use of recycled water in the future to meet a portion of the non-potable demands. The recycled water system for the EID consists of supply from the El Dorado Hills wastewater treatment plant and the Deer Creek wastewater treatment plant, and has a 70 million-gallon storage reservoir located adjacent to the El Dorado Hills wastewater treatment plant to help balance the rate of recycled water generation with recycled water demands. The peak period for recycled water demand occurs at night. EID's current recycled water use is about 2,400 acre-feet per year, and is anticipated to expand incrementally over time to around 3,500 acre-feet of recycled water per year to be delivered annually by 2040.

Water Supply Summary

EID water assets for its service area includes secured and planned water assets collectively totaling up to 108,190 acre-feet in normal water years and 72,025 acre-feet in a single dry water year for supply. In year two and year three of a multi-year drought, supplies are further reduced to 68,105 acre-feet and 62,843 acre-feet.

Water Supply Infrastructure

Dorado Oaks Tentative Subdivision Map Site

There are no existing potable water facilities serving the proposed subdivision site, and as noted the EID supplies potable water service to this portion of the proposed project area. Currently, an 18-inch water line is present beneath SR-49, and a 10-inch water line is located in Fowler Lane. Several water lines of various sizes are located around the project perimeter.

State Route 49 Intersection Area

Within the SR-49 Intersection portion of the proposed project area there is an existing 18-inch water main located within the right-of-way. The water main transitions to 24-inches roughly halfway between Faith Lane and Howard Circle, easterly along SR-49.

Optional Fowler Lane Improvement Area

Within the Fowler Lane Improvement area portion of the proposed project location there is an existing 10-inch water main located within the right-of-way for Fowler Lane.

El Dorado County Water Demand

The 2015 UWMP reported water demand values, at 43,477 AFY within the El Dorado County. Projections of future demand are based on the anticipated buildout and increase in population growth from the County's General Plan. The anticipated demand is calculated for average water year conditions. Projected water demand through 2045 is anticipated to increase to approximately 49,375 AFY.²

Wastewater

Wastewater in the County is treated by two types of treatment systems, Wastewater Treatment Plants (WWTPs) and onsite wastewater treatment systems (OWTS). WWTPs in the EID are connected to a collection system of pipelines and lift stations, while OWTS are either connected to individual residences and nonresidential buildings in areas not served by the EID collection system, such as areas that rely upon septic tanks and onsite, underground disposal using leach fields and other types of soil absorption systems.

Existing Collection and Treatment Systems

EID provides wastewater collection and treatment services to the project area. There are two WWTPs on the County's west slope, owned and operated by EID. EID has the following four permitted wastewater collection systems: El Dorado Hills, Deer Creek, Camino Heights, and Gold Ridge Forest. The Deer Creek WWTP (DCWWTP) service area, which includes the project area, encompasses approximately 24 square miles with an existing capacity of approximately 3.6 mgd, providing treatment for approximately 10,000 wastewater service connections in the communities of Cameron Park, Shingle Springs, and Diamond Springs.³

Wastewater Infrastructure

Dorado Oaks Tentative Subdivision Map Site

Within the Dorado Oaks Tentative Subdivision Map portion of the project area, the existing wastewater infrastructure includes a small EID sewer lift station that lies within a fenced enclosure in the northeastern portion of the proposed subdivision site, and serves an existing sewer line and force main within an easement that runs through the site. Currently, a 24-inch gravity sewer main is located beneath SR-49 near the intersection of Tullis Mine Road.

State Route 49 Intersection Area

Within the State Route 49 Intersection portion of the project area, the existing wastewater infrastructure includes sewer facilities located within the SR-49 roadway and consist of a 24-inch sewer main located at the intersection with Tullis Mine Road. There are also 6-inch sewer collectors that come from the east, west, and north that connect to the 24-inch main. Also found within the SR-49 portion of the proposed project area is an additional 6-inch sewer line that comes from the north side of SR-49 and heads south within the Faith Lane alignment, connecting to the aforementioned lift station in the proposed subdivision site.

² EID, 2016. UWMP 2015. Page 7-1.

³ El Dorado Irrigation District, 2013. El Dorado Irrigation District Wastewater Facilities Master Plan. Available at <https://www.eid.org/home/showdocument?id=3620>. Accessed June 7, 2020.

Optional Fowler Lane Improvement Area

Located within the Fowler Lane portion of the proposed project area, there is an existing 6-inch sewer line within the Fowler Lane right-of-way. This line turns to the west at the approximate location of Decair Court, and terminates at the existing lift station within the proposed subdivision site. The force main from this lift station winds its way through the proposed subdivision site to Sunrise Drive and Tullis Mine Road and eventually connects to the gravity system within the SR-49 right-of-way.

Stormwater

The west slope of El Dorado County contains three major watersheds, each of which drains into one of these major rivers: the Middle Fork American River, the South Fork American River, and the Cosumnes River. These watersheds are further divided into smaller drainage basins that feed the tributaries of these three major rivers. Developed drainage infrastructure exists in many of the drainage basins. The project area is located within the Weber Creek drainage area, in the South Fork American River Watershed, and is included as part of the Cosumnes, American, Bear and Yuba Watersheds (CABY) Integrated Regional Water Management Plan.⁴

Stormwater Summary

Stormwater drainage from the proposed Dorado Oaks Tentative Subdivision Map site is currently not collected as the existing site conditions are unimproved, and contain minimal improvements for stormwater runoff from or through the site. Drainage from the site generally follows a southerly course, via natural stream channels, which eventually flow into Martinez Creek about a half-mile south of the site's southern boundary. Within the State Route 49 Intersection Area portion of the project there are limited stormwater facilities present, with drainage generally accommodated in a system of roadside ditches, curbing, and sheet flows. Existing storm drain facilities within Fowler Lane consist primarily of a roadside ditch with a culvert crossing which flows predominately to the south.

Solid Waste

As the Dorado Oaks Tentative Subdivision Map project site is currently vacant and unimproved, there are no existing solid waste services provided to the site. Construction waste pickup for the project would be provided by El Dorado Disposal Inc., which provides comprehensive solid waste and recycling services to unincorporated El Dorado County including construction, demolition, and debris recycling.

In accordance with Assembly Bill 939, the County prepared an Integrated Waste Management Plan⁵, which includes establishment of two Material Recovery Facilities (MRFs), with the Western El Dorado County MRF serving the proposed project area. The MRF assists the County in

⁴ CABY, 2014. Cosumnes, American, Bear & Yuba River Integrated Regional Water Management (IRWM). CABY Plan, Project Data Management Application, Web Mapping Tool. Available at <http://swwg.maps.arcgis.com/apps/webappviewer/index.html?id=4159adcc1e9e461c8edf521d95e1d9e3&shareWithWebMap=true>. Accessed June 7, 2020.

⁵ El Dorado County, 2012. El Dorado County Solid Waste Management Plan. Volume II: Detailed Strategies and Support. Published January 31, 2012. Available at <https://www.edcgov.us/Government/emd/solidwaste/pages/swmplan.aspx>. Accessed June 7, 2020.

accomplishing waste diversion goals through the implementation of successful programs for source reduction, composting, and recycling. The Western El Dorado County MRF was originally designed to accommodate 400 tons of waste per day.

As of 2018, the unincorporated areas of El Dorado County was disposing of 121,096.75 tons of solid waste per year into landfills, which equates to approximately 82 percent of the original solid waste design capacity per year. After recyclable materials are separated from the waste stream at the MRF, solid waste is taken to Lockwood landfill in Nevada for disposal.

The solid waste generated in El Dorado County is currently disposed of in the Lockwood Landfill, which is located outside the County. The County has also historically used Potrero Hills Landfill, located in Solano County, for solid waste disposal. Lockwood Landfill is located in Storey County, Nevada approximately 12 miles east of Reno, and is a regional sanitary landfill that receives solid waste from several counties in Nevada and California. The permitted total capacity is approximately 43 million tons. The Potrero Hills Landfill, located in Suisun City handles several different types of waste including agricultural, ash, construction and demolition, industrial, mixed municipal, sludge, and tires. The Potrero Hills Landfill has a maximum permitted capacity of 83.1 million cubic yards and, as of the year 2006, a remaining estimated capacity of approximately 13.9 million cubic yards, or 16.7 percent of the landfill's total capacity. The landfill receives a maximum disposal of 4,330 tons per day.

Natural Gas

Natural gas service is not available to the project area.

Electricity

Electrical service is provided by Pacific Gas & Electric (PG&E) to the Diamond Springs community and to the proposed project area. PG&E charges connection and user fees for all new development, in addition to sliding rates for electrical and natural gas service based on use. Service would be brought to the subdivision site via on and off-site aboveground and undergrounded facilities as determined necessary by PG&E. An existing aboveground electric line runs through a portion of the subdivision site in a north-south direction.

Telecommunications

Telecommunication services are provided to the proposed project area by AT&T, SBC, and other local and long-distance phone services, with AT&T and Comcast providing cable television and broadband internet service to the area. Telephone and cable utility poles are located within the project area and will require relocation.

4.15.3 Regulatory Setting

Federal

U.S. Safe Drinking Water Act

The U.S. Safe Drinking Water Act (SDWA), established on December 16, 1974, is the main federal law that ensures the quality of drinking water by setting standards for drinking water

quality and by providing guidance to the states, localities, and water suppliers who implement those standards.

National Pollutant Discharge Elimination System

Federal and state laws relating to wastewater primarily focus on the regulation of pollutant discharges that could contaminate surface waters or groundwater. As such, the Federal Clean Water Act and National Pollutant Discharge Elimination System (NPDES), as well as the state Porter-Cologne Water Quality Control Act, all regulate wastewater treatment and the discharge of treated effluent. (See Section 4.7, *Hydrology and Water Quality, Regulatory Setting*).

Clean Water Act

The Clean Water Act (CWA) regulates the discharge of pollutants into United States waters and establishes water surface quality standards in order to maintain the chemical, physical, and biological health of national water systems. Under the CWA, pollutants may not be discharged from a point source into surface waters unless permitted by the NPDES under the regulation of the US EPA.

State

Senate Bill 610 and Senate Bill 221

As part of the purpose and legislative intent of Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221) projects are precluded from being approved without specific evaluations being performed and documented by the local water provider that indicate that water is available to serve the project. SB 610 primarily affects the Water Code, and SB 221 principally applies to the Subdivision Map Act. SB 610 requires the preparation of a Water Supply Assessment (WSA) for residential developments exceeding 500 units.⁶ A WSA evaluates the water supply available for new development based on anticipated demand. For the broad range of projects that are subject to this law, the statutory WSA must be requested by the lead agency from the local water provider at the time the lead agency determines that an Environmental Impact Report (EIR) is required for the project under CEQA. The water agency must then provide the assessment within 90 days (but may request a time extension under certain circumstances). The WSA must include specific information including an identification of existing water supply entitlements and contracts. The governing board of the water agency must approve the assessment at a public hearing.

SB 221 requires the local water provider to provide “written verification” of “sufficient water supplies” to serve the project. Sufficiency under SB 221 differs from SB 610 in that it is determined by considering the availability of water over the past 20 years; the applicability of any urban water shortage contingency analysis prepared per Water Code Section 10632; the reduction in water supply allocated to a specific use by an adopted ordinance; and the amount of water that

⁶ All projects that meet any of the following criteria require a WSA: 1) a proposed residential development of more than 500 dwelling units; 2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 ft² of floor space; 3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 ft² of floor space; 4) a proposed hotel or motel, or both, having more than 500 rooms; 5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; 6) a mixed-use project that includes one or more of the projects specified in this subdivision; or 7) a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer. In most cases, the WSA prepared under SB 610 would meet the requirement for proof of water supply under SB 221.

Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code Sections 10610-10656) requires that all urban water suppliers prepare urban water management plans and update them every five years.

Assembly Bill 901

Assembly Bill 901 (AB 901) requires the UWMP to document the quality of a supplier's available water source(s) and provide an assessment of the ways in which water quality affects its water management strategies and supply.

Assembly Bill 325

Assembly Bill 325 (AB 325), the Water Conservation in Landscaping Act, directs local governments to require the use of low-flow plumbing fixtures and the installation of drought-tolerant landscaping in all new development. Pursuant to the Act, the Department of Water Resources developed a Model Water Efficient Landscape Ordinance.

Senate Bill 365

Existing provisions of the California Water Code declare that the use of potable water for certain non-potable uses "is a waste or an unreasonable use of water." SB 365 amends and expands the Water Code to strengthen the provision that the use of potable water for the irrigation of residential landscaping, floor-trap priming, cooling towers, or air-conditioning devices is wasteful and unsound if reclaimed water suitable for these purposes is available. SB 365 also gives the power to any public agency—including a state agency, city, county, district, or any other political subdivision of the state—to require the use of reclaimed water for these purposes if certain conditions are met. The conditions that must be met are:

- Reclaimed water meeting the requirements of existing law (Section 13550 of the Water Code) is available to the user;
- The use of reclaimed water does not cause any loss or diminution of any existing water right;
- Public health concerns regarding exposure to mist or spray must be addressed, if appropriate; and
- The water user must prepare an engineering report pursuant to Title 22 regulations governing the use of reclaimed water.

The requirements of the law are applicable to all new industrial facilities and subdivisions for which the Department of Health Services has approved the use of reclaimed water, and for which a building permit is issued on or after March 15, 1994; or, if a building permit is not required, new structures for which construction begins on or after this date.

State Health and Safety Code Section 64562

Section 64562 of the California Health and Safety Code requires each public water system to have sufficient water available from its water sources and distribution reservoirs to supply adequately, dependably, and safely the total requirements of all its users under maximum demand conditions before an agreement can be made to permit additional service connections to that system.

California Integrated Waste Management Act of 1989 and SB 1016

The California Integrated Waste Management Act of 1989, or Assembly Bill (AB) 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans and also mandated that local jurisdictions divert at least 50 percent of all solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. In 2006, SB 1016 updated the requirements. The new per capita disposal and goal measurement system moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a factor, along with evaluating program implementation efforts. These two factors will help determine each jurisdiction's progress toward achieving its Integrated Waste Management Act (AB 939) diversion goals.

California Code of Regulations Title 24

The State of California regulates energy consumption under Title 24 of the California Code of Regulations. The Title 24 Building Energy Efficiency Standards were developed by the California Energy Commission (CEC) and apply to energy consumed for heating, cooling, ventilation, water heating and lighting in new residential and non-residential buildings. The CEC updates these standards periodically, and adopted the latest standards in 2019. These standards establish lighting zones that differentiate the amount of outdoor lighting by geographical location, and establish new performance standards for residential lighting.

California Green Building Standards Code

The state building standards code (CalGreen) requires that at least 50 percent of weight of non-hazardous job site debris generated by new construction be recycled, reused, or otherwise diverted from landfill disposal. CalGreen requires submission of plans and verifiable post-project documentation to demonstrate compliance.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to assure California utility customers of safe, reliable utility service at reasonable rates; protect utility customers from fraud; and promote a healthy California economy.

PG&E is a California-based utility, regulated by the CPUC. The CPUC mandates that PG&E obtain specific clearance requirements between utility facilities and surrounding objects or construction activities. The CPUC recommends a reasonable amount of clearance beyond the minimum requirements to allow for several years' worth of vegetation growth, potential wind

sway and other environmental factors. Distances obtained from the line after a pruning cycle may be more than 20 feet for fast-growing species such as mulberry or eucalyptus trees along distribution lines, and 4 years or 40 feet of clearance is required for high-voltage transmission lines.

Local

El Dorado County General Plan

Utilities and service systems are addressed in the El Dorado County General Plan's Public Services and Utilities Element. The purpose of the Public Services and Utilities Element is to promote a pattern of development, which maximizes the use of existing services while minimizing the costs of providing new facilities and services.

Goal 5.1: Provision of Public Services: Provide and maintain a system of safe, adequate, and cost-effective public utilities and services; maintain an adequate level of service to existing development while allowing for additional growth in an efficient manner; and, ensure a safe and adequate water supply, wastewater disposal, and appropriate public services for rural areas.

Policy 5.1.2.3: New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. Lack of available public or private services or adequate infrastructure to serve the project which cannot be satisfactorily mitigated shall be grounds for denial of any project or cause for the reduction of size, density, and/or intensity otherwise indicated on the general plan land use map to the extent allowed by State law.

Goal 5.2: Water Supply: The development or acquisition of an adequate water supply consistent with the geographical distribution or location of future land uses and planned developments.

Policy 5.1.2.3: New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. Lack of available public or private services or adequate infrastructure to serve the project which cannot be satisfactorily mitigated shall be grounds for denial of any project or cause for the reduction of size, density, and/or intensity otherwise indicated on the general plan land use map to the extent allowed by State law.

Policy 5.2.1.2: An adequate quantity and quality of water for all uses, including fire protection, shall be provided for with discretionary development.

Policy 5.2.1.3: All medium-density residential, high-density residential, multifamily residential, commercial, industrial and research and development projects shall be required to connect to public water systems when located within Community Regions and to either a public water system or to an approved private water system in Rural Centers.

Policy 5.2.1.4: Rezoning and subdivision approvals in Community Regions or other areas dependent on public water supply shall be subject to the availability of a permanent and reliable water supply.

Policy 5.2.1.6: Priority shall be given to discretionary developments that are infill or where there is an efficient expansion of the water supply delivery system.

Policy 5.2.1.7: In times of declared water shortages, the Board of Supervisors shall give priority within the affected water district to approving affordable housing and non-residential development projects.

Policy 5.2.1.10: The County shall support water conservation and recycling programs and projects that can reduce future water demand consistent with the policies of the general plan. The County will develop and implement a water use efficiency program for existing and new residential, commercial/industrial, and agricultural uses. The County will also work with each of the County's water purveyors to develop a list of the type of uses that must utilize reclaimed water if feasible. The feasibility of using reclaimed water will be defined with specific criteria developed with public input and with the assistance of EID, and will be coordinated with their ongoing reclaimed water (also referred to as recycled water) planning and implementation process. The County shall encourage all water purveyors to implement the water conservation-related Best Management Practices already implemented by EID and in compliance with the related criteria established by U.S. Bureau of Reclamation.

Policy 5.2.1.11: The County shall direct new development to areas where public water service already exists. In Community Regions, all new development shall connect to a public water system. In Rural Centers, all new development shall connect either to a public water system or to an approved private water system.

Goal 5.3: Wastewater Collection and Treatment. An adequate and safe system of wastewater collection, treatment, and disposal to serve current and future County residents.

Policy 5.3.1.1: High-density and multifamily residential, commercial, and industrial projects shall be required to connect to public wastewater collection facilities as a condition of approval except in Rural Centers and areas designated as Platted Lands (-PL). In the Community Region of Camino/Pollock Pines, the long term development of public sewer service shall be encouraged; however, development projects will not be required to connect to wastewater collection facilities where such connection is infeasible, based on the scale of the project. (Res. No. 298-98; 12/8/98)

Policy 5.3.1.7: In Community Regions, all new development shall connect to public wastewater treatment facilities. In Community Regions where public wastewater collection facilities do not exist project applicants must demonstrate that the proposed wastewater disposal system can accommodate the highest possible demand of the project.

Goal 5.5: Solid Waste. A safe, effective and efficient system for the collection and processing of recyclable and transformable materials and for the disposal of residual solid wastes which cannot otherwise be recycled or transformed.

Policy 5.5.2.1: Concurrent with the approval of new development, evidence will be required that capacity exists within the solid waste system for the processing, recycling, transformation, and disposal of solid waste.

Policy 5.5.2.3: The County shall adopt a Construction and Demolition Debris Diversion Ordinance requiring that a minimum of 50 percent of the debris from construction and demolition projects be reused or recycled. The County shall encourage a higher rate of diversion.

Goal 5.6: Gas, Electric, and Other Utility Services. Sufficient utility service availability consistent with the needs of a growing community.

Policy 5.6.1.1: Promote and coordinate efforts with utilities for the undergrounding of existing and new utility distribution lines in accordance with current rules and regulations of the California Public Utility Commission and existing overhead power lines within scenic areas and existing Community Regions and Rural Centers.

Policy 5.6.1.2: Reserve adequate rights-of-way to facilitate expansion of services in a timely manner.

Policy 5.6.1.4: Special use permits shall be required for the installation of community telecommunication facilities (e.g., microwave towers) in residential areas to ensure that siting, aesthetics, environmental issues, surrounding land uses, and health and safety are considered.

4.15.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

For the purposes of this EIR, an impact to utilities and infrastructure would be considered significant if implementation of the project would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- Not have access to sufficient available water supplies to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Approach to Analysis

Information for this assessment of impacts relative to utilities and service systems is based on the information provided above in Section 4.15.2, *Environmental Setting*, including the service provider studies discussed previously at the beginning of this section.

The project would be regulated by the various laws, regulations, and policies summarized in Section 4.15.3, *Regulatory Framework*. Compliance by the project with applicable federal, state, and local laws and regulations is assumed in this analysis, and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the regulations are conditions of permit approvals.

A significant impact would occur if, after considering the features described in the Project Description and the required compliance with regulatory requirements, a significant impact would

still occur. To the extent that any of these impacts are significant, mitigation measures are proposed to reduce the identified impacts.

Impacts and Mitigation Measures

Impact 4.15-1: Implementation of the project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. (*Less than Significant Impact*)

This Draft EIR has evaluated the entirety of the proposed project, including the construction of the construction of utility services that would be needed to serve it. A discussion of the environmental effects associated with the project are discussed in each of the topical sections of this Draft EIR. The analysis found that the project would not create any potentially significant effects that could not be effectively mitigated. The exception to this was the significant and unavoidable impacts found for construction noise (see Section 4.10, *Noise*, of this EIR), and impacts to historic resources under Option A for the State Route 49 intersection improvements (see Section 4.4, *Cultural Resources*, of this EIR). Those impacts, however, are related to other aspects of the project's development, and not to the provision of new utility facilities. Therefore, implementation of the project and the construction of needed utility improvements that would be a part of it would not could cause significant environmental effects.

The proposed project proponent would coordinate with relevant utility providers as needed throughout the design and construction process to prevent any potential possibility of a temporary disruption to utility services for the adjacent area as result from construction on the project site. In attempting to prevent such an occurrence, the proposed project proponent would also coordinate with El Dorado County to secure permits prior to ground disturbance activities to reduce the potential of damaging or rerouting existing utilities infrastructure. Given these precautions, impacts to utilities infrastructure and service as a result of the project would be **less than significant**.

Mitigation Measures

None required.

Impact 4.15-2: The project would have sufficient water supplies available to serve the project and reasonably foresee future development during normal, dry, and multiple dry years. (*Less than Significant Impact*)

Implementation of the project would result in an increase in water demand as compared to existing conditions at the proposed project site. As noted previously, the EID would be the potable water service provider to the subdivision site. According to the Facilities Improvement Letter provided by EID (see **Appendix I** of this EIR), there were 21,598 equivalent dwelling units (EDUs) of water supply available in their Western/Eastern Water Supply Region as of January, 2020. Of the 21,598 EDUs available, the proposed project would require approximately 337.75 EDUs of water supply via EID's existing 18-inch-diameter water line located within SR-

49 and 10-inch water line located within Fowler Lane.⁷ EID verified that it does have the capacity to provide water supply by connection to existing water supply pipelines in SR-49. This increase in water demand would represent an approximately 2.5 percent use of the available EDUs of the EID. Therefore, as the increase in water demand resulting from the proposed project would be approximately 1.5 percent of the EID's available water supply, EID would have adequate planned water supply to serve the Dorado Oaks Tentative Subdivision Map. For these reasons, the proposed project would have a **less-than-significant** impact on water supply resources.

Mitigation Measures

None required.

Impact 4.15-3: Implementation of the project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (*Less than Significant Impact*)

The project applicant requested the El Dorado Irrigation District review the proposed project's needs for water supply and sanitary sewer services to verify that EID has the capacity to provide those services. EID provided a Facilities Improvement Letter (see **Appendix I** of this EIR) that indicated that the project would require approximately 325.75 EDUs of sewer service, and verified that it does have the capacity to provide treatment to the sewage from the proposed project and the existing gravity sewer pipeline under State Route 49 has the capacity to carry the sewage.⁸ However, the existing onsite sewer lift station, the Deb's Frosty Lift Station, does not have the capacity to lift the sewage to the main sewer line in State Route 49. Consequently, the proposed project would need to construct one or two lift stations and possibly add odor control to the Deb's Frosty Lift Station. EID would require the project applicant to submit a Facility Plan Report (FPR) providing details of the connection for their review and approval. Once approved by EID, the proposed project would have a **less-than-significant** impact on wastewater treatment capacity.

Mitigation Measures

None required.

⁷ El Dorado Irrigation District, 2021. Facility Improvement Letter (FIL), 3472FIL, Dorado Oaks Assessor's Parcel No. 329-310-010, 011, 012 and 329-301-015 & 020 (Diamond Springs) EDC Project No. TM08-1474. June 3, 2021. See **Appendix I** of this EIR.

⁸ Ibid.

Impact 4.15-4: Implementation of the project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, and would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. (*Less than Significant Impact*)

The proposed project site is located within the El Dorado Disposal Service area which provides solid waste collection, disposal, and recycling services to the Diamond Springs vicinity. As noted earlier in the *Environmental Setting* discussion, the area landfills that serve the unincorporated areas of the County are currently processing waste at levels below their original design capacities. Active permits for landfills in the area also indicate that area landfills have existing capacity. Based upon this information, the construction debris generated by the project would not exceed the capacity of local infrastructure, nor would it result in the need to expand or construct new landfill facilities. Further, this project would adhere to all required State and County waste management ordinances and requirements, including the development of a Construction Waste Management Plan.

Collected waste from the project area would be transported to the WERS Transfer Station and Materials Recovery Facility, which is permitted to accept up to 400 tons per day. Upon processing, non-recyclable wastes from the WERS Transfer Station and Material Recovery Facility are delivered to the Potrero Hills Landfill, which has a remaining estimated capacity of approximately 13.9 million cubic yards⁹ and is estimated to remain in operation until 2048. Solid waste generated by the proposed project was estimated based on CalRecycle generation rate estimates by use. Using these generation rates, the proposed project is estimated to generate roughly 4.3 pounds of solid waste per day per person, or approximately 11 pounds per day per household. It is therefore estimated that the 382 residential lots would generate about 4,205 pounds per day of solid waste.¹⁰ This relatively small increase in solid waste would not consume a substantial proportion of the permitted capacity at either facility and would not result in the need to expand or construct new landfill facilities. In addition, this project would adhere to all required State and County waste management ordinances and requirements. Therefore, impacts on solid waste disposal facilities would be **less than significant**.

Mitigation Measures

None required.

Cumulative Impacts

The impact of the project on utilities and infrastructure must be considered in the context of past, present, and future development projects which could contribute to the impacts of the proposed

⁹ CalRecycle, 2020. SWIS Facility Detail Potrero Hills Landfill (48-AA-0075). Available at <https://www2.calrecycle.ca.gov/swfacilities/Directory/48-AA-0075>. Accessed June 12, 2020.

¹⁰ <https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DisposalRateCalculator>. 4.3 pounds per person per day x 2.56 persons per household x 382 households = 4,205 pounds per day.

project and create cumulative impacts. The context for the cumulative analysis of utilities service discussed in this technical section depends on the service in question.

Cumulative impacts related to water supply, conveyance, and treatment include the water supply service area for El Dorado County, including predicted demand increases as established in the El Dorado County General Plan EIR and EID's 2015 UWMP. Cumulative impacts pertaining to wastewater treatment and stormwater drainage are considered within the scope of planned future growth in the EID service area. Cumulative impacts dealing with solid waste are relevant to all current and future development within the service area of the El Dorado Disposal Inc., which includes Diamond Springs and certain unincorporated portions of El Dorado County.

Impact 4.15-5: Implementation of the proposed project, in combination with other cumulative development, could contribute to cumulative impacts to water supplies available to the County's service area during normal, dry, and multiple dry years. (*Less than Significant Impact*)

The geographic context considered for cumulative impacts related to water supplies includes the Diamond Springs community in El Dorado County and the surrounding area that, when combined with the proposed project, could result in cumulative impacts to utilities and service systems. Present projects would include any projects currently under construction and reasonably foreseeable future projects are those that could be developed or occur in the project site area by buildout of the El Dorado County General Plan.

The 2015 UWMP projects the water supply necessary for future development and buildout as anticipated through General Plan buildout consistent with the County's General Plan. The 2015 UWMP was prepared following the adoption of the County's General Plan by the El Dorado County Board of Supervisors, and therefore reflects intended development which would include the project site and vicinity.

As evaluated in the El Dorado County General Plan EIR (2003), it was concluded that the water supply capacity at buildout of the General Plan would result in a significant and unavoidable impact due to a projected water supply shortage. This analysis was acknowledged in the El Dorado County Board of Supervisors adopted statement of overriding considerations for the significant and unavoidable impacts identified in the General Plan EIR. This included the significant impact related to water supply. As the proposed project is consistent with the land use type and density designated for the site in the general plan, and is therefore consistent with the overall water demand projections included in the 2003 General Plan EIR, this analysis would remain the same.

CEQA Section 15183(a) mandates that projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the project or its site. The proposed project does not include any features that would require unusually high water demand; therefore, regarding water supply, there would be no project-specific effects peculiar to the project or its site. Consistent with CEQA Section 15183(1), the project's impacts related to water

supply were already evaluated as part of the 2003 General Plan EIR, and no additional CEQA analysis is required.

As previously stated, the proposed project would result in less than significant impacts from the temporary disruption for existing utilities during construction and EID waterline replacement. Other projects in the cumulative study area may also result in impacts to utilities and services systems, including the temporary interruption of services. These projects would be required to mitigate for impacts in accordance with state, federal and local regulations and would not be likely to create temporary interruptions during any temporary disruptions created during the proposed project's construction. Accordingly, the proposed project would not contribute to cumulative impacts and, in conjunction with other projects, would not result in cumulatively considerable impacts to utilities and service systems.

Mitigation Measures

None required.

Impact 4.15-6: Implementation of the project, in combination with other development, would not contribute to cumulative increases to discharge flows or water conveyance demand, such that the relocation or construction of new or expanded water conveyance infrastructure or facilities could cause significant environmental effects. (*Less than Significant Impact*)

As with the proposed project, future development within the County would require a determination by the applicable water supplier that it has enough water to supply the project in accordance with applicable criteria. Accordingly, the proposed project would not contribute to cumulative impacts and, in conjunction with other projects, would not result in cumulatively considerable impacts to utilities and service systems for water conveyance.

Mitigation Measures

None required.

Impact 4.15-7: Implementation of the project, in combination with other development, would not result in a determination by the wastewater treatment provider which serves or may serve the development area that it does not have adequate capacity to serve the development's cumulative project demand in addition to the provider's existing commitments. (*Less than Significant Impact*)

As with the proposed project, future development within the County would require a determination by the applicable wastewater treatment provider that it has enough capacity to serve the project.

These projects would be required to mitigate for impacts in accordance with state, federal and local regulations concerning the generation and treatment of wastewater. Accordingly, the proposed project would not contribute to cumulative impacts and, in conjunction with other

projects, would not result in cumulatively considerable impacts to utilities and service systems for wastewater.

Mitigation Measures

None required.

Impact 4.15-8: Implementation of the project, in combination with other development, would not contribute to cumulative increases to surface runoff flows, such that the relocation or construction of new or expanded stormwater drainage infrastructure or facilities could cause significant environmental effects. (*Less than Significant Impact*)

Cumulative impacts pertaining to stormwater drainage are considered within the scope of planned future growth in the EID service area. The geographic context considered for cumulative impacts related to wastewater includes the Diamond Springs community in El Dorado County and the surrounding area that, when combined with the proposed project, could result in cumulative impacts to utilities and service systems. Present projects would include any projects currently under construction and reasonably foreseeable future projects are those that could be developed or occur in the project site area by buildout of the El Dorado County General Plan.

As previously stated, the proposed subdivision site is currently undeveloped and has no stormwater facilities beyond the existing natural drainageways on the site. Development of the site would require installation of all-new stormwater facilities. The design and construction of these facilities would be subject to County review and the implementation of best practices in compliance with applicable regulations. Compliance with standard conditions would avoid significant effects. Other projects that could be developed in accordance with the County's General Plan would need to meet the same requirements. Accordingly, the proposed project would not contribute to cumulative impacts and, in conjunction with other projects, would not result in cumulatively considerable impacts to utilities and service systems for stormwater.

Mitigation Measures

None required.

Impact 4.15-9: Implementation of the project, in combination with other development, would not contribute to cumulative increases to energy demand, such that the relocation or construction of new or expanded electrical transmission and distribution infrastructure or facilities could cause significant environmental effects. (*Less than Significant Impact*)

As previously stated, the proposed project would result in less than significant impacts from the temporary disruption for existing utilities during construction. Other projects in the cumulative study area may result in impacts to utilities and services systems, including the temporary interruption of services. These projects would be required to mitigate for impacts in accordance with state, federal and local regulations and would not be likely to create temporary interruptions during the proposed projects temporary interruptions. Infrastructure considerations are site-

specific, and must be addressed during individual project planning and development. Therefore, the project would not have a considerable contribution such that a new significant cumulative impacts to electricity would occur.

Mitigation Measures

None required.

Impact 4.15-10: Implementation of the project, in combination with other development, could contribute to cumulative increases to solid waste, such that the relocation or construction of new or expanded solid waste services, or facilities could cause significant environmental effects. (*Less than Significant Impact*)

As previously stated, the proposed project site is located within the El Dorado Disposal Service area which would provide solid waste collection, disposal, and recycling services to the Diamond Springs vicinity. Collected waste is transported to the WERS Transfer Station and Materials Recovery Facility, which is permitted to accept up to 400 tons per day. Upon processing, non-recyclable wastes from the WERS Transfer Station and Material Recovery Facility are delivered to the Potrero Hills Landfill, which has a remaining estimated capacity of approximately 13.9 million cubic yards and is estimated to remain in operation until 2048.

As described, both facilities are currently accepting quantities of waste far below their capacity level. Therefore, the project would not have a considerable contribution such that a new significant cumulative solid waste impact would occur.

Mitigation Measures

None required.

4.15.5 References

- CABY, 2014. Consumnes, American, Bear & Yuba River Integrated Regional Water Management (IRWM). CABY Plan, Project Data Management Application, Web Mapping Tool. Available at <http://swwg.maps.arcgis.com/apps/webappviewer/index.html?id=4159adcc1e9e461c8edf521d95e1d9e3&shareWithWebMap=true>. Accessed June 7, 2020.
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El Dorado Irrigation District, 2013. El Dorado Irrigation District Wastewater Facilities Master Plan. Available at <https://www.eid.org/home/showdocument?id=3620>. Accessed June 7, 2020.

El Dorado Irrigation District, 2021. Facility Improvement Letter (FIL), 3472FIL, Dorado Oaks Assessor's Parcel No. 329-310-010, 011, 012 and 329-301-015 & 020 (Diamond Springs) EDC Project No. TM08-1474. June 3, 2021. See **Appendix I** of this EIR.

4.16 Wildfire

4.16.1 Introduction

This section assesses potential effects related to wildfire that could result from implementation of the proposed project. The section includes a description of existing wildfire hazard conditions, existing fire protection services, relevant fire prevention policies and regulations, and a description of potential impacts that could result from the project.

The Notice of Preparation was circulated on July 29, 2019 and a scoping meeting was held on August 20, 2019. The Notice of Preparation and the comments received during the public comment period can be found in **Appendix A** of this EIR. Comments relevant to wildfire included concerns that the proposed project could exacerbate fire risk, and project-generated traffic volumes on local roadways could impair emergency response and emergency evacuation.

4.16.2 Environmental Setting

Wildfire

California is recognized as one of the most fire-prone and consequently fire-adapted landscapes in the world. The combination of complex terrain, Mediterranean climate, and productive natural plant communities, along with ample natural and aboriginal ignition sources, has created conditions for extensive wildfires. Wildland fire is an ongoing concern for El Dorado County. Generally, the fire season extends from early spring through late fall of each year during the hotter, dryer months. Fire conditions arise from a combination of high temperatures, low moisture content in the air and fuel, an accumulation of vegetation, and high winds.

Potential losses from wildfire include human life, structures and other improvements, natural and cultural resources, quality and quantity of water supplies, cropland, timber, and recreational opportunities. Economic losses could also result. Smoke and air pollution from wildfires can be a severe health hazard. In addition, catastrophic wildfire can create favorable conditions for post-fire hazards such as flooding, landslides, and erosion during subsequent rainy seasons (El Dorado County, 2018).

Wildland Urban Interface

Throughout California, communities are increasingly concerned about wildfire safety as increased development in the foothills and mountain areas and subsequent fire control practices have affected the natural cycle of the ecosystem. While wildfire risk is predominantly associated with wildland urban interface (WUI) areas, significant wildfires can also occur in heavily populated areas. The wildland urban interface is a general term that applies to development adjacent to landscapes that support wildland fire. The WUI defines the community development into the foothills and mountainous areas of California. The WUI describes those communities that are mixed in with grass, brush, and timber-covered lands (wildland). These are areas where wildland fire once burned only vegetation but now burns homes and other structures as well. The WUI for El Dorado County consists of communities at risk as well as the area around the communities that pose a fire threat.

There are two types of WUI environments. The first is the true urban interface where development abruptly meets wildland. The second WUI environment is referred to as the wildland urban intermix. Wildland urban intermix communities are rural, low density communities where homes are intermixed in wildland areas. Wildland urban intermix communities are difficult to defend because they are sprawling communities over a large geographical area with wild fuels throughout. This profile makes access, structure protection, and fire control difficult as fire can freely run through the community (El Dorado County, 2018).

Project Site and Vicinity

Title 14 of the California Code of Regulations (CCR), Division 1.5, establishes regulations for the California Department of Forestry and Fire Protection (CAL FIRE) in State Responsibility Areas where CAL FIRE is responsible for wildfire protection. The project site and surrounding vicinity is located within a State Responsibility Area for fire protection responsibility. As part of the Fire and Resources Assessment Program (FRAP), CAL FIRE has mapped areas of significant fire hazards throughout the state. The maps classify lands into fire hazard severity zones, based on a hazards scoring system. The entirety of the project site is designated as a Moderate Fire Hazard Severity Zone (CAL FIRE, 2020).

Dorado Oaks Tentative Subdivision Map Site

The Dorado Oaks Tentative Subdivision Map site is located immediately south of State Route 49 (SR-49), extending southwards from the intersection of SR-49 and Faith Lane. The site is bounded to the west by undeveloped lands and a residential subdivision comprised of single-family homes. South of the site lies undeveloped lands and scattered rural homes. To the east, the site is generally bounded by low-density residential areas. To the north lies the SR-49 commercial corridor.

The approximately 142.5-acre Dorado Oaks Tentative Subdivision Map site consists entirely of undeveloped lands. The project site is vacant and does not currently have an internal roadway system beyond the several unimproved dirt tracks that cross the site. The project site is not located on a public road. Current access to the site is from the south end of Faith Lane. The site is generally covered with oak woodland and ponderosa pines, consistent with other undeveloped areas in the vicinity. These trees typically have limbs and canopy that reach the ground and create ladder fuels, which allow a fire to climb up from the landscape or forest floor into the tree canopy (CDS Fire Prevention Planning, 2018).

State Route 49 Intersection Area

The SR-49 intersection area is currently comprised of roadways adjoining commercial areas. SR-49 along this segment is configured as an undivided two-lane roadway and is largely fronted with low-rise commercial properties of various sizes, styles, and materials. Due to the built-up nature of this area, vegetation is minimal, and is generally restricted to occasional oak trees lying adjacent to the roadway.

Optional Fowler Lane Improvement Area

The Optional Fowler Lane Improvement Area, which begins approximately 450 feet from Fowler Lane's intersection with South Point Road, and extends westerly and southerly for approximately 2,600 feet. This portion of the roadway passes through a rural residential area that is largely comprised of rural residential homes on large lots. Vegetation in this area is generally similar to that found on the Dorado Oaks Tentative Subdivision Map site.

Firefighting Resources

The project site is within the Diamond Springs-El Dorado Fire Protection District, which provides fire suppression, rescue, and emergency medical services to the communities of Diamond Springs, El Dorado, Sleepy Hollow, Logtown, Missouri Flat, Nashville, and Sandridge. The District serves approximately 35,000 residents and covers 95 square miles. District personnel are made up of career, volunteer, and limited term employees. The District has a total of five stations. Station 49, which is the District's main station and administration headquarters, is located at 501 Pleasant Valley Road, less than 500 feet east of the main point of entry for the proposed Dorado Oaks Subdivision via Faith Lane. Station 49 is staffed 24 hours per day, and the other four stations are staffed by resident volunteers.

4.16.3 Regulatory Setting

Federal

The project site is located within a State Responsibility Area for purposes of fire protection. Accordingly, there are no federal regulations regarding wildfire that pertain to the project.

State

California Department of Forestry and Fire Protection

Title 14 of the CCR, Division 1.5, establishes regulations for CAL FIRE in State Responsibility Areas where CAL FIRE is responsible for wildfire protection. These regulations constitute the basic wildland fire protection standards of the California Board of Forestry and Fire Protection. They have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in State Responsibility Areas. Additionally, Title 14, Division 1.5, Chapter 7, Subchapter 2 sets forth the minimum standards for emergency access and egress (Article 2), signage (Article 3), water supply (Article 4), and fuel modification standards (Article 5) for lands within State Responsibility Areas.

Emergency Services Act

Under the Emergency Services Act, Government Code Section 8550, et seq., the state developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving wildfire and other natural and/or human-caused incidents is an important part of the plan, which is administered by the Governor's Office of Emergency Services (OES). The office coordinates the responses of other agencies, including the California Environmental Protection Agency (CalEPA), the California Highway Patrol

(CHP), regional water quality control boards, air quality management districts, and county disaster response offices.

California Fire Plan

The 2018 Strategic Fire Plan for California is the state's road map for reducing the risk of wildfire. By emphasizing fire prevention, the Fire Plan seeks to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health. The 2018 plan has eight principal goals: (1) analyzing fire risk; (2) supporting land use planning; (3) community preparedness planning; (4) public education; (5) integrating landowner fuels management; (6) identifying fire suppression resources; (7) increasing fire prevention efforts; and (8) post wildfire recovery.

California Public Resources Code

Fire Hazards Severity Zones – Public Resources Code sections 4201-4204

California Public Resources Code Sections 4201 through 4204 require CAL FIRE to prepare fire hazard severity zone maps for all lands within State Responsibility Areas. Each zone is to embrace relatively homogeneous lands and shall be based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified as a major cause of wildfire spread. The project site is not within a Very High Fire Hazard Severity Zone, but is rather within a Moderate Fire Hazard Severity Zone.

International Building Code

In January of 2008, California officially switched from the Uniform Building Code to the International Building Code. The International Building Code specifies construction standards to be used in urban interface and wildland areas where there is an elevated threat of fire.

Local

El Dorado County General Plan

The El Dorado County General Plan provides for long-range direction and policy for the use of land within El Dorado County. General Plan polices applicable to wildfire are addressed in the Public Facilities Element; the Public Health, Safety, and Noise Element; and the Conservation and Open Space Element of the General Plan. Applicable policies from these elements are listed below.

Public Facilities Element

Policy 5.7.1.1: Prior to approval of new development, the applicant will be required to demonstrate that adequate emergency water supply, storage, conveyance facilities, and access for fire protection either are or will be provided concurrent with development.

Policy 5.7.2.1: Prior to approval of new development, the responsible fire protection district shall be requested to review all applications to determine the ability of the district to provide protection services. The ability to provide fire protection to existing development shall not be reduced below acceptable levels as a consequence of new

development. El Dorado County General Plan Public Services and Utilities Element July 2004 (Amended December 2015) Page 101 recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.

Policy 5.7.4.1: Prior to approval of new development, the applicant shall be required to demonstrate that adequate medical emergency services are available and that adequate emergency vehicle access will be provided concurrent with development.

Policy 5.7.4.2: Prior to approval of new development, the Emergency Medical Services Agency shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.

Public Health, Safety, and Noise Element

Policy 6.1.1.1: The El Dorado County Multi-jurisdictional Local Hazard Mitigation Plan (LHMP) shall serve as the implementation program for the coordination of hazard planning and disaster response efforts within the County and is incorporated by reference to this Element. The County will ensure that the LHMP is updated on a regular basis to keep pace with the growing population.

Policy 6.2.1.1: Implement Fire Safe ordinance to attain and maintain defensible space through conditioning of tentative maps and in new development at the final map and/or building permit stage.

Policy 6.2.1.2: Coordinate with the local Fire Safe Councils, California Department of Forestry and Fire Protection, and federal and state agencies having land use jurisdiction in El Dorado County in the development of a countywide fuels management strategy.

Policy 6.2.2.1: Fire Hazard Severity Zone Maps shall be consulted in the review of all projects so that standards and mitigation measures appropriate to each hazard classification can be applied. Land use densities and intensities shall be determined by mitigation measures in areas designated as high or very high fire hazard.

Policy 6.2.2.2: The County shall preclude development in areas of high and very high wildland fire hazard or in areas identified as wildland-urban interface (WUI) communities within the vicinity of Federal lands that are a high risk for wildfire, as listed in the Federal Register Executive Order 13728 of May 18, 2016, unless such development can be adequately protected from wildland fire hazard, as demonstrated in a WUI Fire Safe Plan prepared by a qualified professional as approved by the El Dorado County Fire Prevention Officers Association. The WUI Fire Safe Plan shall be approved by the local Fire Protection District having jurisdiction and/or California Department of Forestry and Fire Protection. (Resolution 124- 2019, August 6, 2019)

Policy 6.2.3.1: As a requirement for approving new development, the County must find, based on information provided by the applicant and the responsible fire protection district that, concurrent with development, adequate emergency water flow, fire access, and fire fighting personnel and equipment will be available in accordance with applicable State and local fire district standards.

Policy 6.2.3.2: As a requirement of new development, the applicant must demonstrate that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area.

Policy 6.2.3.4: All new development and public works projects shall be consistent with applicable State Wildland Fire Standards and other relevant State and federal fire requirements.

Policy 6.2.4.1: Discretionary development within high and very high fire hazard areas shall be conditioned to designate fuel break zones that comply with fire safe requirements to benefit the new and, where possible, existing development.

Policy 6.2.4.2: The County shall cooperate with the California Department of Forestry and Fire Protection and local fire protection districts to identify opportunities for fuel breaks in zones of high and very high fire hazard either prior to or as a component of project review.

Policy 6.2.5.1: The County shall cooperate with the U.S. Forest Service, California Department of Forestry and Fire Protection, and local fire districts in fire prevention education programs.

Conservation and Open Space Element

Policy 7.1.2.1: Development or disturbance of slopes over 30% shall be restricted. Standards for implementation of this policy, including but not limited to exceptions for access, reasonable use of the parcel, and agricultural uses shall be incorporated into the Zoning Ordinance

Policy 7.1.2.2: Discretionary and ministerial projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation. Specific standards for minimizing erosion and sedimentation shall be incorporated into the Zoning Ordinance.

Policy 7.1.2.3: Enforce Grading Ordinance provisions for erosion control on all development projects and adopt provisions for ongoing, applicant-funded monitoring of project grading.

El Dorado County Local Hazard Mitigation Plan (LHMP)

The El Dorado County Local Hazard Mitigation Plan (LHMP) provides guidance for the County's response to emergency situations, including wildfire, flood events, earthquakes, levee failures, and severe weather. El Dorado County developed the LHMP to make the County and its residents less vulnerable to hazard events. The LHMP was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 so that El Dorado County would be eligible for the Federal Emergency Management Agency's (FEMA) Pre-Disaster Mitigation and Hazard Mitigation Grant programs.

The County followed a planning process prescribed by FEMA, which began with the formation of a hazard mitigation planning committee (HMPC) comprised of key County representatives, and other regional stakeholders. The HMPC conducted a risk assessment that identified and profiled hazards that pose a risk to the County, assessed the County's vulnerability to these hazards, and examined the capabilities in place to mitigate them. Based on the risk assessment, the HMPC identified the following goals and objectives for reducing the County's vulnerability to hazards.

Goal 1: Minimize risk and vulnerability of El Dorado County to the impacts of natural hazards and protect lives and reduce damages and losses to property, economy, public health and safety, and the environment.

Goal 2: Provide protection for critical facilities, infrastructure, utilities and services from hazard impacts.

Goal 3: Improve public awareness, education, and preparedness for all hazards.

Goal 4: Increase communities' capabilities to mitigate losses and to be prepared for, respond to, and recover from a disaster event.

Goal 5: Maintain FEMA Eligibility/Position the communities for grant funding. Continued compliance with the National Flood Insurance Program (NFIP)/enhancement of floodplain management program through participation in the NFIP.

Information in the LHMP helps guide and coordinate mitigation activities and decisions for local land use policy in the future.

El Dorado County Department of Forestry State Responsibility Area Fire Safe Regulations

The El Dorado County Department of Forestry State Responsibility Area Fire Safe Regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction and development in State Responsibility Areas. The future design and construction of structures, subdivisions, and developments in the State Responsibility Areas must provide for basic emergency access and perimeter wildfire protection measures. Required measures include provisions for emergency access; signing and

building numbering; private water supply reserves for emergency fire use; and vegetation modification.

El Dorado County Fire Safe Council

The El Dorado County Fire Safe Council was organized in September 2001 and currently has over 150 members from the public and private sectors. Through community outreach and public education, the Council endeavors to make residents of the County aware of the risks of living within a Wildland Urban Interface and what they should do to protect their home and property from wildfire. The Council and its partners have implemented many fire safe projects in the County, including the chipper program, defensible space inspections, and vegetation reduction projects.

4.16.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

Criteria within Appendix G of the CEQA Guidelines related to wildfire focus primarily on lands that are located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones. The project site is located within a State Responsibility Area (but not within a Very High Fire Hazard Severity Zone). Accordingly, implementation of the project would have a significant impact on the environment if it would:

- Substantially impair an adopted emergency response plan or emergency evacuation plan;
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Methodology and Assumptions

Impacts associated with wildfire are generally evaluated within the context of the effectiveness of standard wildfire risk abatement methods as they relate to a project site, as determined by site-specific conditions and circumstances. The general rule employed here is that if wildfire risk can be effectively lessened through implementation of standard regulatory requirements (e.g., compliance with Title 14 of the California Code of Regulations, adopted plans, etc.), then the impact would be less than significant.

Impacts and Mitigation Measures

Impact 4.16-1: Implementation of the project would not substantially impair an adopted emergency response plan or emergency evacuation plan. (*Less than Significant Impact*)

The project site and surrounding vicinity are subject to a number of emergency response plans, most notably the El Dorado County Local Hazard Mitigation Plan (LHMP), which provides guidance for the County's response in emergency situations, including wildfire and emergency evacuation. Impairment of emergency response plans or emergency evacuation plans would occur if the project would introduce an undue or extraordinary burden on emergency responders as they respond to a wildfire incident. Common examples of such a situation include project placement and design that could preclude access by emergency responders or the orderly evacuation of a site in the event of a wildfire incident. Undersized roadways, underrated bridges and culverts, steep grades and pinch points, remoteness, and inadequate points of ingress and egress to and from a site are examples of the difficulties that firefighters can experience when responding to a wildfire. Responding to a wildfire incident under these types of scenarios can result in an inordinate expenditure of personnel and equipment resources during a wildfire incident and/or an evacuation, which can be particularly problematic when those resources are also needed elsewhere during a large-scale and rapidly unfolding wildfire incident.

In the case of the proposed project, the project applicant has committed to specific project design features that would help to avoid these types of constraints. As described in Chapter 3, *Project Description*, and depicted in Figure 3-3, the proposed project would include the provision of four public vehicular access points and emergency vehicle access to and from the project site to existing adjoining roadways.

The four public proposed vehicular access points are: 1) Faith Lane, connecting to SR-49/Pleasant Valley Road and providing primary access at the north end of the project site; 2) Faith Lane/Argonaut Drive, connecting to Argonaut Drive on the west side of the project; 3) "C" Street, connecting to Fowler Lane on the northeast side of the project site; and 4) "D" Street, connecting to Crystal Drive/Tullis Mine Road on the northwest side of the project site.

Also as described in Chapter 3, *Project Description*, two emergency vehicle access options are under consideration. The first would derive from the southern terminus of "G" Street and exit the subdivision site to the southwest, connecting to Antares Drive. The second emergency access option would derive from "H" Court and connect to Fowler Lane. If selected, the Fowler Drive option would require offsite widening of the southerly offsite portions of Fowler Drive to meet County Fire Department requirements. The proposed multiple vehicular access points, emergency vehicle access points, as well as interior street and circulation elements designed in required compliance with County and fire department standards would ensure that emergency response to a wildfire or evacuation from the project site would not be impaired.

In addition, the proposed project is subject to compliance with numerous El Dorado County General Plan polices adopted to ensure new development includes adequate access for emergency response and evacuation. Policy 5.7.1.1 requires project applicants to demonstrate, prior to approval of new development, that adequate emergency water supply, storage, conveyance

facilities, and access for fire protection either are or will be provided concurrent with development. Policy 5.7.2.1 requires that the responsible fire protection district (in this case the Diamond Springs-El Dorado Fire Protection District) shall be requested to review all applications to determine the ability of the district to provide protection services prior to approval of new development. This policy also mandates that the ability to provide fire protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Policy 5.7.4.1 requires project applicants to demonstrate, prior to approval of new development, that adequate medical emergency services are available and that adequate emergency vehicle access will be provided concurrent with development. Policy 6.2.3.2 requires project applicants to demonstrate, prior to approval of new development that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area. Policy 6.2.3.4 requires that all new development and public works projects shall be consistent with applicable State Wildland Fire Standards and other relevant State and federal fire requirements.

The proposed project's provision of multiple points of vehicular access and egress from the project site, including emergency vehicle access that meets County Fire Department requirements, combined with the project's required compliance with County policies and development standards adopted to ensure proper emergency response and evacuation, would ensure that impacts related impairment of an adopted emergency response plan or emergency evacuation plan would be **less than significant**.

Mitigation Measures

None required.

Impact 4.16-2: Implementation of the project would not exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. (*Less than Significant Impact*)

The project site is bounded to the west by undeveloped lands and a residential subdivision comprised of single-family homes. South of the site lies undeveloped lands and scattered rural homes. To the east, the project site is generally bounded by low-density residential areas. To the north lies the SR-49 commercial corridor.

The approximately 142.5-acre Dorado Oaks Subdivision site consists entirely of undeveloped lands. The site is generally covered with oak woodland and ponderosa pines, consistent with other undeveloped areas in the vicinity. These trees typically have limbs and canopy that reach the ground and create ladder fuels, which allow a fire to climb up from the landscape or forest floor into the tree canopy (CDS Fire Prevention Planning, 2018).

The project is expected to be developed in six phases, with mass grading of the Dorado Oaks Subdivision site occurring initially, followed by detailed development of the various phases. Construction of the subdivision would occur in typical fashion, with mass grading of the entire

site probably occurring first, followed by detailed grading on a phase-by-phase basis. Trenching for utilities would occur within the subdivisions roadbeds, followed by installation of curbs, gutters, and pavement. Building construction would then commence, with releases of housing likely following one after the other.

Development of the site would include tree and vegetation removal. Much of this work would occur as part of a site-specific vegetation and fuels management effort formulated to reduce the exposure of the subdivision's homes and residents to wildfire and to provide defensible space for firefighters and residents in accordance with applicable County policies and development standards.

In addition to the fuel reductions that would be undertaken as part of site preparation and construction, the project site would be subject to ongoing fuel and vegetation management treatments as prescribed in the project's wildland fire safe plan. The plan would consider site-specific attributes such as slope, prevailing winds, and fuel loads, and would be subject to review and approval by the Diamond Springs-El Dorado Fire Protection District and CAL FIRE. The plan would include a number of standard prescriptions, including, but not limited to:

- Fuel hazard reduction zones (FHRZ) would be installed around the perimeter of the subdivision and fuel hazard reduction zone along both sides of all roads including the emergency vehicle access (EVA) routes. Interior open space perimeters would have a FHRZ adjacent to backyards. Sidewalks and planted landscaping areas could be a part of the FHRZ. Tree canopies over the roads and driveways would require vertical clearance over the roadways. Nonflammable fencing would be used adjacent to all open space areas and the EVA routes.
- All residences would have National Fire Protection Association (NFPA) 13D fire sprinkler systems. Since the project is located in a CALFIRE-designated Moderate Fire Hazard Severity Zone, implementation of Wildland-Urban Interface Fire Areas Building Standards (7A) would be required for the construction of new residences. These standards address roofing, venting, eave enclosure, windows, exterior doors, siding, and decking.
- A Community Service District (CSD), Lighting and Landscape District (LLD), Homeowner's Association (HOA), a Zone of Benefit (ZOB), or similar entity would be formed for the purpose of maintaining the fuel hazard reduction zones along the roads and open space areas and the EVA gates.

Treatments undertaken as part of the above activities would greatly lessen the risk of wildfire on the project site and would also lessen the severity of such an event should it occur. All plans and executed work would meet or exceed the fire safety standards set forth in Title 14 of the Public Resources Code, and would be subject to review and inspection by the Diamond Springs-El Dorado Fire Protection District and CAL FIRE per the requirements of 14 CCR 1270, et seq.

Based on each of these considerations, development of the project would not exacerbate wildfire risks, nor would it substantially increase the likelihood that the project would expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Rather, the required fuel reductions and operational features of the project would present an

improvement over current conditions, since the wildfire risks associated with the site's existing conditions would be substantially reduced. Accordingly, the impact would be **less than significant**.

Mitigation Measures

None required.

Impact 4.16-3: Implementation of the project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (*Less than Significant Impact*)

As discussed above, the infrastructure improvements associated with the project, and the fuel hazard reduction zones and other wildfire mitigation strategies proposed would result in an improved condition with respect to wildfire preparedness and the ability to lessen the overall severity of future wildfires in the area. Therefore, the project would not exacerbate fire risk, but would instead improve conditions related to wildfire risk. With respect to these improvements' effect on the environment, all project improvements associated with wildfire risk reduction and management would occur on the project site as part of the project's development and operation. An evaluation of the environmental effects associated with the project's development, including those portions of the project that relate to abatement of wildfire risk (hazardous fuel reductions, etc.), are evaluated in the various topical sections of this EIR. In all instances, the effects of project implementation were determined to be less than significant. Accordingly, the impact would also be **less than significant**.

Mitigation Measures

None required.

Impact 4.16-4: Implementation of the project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (*Less than Significant Impact*)

Most of the project site is hilly and sloping to the south. Elevations range from about 1,675 feet above mean sea level at the southernmost end of the project site to about 1,845 feet above sea level at a low hilltop near the center of the project site. There are two generally north-south ridgelines, which route most drainage to the center of the project site and then south. Some drainage along the western border flows offsite to the west and some drainage along the eastern border flows offsite to the east. In general, development of the project and its associated hazardous fuels treatments would decrease fire hazards on the project site, resulting in decreased effects related to post-fire hazards should a fire occur. The impact would be **less than significant**.

Mitigation Measures

None required.

Cumulative Impacts

The geographic context considered for cumulative impacts related to wildfire is El Dorado County. Present projects would include any projects currently under construction and reasonably foreseeable future projects are those that could be developed or occur in the project site area by buildout of the El Dorado County General Plan.

Impact 4.16-5: Implementation of the project, in conjunction with other development, would not substantially impair an adopted emergency response plan or emergency evacuation plan. (*Less than Significant Impact*)

The project and all development projects in El Dorado County are subject to a number of emergency response plans, most notably the El Dorado County Local Hazard Mitigation Plan (LHMP), which provides guidance for the County's response to emergency situations, including wildfire and emergency evacuation. In addition, the proposed project and all development projects in El Dorado County are subject to compliance with the numerous El Dorado County General Plan polices and development standards adopted to ensure new adequate access for emergency response and evacuation. Required adherence to those requirements ensures that cumulative impacts related to impairment of an adopted emergency response plan or emergency evacuation plan would be **less than significant**.

Mitigation Measures

None required.

Impact 4.16-6: Implementation of the project, in conjunction with other development, would not exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. (*Less than Significant Impact*)

The project and all development projects in El Dorado County are subject to compliance with applicable State and County requirements pertaining to development within wildfire-prone areas. The fuels management efforts required of the project and committed to by the project applicant would substantially lessen the risk of wildfire, not only at the project site, but in surrounding areas as well. CAL FIRE development standards for hazardous fuel reduction and management, site design, and other requirements, as outlined in Title 14 of the Public Resources Code, would be required for future development projects within wildfire-prone areas. The plans and design features associated with each of those projects would be required to consider site-specific attributes such as slope, prevailing winds, and fuel loads, and would be subject to review and approval by the responsible fire protection district in cooperation with CAL FIRE. Required adherence to those requirements would ensure that cumulative impacts related to risks from wildfire and exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be **less than significant**.

Mitigation Measures

None required.

Impact 4.16-7: Implementation of the project, in conjunction with other development, would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (*Less than Significant Impact*)

To comply with applicable regulations and emergency preparedness plans, risk abatement activities implemented for development projects within wildfire-prone areas in the County would be similar to those that would be implemented for the project. These would include, among other things, hazardous fuel reduction treatments, ongoing maintenance of the same, and provision of adequately designed roadways, access points, and other facilities. Cumulatively, these types of infrastructure improvements, and the fuel breaks and other wildfire mitigation strategies that would likely be required would result in an improved condition with respect to wildfire preparedness and the ability to lessen the overall severity of future wildfires in the area. Therefore, development projects in the County would not exacerbate fire risk, but would instead improve conditions related to wildfire risk. For the proposed project, the environmental effects of implementing these types of features has been found to be less than significant, as has been outlined in the various topical sections of this EIR. At other locations, the effects of implementing these types of features could vary, depending on site-specific factors. For instance, if a development is proposed within a sensitive habitat area, and if implementing wildfire risk abatement features would impact that habitat, then the potential effects of project implementation could be adverse. Each of those projects, however, would be required to comply with existing laws and regulations that are in place to avoid or lessen those effects. Regardless, potentially adverse impacts associated with other projects would not be made worse by implementation of the proposed project. This is because the environmental effects of implementing the project have been found to be less than significant, as has been outlined in the various topical sections of this EIR, and therefore the project would not contribute to any cumulative adverse effects that could be associated with other projects. Based on each of these considerations, the cumulative effects of implementing wildfire abatement activities on a cumulative basis would be **less than significant**.

Mitigation Measures

None required.

Impact 4.16-8: Implementation of the project, in conjunction with other development, would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (*Less than Significant Impact*)

Impacts from post-fire hazards such as flooding and landslides can be substantially lessened if the severity and intensity of wildfires are also lessened. Compliance with existing laws and regulations to that effect, as described previously, would ensure that post-wildfire hazards would be lessened in their severity. Implementation of hazardous fuel reduction treatments is one method by which wildfire severity and the resultant post-fire effects can be lessened. The extent to which the cumulative projects implement wildfire hazard reduction as part of their

development and operation will affect the severity of post-fire hazards. For the proposed project, the proposed fuel reduction measures and other wildfire mitigation components of the project would lessen the potential for wildfire, and would also lessen the severity of such a fire if it were to occur on the project site. As such, post-fire effects would be less than would otherwise be the case if the project had not been implemented, and the project would thus not contribute to a cumulatively considerable impact. In fact, an improved condition would occur.

Issues such as slope, topography, drainage patterns, and other physical factors can have an effect on post-fire conditions. While the project site is located in an area where those types of features are not major contributors to hazardous post-fire conditions, that may not be the case at all of the reasonably foreseeable project locations. In those instances, implementation of appropriate design and other features, as required by existing laws, regulations, and policies would ensure that potential impacts would be minimized. Based on these considerations, the cumulative effects from post-fire conditions would be **less than significant**.

Mitigation Measures

None required.

4.16.5 References

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4.17 Environmental Topics Not Subjected to Detailed Analysis

Pursuant to CEQA Guidelines Section 15128, this subsection describes the reasons that various possible effects of a project were determined not to be significant, or to have no impact, and, therefore, were not discussed in detail in this EIR. These determinations were generally made because the identified environmental resources are not present within or around the project or because development of the project would clearly have no effect with respect to the topic issue area. These issue areas are described in this section with an explanation of why they are not evaluated further in this EIR.

4.17.1 Agricultural and Forestry Resources

Appendix G of the CEQA *Guidelines* specifies that an impact to agricultural and forestry resources would occur if a project would: 1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; 2) conflict with existing zoning for agricultural use, or a Williamson Act contract; 3) conflict with existing zoning, or cause rezoning of, forest land or timberland; 4) result in loss of forest land or conversion of forest land to non-forest use; or; 5) involve other changes that could result in conversion or farmland of forest land to non-agricultural use.

With respect to agricultural resources, the entirety of the project site is mapped as “Other Land” by the California Farmland Mapping and Monitoring Program (FMMP). As described by the FMMP: “Other Land is land not included in any other mapping category. Common examples include low density rural developments, brush, timber, wetland, and riparian areas not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as other land.” According to the FMMP map for the County, there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance designated on any portion of the site (California Department of Conservation, 2016).

No existing agricultural uses are located on or in the vicinity of the project site, and none are known to have occurred on the site in the past. The project site is not zoned for agricultural uses, nor does it meet the criteria for designation as such, based on General Plan Policy 8.1.1.2, which defines “Agricultural Districts” as being based on the following criteria: 1) lands currently under Williamson Act contract (i.e., “agricultural preserves”); 2) soils identified as El Dorado County “choice” agricultural soil, which consist of Federally designated prime, State designated unique or important, or County designated locally important soils; 3) lands under cultivation for commercial crop production; 4) lands that possess topographical and other features that make them suitable for agricultural production; 5) low development densities; and 6) a determination by the Board of Supervisors that the affected lands should be preserved for agricultural production rather than other uses. The project site meets none of these criteria.

With respect to forestry resources, no existing timber-harvest uses are located on or in the vicinity of the project site, and none are known to have occurred on the site in the past. The site is not zoned for such use; neither is it designated for such use in the County's General Plan (El Dorado County, 2004b). General Plan Policy 8.3.1.1 defines potential timber production lands as those which are designated Natural Resource (NR) on the General Plan land use map and zoned Timber Production Zone (TPZ) or Forest Resource (FR). Lands designated and zoned in this manner are to be maintained for the purposes of protecting and encouraging the production of timber and associated activities. The project site is not designated as such.

Based on these considerations, development of the site would result in no impacts to agricultural and forestry resources. Accordingly, this issue was not subjected to detailed analysis in the EIR.

4.17.2 References

- California Department of Conservation. 2016. *El Dorado County Important Farmland 2016*.
<https://www.conservation.ca.gov/dlrp/fmmp/Pages/ElDorado.aspx>. Accessed April 23, 2020.
- El Dorado County. 2004a. El Dorado County General Plan, Figure AF-1: *Farmland in El Dorado County*.
- El Dorado County. 2004b. El Dorado County General Plan. *Agriculture and Forestry Resources Element*.

CHAPTER 5

Alternatives to the Proposed Project

Pursuant to the provisions of CEQA, this chapter describes and evaluates alternatives to the proposed project, including a “No Project” alternative, and identifies an “environmentally superior” alternative. The primary purpose of this section is to provide decision-makers and the public with a qualitative review of project alternatives that eliminate or substantially reduce any of a project’s adverse environmental impacts while, at the same time, attaining most of the project objectives.

5.1 CEQA Requirements

CEQA requires that an EIR describe and evaluate a range of reasonable alternatives to the proposed project, and evaluate the comparative merits of the alternatives (*CEQA Guidelines* Section 15126.6(a), (d)). The “range of alternatives” is governed by the “rule of reason,” which requires the EIR to set forth only those alternatives necessary to foster informed decision-making and public participation (Section 15126.6(a), (f)).

The range of alternatives shall include alternatives that would feasibly attain most of the basic objectives of the project and would avoid or substantially lessen any of the significant effects of the project (*CEQA Guidelines* Section 15126.6(a)-(c)). CEQA generally defines “feasible” to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors. In addition, the following may be taken into consideration when assessing the feasibility of alternatives: site suitability; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries; and the ability of the proponent to attain site control (Section 15126.6(f)(1)). If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR (Section 15126.6(f)(2)(B)).

The description or evaluation of alternatives does not need to be exhaustive, and an EIR need not consider alternatives for which the effects cannot be reasonably determined and for which implementation is remote or speculative. An EIR need not describe or evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project (*CEQA Guidelines* Section 15126.6(d)).

The “no project” alternative must be evaluated. This analysis shall discuss the existing conditions, as well as what could be reasonably expected to occur in the foreseeable future if the project were

not approved, based on current plans and consistent with available infrastructure and community services (*CEQA Guidelines* Section 15126.6(e)(2)).

CEQA also requires that an environmentally superior alternative be selected from among the alternatives. The environmentally superior alternative is the alternative with the fewest or least severe adverse environmental impacts. When the “no project” alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives (*CEQA Guidelines* Section 15126.6(e)(2)).

5.2 Factors in the Selection of Alternatives

The nature and scope of the range of alternatives to be discussed is governed by the “rule of reason.” The *CEQA Guidelines* recommend that an EIR should briefly describe the rationale for selecting the alternatives to be discussed (Section 15126.6[c]). This alternatives analysis considers the following factors:

- The extent to which the alternative would accomplish most of the basic objectives of the proposed project;
- The extent to which the alternative would avoid or lessen the identified significant, or less-than-significant with mitigation, environmental effects of the proposed project;
- The feasibility of the alternative, taking into account site suitability, availability of infrastructure, general plan consistency, and consistency with other applicable plans and regulatory limitations;
- The extent to which an alternative contributes to a “reasonable range” of alternatives necessary to permit a reasoned choice; and
- The requirement of the *CEQA Guidelines* to consider a “No-Project” alternative, and to identify an “environmentally superior” alternative in addition to the no-project alternative (Section 15126.6[e]).

5.2.1 Project Objectives

As stated above, the selection of alternatives shall consider the basic objectives of the proposed project. As previously presented in Chapter 3, *Project Description*, the project objectives are to:

- Develop a residential project that is in compliance with existing County land use and zoning requirements for the property, as defined in the General Plan and Zoning Code.
- Provide housing of various types to fulfill the goals of the County’s Housing Element and help meet the County’s Regional Housing Need Allocation.
- Provide options for housing that meet the needs of a wide demographic.
- Develop an economically sustainable and financially sound new development that can fund the construction of the facilities and services that are needed to serve the plan area and achieve General Plan objectives, while avoiding any financial impact on the County’s ability to provide services to the rest of the County.

5.2.2 Elimination and/or Reduction of Significant Impacts

CEQA *Guidelines* § 15126.6(b) states that “Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.”

Potentially significant environmental impacts that would result from the proposed project are evaluated in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR. With implementation of the project design features, standard conditions and requirements, and mitigation measures identified for each resource area significantly impacted, many of the potentially significant impacts resulting from the proposed project would be reduced to a less-than-significant level. The proposed project impacts listed below would remain significant and unavoidable even after mitigation, and the alternatives evaluated in this EIR have been selected because they are anticipated to reduce and/or eliminate one or more of the significant impacts associated with the proposed project.

Impact 4.4-1: The project could cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. (Significant and Unavoidable Impact, with Mitigation) (For State Route 49 Intersection Improvement Option A only)

Impact 4.4-4a: The project could cause a cumulative impact to a historical resource as defined in CEQA Guidelines Section 15064.5. (Significant and Unavoidable Impact, with Mitigation) (For State Route 49 Intersection Improvement Option A only)

Impact 4.10-1c: Construction of the proposed project would result in temporary increases in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Significant and Unavoidable Impact, with Mitigation)

Impact 4.10-4: Construction activities for the proposed project combined with cumulative construction noise in the project area would result in a substantial temporary or periodic increase in ambient noise levels in excess of standards established in the General Plan or Noise Ordinance. (Significant and Unavoidable Impact, with Mitigation).

5.2.3 Alternatives Considered but Rejected from Further Evaluation

Alternative Primary Roadway Access

Several scoping comments were received concerning the proposed subdivision’s roadway connection with SR-49. Specifically, one commenter suggested that a more desirable alternative would be to route project traffic not directly northwards to SR-49 via Faith Lane, but rather from the northwestern portion of the site to an ultimate connection with SR-49 near or at its intersection with Missouri Flat Road. Indeed, such a connection was put forward as part of a now-defunct tentative subdivision project (Oak Highlands) proposed in the early 2000’s that

envisioned a \pm 90-lot residential subdivision northwest of the Dorado Oaks project site. The commenter also asserted that such an alignment had been a part of earlier conceptual circulation plans for the Diamond Springs area.

Under this scenario, project traffic would be routed to SR-49 from roadways leading northwesterly from either the Dorado Oaks subdivision's "A" Street or "D" Street. The roadway would then cross vacant land and travel around the west side of the mobile home park on SR-49. There a new signalized intersection would be installed. Another scenario would be to cut through the middle of the mobile home park and thus allow the project roadway to meet SR-49 directly at Missouri Flat Road.

Each of these scenarios were considered and were ultimately determined to be infeasible. Any of the proposed alignment concepts would be required to cross over approximately 2,000 feet of private land that is not controlled by the Dorado Oaks project applicant. The applicant reached out to the property owner to discuss possible options, and the owner indicated strongly that he was not interested in selling his land or providing the needed overland access. Accordingly, acquiring the needed right-of-way would require use of eminent domain, which is not a practice the County typically employs for private development projects.

Finally, running the roadway through the center of the existing mobile home park would have severely negative consequences for the residents of the park. Depending on the precise alignment of the roadway, as many as 20 mobile homes and mobile home lots would need to be acquired and the residents relocated. Splitting the park into two separate pieces could also have negative consequences for the continued operation of the park. Given that the existing mobile home park provides a substantial quantity of affordable housing units in the area, many of which are occupied by seniors, implementation of this scenario would be highly undesirable.

Based on each of these considerations, this alternative was rejected from further consideration and was not carried forward for detailed analysis.

Single Family Residential Alternative

A number of commenters opined that the project proposes housing at too high a density and that it would therefore be out of character with the existing community. Several commenters suggested that a lower density, perhaps along the lines of one-acre residential (R1A) or residential estate (RE) would be more appropriate for the area.

This potential alternative was not carried forward for analysis because it would conflict with the existing land use designations and zoning for the project site. Such a conflict would result in a significant impact under CEQA. Existing General Plan land use designations for the 142.5-acre site are primarily High Density Residential (89.6 acres) and Multi-Family Residential (48.6 acres). These designations comprise 97 percent of the site. Zoning for the site envisions correspondingly high densities, with 89.6 acres of the site zoned as Single-Unit Residential (R1, minimum 6,000 square-foot lot size) and 48.6 acres zoned as Multi-Family Residential (MFR, minimum 5 units per acre). The project site was specifically identified as an opportunity site for more housing as part of the General Plan's 2013 Housing Element. Opportunity sites are those

sites that are intended to help the County meet its Regional Housing Needs Allocation as established by the Sacramento Area Council of Governments. Such sites are located near areas of existing development, and are already served by urban services such as utilities, schools, and other public services. The project site and the project as proposed meet these criteria. Developing the site at a substantially lesser intensity would run counter to the goals and policies established in the General Plan and in other area planning documents. Based on each of these considerations, a R1A or larger residential alternative was not carried forward for detailed analysis.

Construction Noise Buffer Alternative

Since the analysis in the EIR found that the project's temporary construction noise impacts would be significant and unavoidable (with mitigation) to existing residential uses on the north, east, and west sides of the proposed subdivision site, consideration was given to scenarios that could avoid those impacts. One scenario would be to modify the site design by eliminating a number of proposed residential lots on the northern, eastern, and western portions of the project site for the purpose of increasing the distance between the areas of construction and the residential uses, thus lessening the noise impacts to those noise-sensitive uses. Under this scenario, the northernmost proposed residential subdivision lots on Lot A would be eliminated (a reduction of 23 multifamily lots), as would the westernmost proposed residential lots on Lot K (a reduction of 17 single family lots), and a group of proposed residential lots on the eastern portion of Lot N (a reduction of 22 single family lots). This would have the effect of eliminating those lots that would be closest to existing residential uses. Table 5-1 provides a breakdown of the unit count under both the proposed project and the alternative.

**TABLE 5-1
CONSTRUCTION NOISE BUFFER ALTERNATIVE**

	Proposed Project	Construction Noise Buffer Alternative
Single-Family Lots	157	118
Multi-Family Lots	225	202
Total	382	320

Under this scenario the overall project lot count would be reduced from 382 to 320. Residential development would comprise approximately 38 acres or about 27 percent of the site, as opposed to 48 acres or approximately 34 percent of the site under the proposed project.

Although the economic feasibility of this alternative would be required to be confirmed (e.g., the ability of this alternative to fund the construction of the facilities and services that are needed to serve the project site), this alternative is potentially feasible. However, it was rejected from further evaluation based on two factors, as outlined below.

First, while the alternative would reduce the magnitude of the proposed project's significant (with mitigation) temporary construction noise impacts, the impact would still remain significant and unavoidable (with mitigation). In other words, the significant and unavoidable construction noise impacts would still be present, even with the elimination of 62 residential lots.

Second, the alternative would reduce the overall number of units on the site, and would therefore potentially conflict with the land use and zoning densities envisioned for the site in the County's General Plan and Zoning Code. The alternative would provide fewer housing units compared to the proposed project and would therefore be less supportive of fulfilling the goals of the County's Housing Element and helping to meet the County's Regional Housing Need Allocation. This would be a potentially significant impact.

In summary, the alternative would offer little benefit with respect to avoiding the project's significant and unavoidable temporary construction noise impacts. That impact would remain, even with the elimination of 62 lots. Further, the loss of those lots would run counter to the densities prescribed in the County's General Plan, Housing Element, and Zoning Code, and would therefore create a new significant land use impact. Based on these considerations, this alternative was not carried forward for detailed analysis.

Alternative Project Location

Several scoping comments suggested that the County consider an alternative location for the project. While the County is not required to evaluate alternative locations for the project—based on a number of legal reasons that are outlined below—the County does want to provide an acknowledgement of the comments that were received on this issue.

Ultimately, an exhaustive evaluation of alternative locations was not carried forward for more detailed consideration because CEQA does not expressly require a discussion of alternative project locations (Pub. Res. Code §§21001(g), 21002.1(a), 21061). CEQA Guidelines Section 15126.6(a) requires a description of “a range of reasonable alternatives to the project, or to the location of the project,” suggesting that a lead agency may evaluate on-site alternatives, off-site alternatives, or both. For this project, the County has elected (consistent with CEQA) to evaluate only on-site alternatives. As the California Supreme Court has emphasized, “the keystone of regional planning is consistency -- between the general plan, its internal elements, subordinate ordinances, and all derivative land-use decisions. Case-by-case reconsideration of regional land-use policies, in the context of a project-specific EIR, is the very antithesis of that goal.” *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 572–73. Because the land use and zoning provisions that govern use of the proposed site contemplate residential uses of the types and densities proposed by the project applicant (El Dorado County Zoning Ordinance Chapter 130.24), the County has elected not to reconsider those determinations in the context of this EIR. This approach is consistent with the court's conclusion in *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal. App.4th 477, 492 (“Because the proposed project is consistent with the City's existing plans, policies, and zoning, we conclude a review of alternative sites was not necessary.”)

5.3 Description of Alternatives Selected for Analysis

The alternatives selected for analysis are designed to inform the public discussion and the final decisions by the El Dorado County Planning Commission and Board of Supervisors on the proposed phased Dorado Oaks Tentative Subdivision Map Project. Specifically, the range of alternatives is designed to inform decision makers about:

- Potential modifications to the proposed project that might minimize or avoid environmental impacts.
- The relative change in environmental impact (increase or decrease) that might be expected by potential modifications to the proposed project.
- The impact on the project sponsor's and the County's ability to achieve the project objectives with the potential modifications to the project.

The following alternatives were selected for analysis based on the environmental analysis and ability to attain the basic objectives of the project. These alternatives are described in further detail and analyzed below.

- **Alternative 1: No Project – No Development Alternative** assumes no development of the project site. The site would remain in its current condition.
- **Alternative 2: SR-49 Roundabout (Option A) Alternative** would construct a four-way roundabout at the intersection of China Garden Road/SR-49, to the east of Faith Lane for the proposed subdivision's roadway connection with SR-49.
- **Alternative 3: SR-49 Signalized Intersection (Option B) Alternative** would realign the existing Faith Lane alignment westwards to connect with Silver Drive, and install two coordinated signals at the intersections of Silver Drive/SR-49 and China Garden Road/SR-49 for the proposed subdivision's roadway connection with SR-49.

Further details on these alternatives, and an evaluation of environmental effects relative to the project, are provided below.

5.3.1 Alternative 1: No Project / No Development Alternative

CEQA requires consideration of the No Project Alternative, which addresses the impacts associated with not moving forward with the project. The purpose of analyzing the No Project Alternative is to allow decision-makers to compare the impacts of the project versus no project. Under the No Project/No Development Alternative, the project would not be constructed, and the site would remain in the same state as its current condition. The approximately 142.5-acre proposed subdivision site would remain as undeveloped land comprised of oak woodlands and assorted dirt tracks, with portions of the site cleared and graded as part of previous development proposals. The small El Dorado Irrigation District (EID) sewer lift station in the northeastern portion of the site and the existing overhead PG&E electric distribution line that crosses the middle of the site would remain. Residential uses, open space, infrastructure, and roadway improvements would not be developed on the site. The SR-49 intersection area would remain in its current condition, comprising roadways adjoining roadside and commercial areas, and

proposed modifications to the proposed subdivision's roadway connection with SR-49 would not be developed. Improvements to Fowler Lane to facilitate emergency vehicle access to the project site as proposed in the project would not be constructed.

Under this alternative, the site would retain its existing residential land use and zoning designations. Therefore, selection of the No Project/No Development Alternative would not preclude development of the site under those same uses at a later time.

This alternative would not meet any of the objectives of the proposed project. Under the No Project/No Development Alternative, the project site would not be developed as a residential project that is in compliance with existing County land use and zoning requirements for the property. The No Project/No Development Alternative would not provide housing of various types to fulfill the goals of the County's Housing Element and help meet the County's Regional Housing Need Allocation. The objective to develop an economically sustainable and financially sound new development that can fund the construction of the facilities and services that are needed to serve the plan area and achieve General Plan objectives while avoiding any financial impact on the County's ability to provide services to the rest of the County would not be achieved.

5.3.2 Alternative 2: SR-49 Roundabout (Option A) Alternative

Alternative 2 would construct a four-way roundabout at the intersection of China Garden Road/SR-49, to the east of Faith Lane for the proposed subdivision's roadway connection with SR-49. This alternative was identified in Chapter 3, *Project Description*, as Option A. This alternative would require the demolition of several buildings within the existing strip mall on the southeast corner of SR-49 and Faith Lane, including the historic building at 484 Pleasant Valley Road. All other project components would be the same as described in Chapter 3, *Project Description*, under this alternative.

This alternative is potentially feasible. It would fully meet the objectives of the proposed project, in that it would provide housing of various types to fulfill the goals of the County's Housing Element and help meet the County's Regional Housing Need Allocation, and would provide options for housing that meets the needs of a wide demographic. This alternative would also potentially meet the project objective to develop an economically sustainable and financially sound new development that can fund the construction of the facilities and services that are needed to serve the plan area and achieve General Plan objectives, while avoiding any financial impact on the County's ability to provide services to the rest of the County.

5.3.3 Alternative 3: SR-49 Signalized Intersection (Option B) Alternative

Alternative 3 would require the realignment of Faith Lane westwards to connect with Silver Drive consistent with Option B, as described in Chapter 3 of this EIR, *Project Description*. The existing Faith Lane alignment would be abandoned, and realigned to connect with Silver Drive, where it would intersect with SR-49. A three-way traffic signal would be placed at this intersection, and

an additional three-way signalized intersection would be placed approximately 400 feet to the east at China Garden Road and SR-49. No building demolitions would be required. All other project components would be the same as described in Chapter 3, *Project Description*, under this alternative.

This alternative is potentially feasible. It would fully meet the objectives of the proposed project, in that it would provide housing of various types to fulfill the goals of the County's Housing Element and help meet the County's Regional Housing Need Allocation, and would provide options for housing that meets the needs of a wide demographic. This alternative would also potentially meet the project objective to develop an economically sustainable and financially sound new development that can fund the construction of the facilities and services that are needed to serve the plan area and achieve General Plan objectives, while avoiding any financial impact on the County's ability to provide services to the rest of the County.

5.4 Comparative Analysis of the Alternatives

This section presents a discussion of the comparative environmental effects of each alternative. This EIR analyzed the two "build" alternatives (Alternatives 2 and 3) at the same level of detail. Therefore, this section summarizes the results of that analysis, and provides a summary comparison of the impacts associated with the "build" alternatives, as well as impacts associated with the No Project/No Development Alternative (Alternative 1).

5.4.1 Comparison of Impacts Identified for the Proposed Project and Alternatives

Alternative 1: No Project – No Development Alternative

Under the No Project/No Development Alternative, the project would not be constructed, and the site would remain in the same state as its current condition. The approximately 142.5-acre proposed subdivision site would remain as undeveloped land comprised of oak woodlands and assorted dirt tracks, with portions of the site cleared and graded as part of previous development proposals. The small EID sewer lift station in the northeastern portion of the site and the existing overhead PG&E electric distribution line that crosses the middle of the site would remain. Residential uses, open space, infrastructure, and roadway improvements would not be developed on the site. The SR-49 intersection area would remain in its current condition, comprising roadways adjoining roadside and commercial areas, and proposed modifications to the proposed subdivision's roadway connection with SR-49 would not be developed. Improvements to Fowler Lane to facilitate emergency vehicle access to the project site as proposed in the project would not be constructed.

Even though the proposed project would not be developed at this time, under this alternative the site would retain its existing residential land use and zoning designations. Therefore, selection of the No Project/No Development Alternative would not preclude development of the site under those same uses at a later time.

Impacts

Aesthetics

The No Project/No Development Alternative would result in no impacts to aesthetics, compared to the less-than-significant impact (no mitigation required) identified with the other alternatives. The No Project/No Development alternative would result in no change to the existing views as seen from each viewpoint location discussed and evaluated in Section 4.1, *Aesthetics*, of this EIR. No visual impacts or other changes related to visual character or nighttime lighting would result from this alternative, as no changes would occur. The No Project/No Development Alternative would have no impacts to aesthetics.

Air Quality and Climate Change

The No Project/No Development Alternative would result in no impacts to air quality and climate change, compared to the less-than-significant (with mitigation) impacts identified with the other alternatives. No development would occur with the No Project/No Development Alternative. Therefore, none of the effects related to air quality resulting from construction or operational activities on the project site would occur with this alternative, as compared to Alternatives 2 and 3. The No Project/No Development Alternative would have no impacts related to air quality. The No Project/No Development Alternative would also not result in construction activity or any changes to the land uses existing on the project site. Therefore, no increase in greenhouse gas (GHG) emissions associated with construction and operation of development would occur.

Biological Resources

The No Project/No Development Alternative would result in no impacts to biological resources, compared to the less-than-significant (with mitigation) impacts identified with the other alternatives. No development would occur with the No Project/No Development Alternative. Therefore, none of the project's impacts related to biological resources would occur with this alternative.

Cultural and Tribal Cultural Resources

The No Project/No Development Alternative would result in no impacts to cultural and tribal cultural resources, compared to the significant and unavoidable (with mitigation) impacts identified with Alternative 2 and the less-than-significant (with mitigation) impacts identified with Alternative 3. No development would occur with the No Project/No Development Alternative. Therefore, the significant and unavoidable impact to a historical resource identified under Alternative 2 would not occur. There would be no loss of the historic building at 484 Pleasant Valley Road, nor would there be any potential degradation or loss of unknown historical, archaeological, or tribal cultural resources within the project site.

Energy

The No Project/No Development Alternative would result in no impacts to energy, compared to the less-than-significant impact (no mitigation required) identified with the other alternatives. No development would occur with the No Project/No Development Alternative. Therefore, none of the effects related to energy resources (e.g., electricity, natural gas, fuels) resulting from

construction or operations activities on the project site would occur with this alternative, as compared to the other alternatives. The No Project/No Development Alternative would have no impacts related to energy resources.

Geology, Soils, Seismicity, Paleontological Resources, and Mineral Resources

The No Project/No Development Alternative would result in no impacts to geology, soils, seismicity, paleontological resources, and mineral resources, compared to the less-than-significant impact (no mitigation required) identified with the other alternatives. No development would occur with the No Project/No Development Alternative. Therefore, none of the effects related geologic, seismic, and soils hazards, mineral resources, and paleontological resources would occur with this alternative, as compared to the other alternatives. The No Project/No Development Alternative would have no impacts related to geology, soils, seismicity, paleontological resources, and mineral resources.

Hazards and Hazardous Materials

The No Project/No Development Alternative would result in no impacts to hazards and hazardous materials, compared to the less-than-significant (with mitigation) impacts identified with the other alternatives. The No Project/No Development Alternative would not result in any development or changes to the project site. Construction activities would not take place, and residential uses, open space, infrastructure, and roadway improvements would not be developed on the site. Therefore, none of the effects related to exposure to hazards and hazardous materials would occur with this alternative, as compared to the other alternatives. The No Project/No Development Alternative would have no impacts related to hazards and hazardous materials.

Hydrology and Water Quality

The No Project/No Development Alternative would result in no impacts to hydrology and water quality, compared to the less-than-significant (with mitigation) impacts identified with the other alternatives. No development and no changes to the existing hydrologic conditions on the project site would occur under the No Project/No Development Alternative. Therefore, none of the effects related to water quality, groundwater, drainage, or erosion would occur with this alternative, as compared to the other alternatives. The No Project/No Development Alternative would have no impacts related to hydrology and water quality.

Land Use and Planning

The No Project/No Development Alternative would result in no land use and planning impacts, compared to the less-than-significant (no mitigation required) impacts identified with the other alternatives. The No Project/No Development Alternative would not result in any changes to the existing land uses or zoning designation of the project site. As with the other alternatives, the impact would therefore be less than significant. However, this alternative would not provide housing to help fulfill the goals of the County's Housing Element and help meet the County's Regional Housing Need Allocation, which would be a potentially significant impact.

Noise and Vibration

The No Project/No Development Alternative would result in no impacts to noise and vibration, compared to the significant and unavoidable (with mitigation) impacts identified with the other alternatives. The No Project/No Development Alternative would not result in construction activity or any changes to the land uses existing on the project site. Therefore, none of the noise and vibration effects associated with construction and operation of the other alternatives would occur.

Population and Housing

The No Project/No Development Alternative would result in no population and housing impacts, compared to the less-than-significant (no mitigation required) impacts identified with the other alternatives. No development or population increase on the project site would occur under the No Project/No Development Alternative. Therefore, the alternative would have no impact related to population and housing. However, this alternative would not provide housing to help fulfill the goals of the County's Housing Element or help meet the County's Regional Housing Need Allocation, which would be a potentially significant impact.

Public Services and Recreation

The No Project/No Development Alternative would result in no impacts to public services and recreation, compared to the less-than-significant (no mitigation required) impacts identified with the other alternatives. No development or population increase on the project site would occur under the No Project/No Development Alternative. Therefore, the alternative would have no impacts related to public services and recreation.

Transportation and Traffic

The No Project/No Development Alternative would result in no transportation and traffic, compared to the less-than-significant (with mitigation) impacts identified with the other alternatives. The No Project/No Development Alternative would not result in any new development or changes to the land use activity to affect current transportation and traffic patterns as compared to the other alternatives. The No Project/No Development Alternative would therefore have no impact related to transportation and traffic.

Utilities and Service Systems

The No Project/No Development Alternative would result in no impacts to utilities and service systems, compared to the less-than-significant (no mitigation required) impacts identified with the other alternatives. The No Project/No Development Alternative would not result in any changes to existing conditions with respect to demand for utilities and service systems. Under this alternative, the installation of new utility infrastructure would not take place as it would under the other alternatives. The No Project/No Development Alternative would have no impact related to utilities and service systems.

Wildfire

The No Project/No Development Alternative would result in no impacts related to wildfire, compared to the less-than-significant (no mitigation required) impacts identified with the other alternatives. The No Project/No Development Alternative would not result in any development or changes to the project site. The approximately 142.5-acre proposed subdivision site would remain as undeveloped land comprised of oak woodlands and other vegetation. The trees on the project site typically have limbs and canopy that reach the ground and create ladder fuels, which allow a fire to climb up from the landscape or forest floor into the tree canopy. Under this alternative required fuel reductions and operational features of the other alternatives that would lessen wildfire risks associated with the site's existing conditions would not occur. This would be a potentially significant impact.

Alternative 2: SR-49 Roundabout (Option A) Alternative

Alternative 2 is one of the “build” alternatives for the project. The analysis below provides a summary comparison of impacts between the two “build” alternatives (Alternatives 2 and 3) for the project. Alternative 2 would construct a four-way roundabout at the intersection of China Garden Road/SR-49, to the east of Faith Lane for the proposed subdivision's roadway connection with SR-49. This alternative was identified in Chapter 3, *Project Description*, as Option A. This alternative would require the demolition of several buildings within the existing strip mall on the southeast corner of SR-49 and Faith Lane, including the historic building at 484 Pleasant Valley Road. All other project components would be the same as described in Chapter 3, *Project Description*, under this alternative.

Impacts

Aesthetics

The SR-49 Roundabout Alternative would result in less-than-significant (no mitigation required) aesthetics impacts, similar to that identified for Alternative 3. Development under this alternative would be similar to Alternative 3. Differences in aesthetic impacts under this alternative would only occur in the SR-49 Intersection Area, where a four-way roundabout would be constructed at the intersection of China Garden Road/SR-49. The visual setting of the area would be changed through demolition of several buildings at the southeast corner of Faith Lane and SR-49. In addition, where there is now a typical roadway intersection at SR-49 and China Garden Road, a roundabout would be constructed to replace the intersection.

While the visual setting would be changed, those changes would not be adverse. The roundabout would be constructed to Caltrans design standards, and would have a landscaped central portion and perhaps a decorative and/or monumental element, depending on the ultimate design. The demolition of the buildings at the southeast corner of Faith Lane and SR-49 (including the demolition of the historic structure at 484 Pleasant Valley Road) would represent a change to the area, but the structures are not designated as scenic, and several (including 484 Pleasant Valley Road) are no longer actively used and have fallen into a state of moderate disrepair.

As with Alternative 3, new development on the site would be subject to County Design Review, which would ensure continuity of quality design. Based on these considerations, this alternative would result in a less-than-significant impact, similar to Alternative 3.

Air Quality and Climate Change

The SR-49 Roundabout Alternative would result in less-than-significant (with mitigation) construction and operational impacts, similar to that identified with Alternative 3. Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. Accordingly, the quantities of construction and operational pollutant and greenhouse gas emissions associated with Alternatives 2 and 3 would also be the same. Based on these considerations, this alternative would result in a less-than-significant impact, similar to Alternative 3.

Biological Resources

The SR-49 Roundabout Alternative would result in less-than-significant (with mitigation) biological resources impacts, similar to that identified with Alternative 3. Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. Mitigations to avoid or minimize impacts to western pond turtle, special-status bat species, nesting birds, sensitive plant species, oak woodland, and aquatic resources would remain applicable to this alternative. Impacts to biological resources under this alternative would be the same as Alternative 3.

Cultural and Tribal Cultural Resources

The SR-49 Roundabout Alternative would result in significant and unavoidable (with mitigation) impact, substantially greater than Alternative 3. Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. Mitigations for the project to address inadvertent discovery of cultural resources, tribal cultural resources, and human remains would still be required under this alternative.

Under this alternative, however, a significant-and-unavoidable (with mitigation) impact associated with the demolition of the historic building at 484 Pleasant Valley Road would occur. In summary, impacts to cultural and tribal cultural resources under this alternative would be substantially greater than Alternative 3.

Energy

The SR-49 Roundabout Alternative would result in less-than-significant (no mitigation required) construction and operational impacts, similar to that identified with Alternative 3. Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. Accordingly, effects related to energy resources (e.g., electricity, natural gas, fuels) resulting from construction and operations activities on the project site would be the same under

both Alternatives 2 and 3. In summary, effects related to energy resources under this alternative would be the same as Alternative 3.

Geology, Soils, Seismicity, Paleontological Resources, and Mineral Resources

The SR-49 Roundabout Alternative would result in less-than-significant (no mitigation required) impacts related to geology, soils, seismicity, paleontological resources, and mineral resources, similar to that identified with Alternative 3. Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. As with Alternative 3, compliance with applicable building codes and site-specific design requirements would reduce or avoid potential impacts related to seismically-induced ground shaking, lateral spreading, subsidence, liquefaction, collapse, and expansive soils. In summary, effects related to geology, soils, seismicity, paleontological resources, and mineral resources would be the same as Alternative 3.

Hazards and Hazardous Materials

The SR-49 Roundabout Alternative would result in less-than-significant (with mitigation) impacts related to hazards and hazardous materials, similar to that identified with Alternative 3. Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. This alternative would be subject to the same regulatory requirements and mitigation measures as Alternative 3. As with Alternative 3, with mitigation, this alternative would avoid significant hazards and hazardous materials impacts. In summary, effects related to hazards and hazardous materials under this alternative would be the same as Alternative 3.

Hydrology and Water Quality

The SR-49 Roundabout Alternative would result in less-than-significant (with mitigation) hydrology and water quality impacts, similar to that identified with Alternative 3. Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. This alternative would involve construction and earthmoving activities that could affect water quality and alter drainage patterns in a similar fashion as Alternative 3. Adherence to the same project design features, mitigations, and regulatory requirements would ensure the alternative would have less-than-significant impacts to hydrology and water quality. In summary, effects related to hydrology and water quality under this alternative would be the same as Alternative 3.

Land Use and Planning

The SR-49 Roundabout Alternative would result in less-than-significant (no mitigation required) land use and planning impacts, similar to that identified with Alternative 3. As with Alternative 3, this alternative would be consistent with existing land use and zoning designations for the project site. Overall, the alternative would result in the same less-than-significant land use and planning impacts like those identified for Alternative 3. Both Alternatives 2 and 3 would be supportive towards meeting the County's Regional Housing Needs Assessment goals and its

General Plan Housing Element goals and policies. In summary, effects to land use and planning under this alternative would be the same as Alternative 3.

Noise and Vibration

The SR-49 Roundabout Alternative would result in the same significant and unavoidable (with mitigation) temporary construction noise impacts identified with Alternative 3. Operational impacts would be less than significant, the same as Alternative 3. Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. Under both alternatives, temporary construction noise impacts at sensitive residential receptors surrounding the project site would be significant and unavoidable, with mitigation.

Population and Housing

The SR-49 Roundabout Alternative would result in less-than-significant (no mitigation required) impacts related to population and housing, similar to that identified with Alternative 3. Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. Overall population growth with this alternative would be the same as Alternative 3 (978 persons), and the same number of residential lots (382) would be developed. Both Alternatives 2 and 3 would be supportive towards meeting the County's Regional Housing Needs Assessment goals and its General Plan Housing Element goals and policies. In summary, effects to population and housing under this alternative would be the same as Alternative 3.

Public Services and Recreation

The SR-49 Roundabout Alternative would result in less-than-significant (no mitigation required) impacts to public services and recreation, similar to that identified with Alternative 3. Residential development, population growth, and associated demand for police, fire and emergency services, schools, and parks and recreation would be the same as that would occur under the Alternative 3. Consequently, this Alternative would have the same less-than-significant (no mitigation required) public services and recreation impacts as Alternative 3.

Transportation and Traffic

The SR-49 Roundabout Alternative would result in less-than-significant (with mitigation) Transportation and Traffic impacts, similar to that identified with Alternative 3. Under this alternative, residential development, population growth, and associated VMT per Capita for the project would be the same as that would occur under Alternative 3. As with Alternative 3, the VMT per Capita under this alternative would not exceed the County's VMT threshold under existing or cumulative conditions, and the impact would be less than significant. As with Alternative 3, this alternative would provide adequate emergency access to and from the project site and would be located in an area that is adequately served by existing emergency services. This alternative would also not conflict with a program, plan, ordinance or policy addressing transit, bicycle, and pedestrian facilities. With regard to Non-CEQA traffic operations analysis, vehicle trips under this alternative would result in the same the less-than-significant impacts on

the roadway system (e.g., effects on intersections and intersection turn pocket queues), as compared to Alternative 3.

Utilities and Service Systems

The SR-49 Roundabout Alternative would result in less-than-significant (no mitigation required) impacts to utilities and service systems, the same as those identified for Alternative 3. Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. Overall, this alternative would result in the same level of demand for utilities and service systems as Alternative 3.

Wildfire

The SR-49 Roundabout Alternative would result in less-than-significant (no mitigation required) impacts related to wildfire, similar to that identified with for Alternative 3. As with Alternative 3, required fuel reductions and operational features (e.g., emergency vehicle access that meets County Fire Department requirements) would be implemented under this alternative to ensure less-than-significant (no mitigation required) impacts related to wildfire, the same as that identified with Alternative 3.

Alternative 3: SR-49 Signalized Intersection (Option B) Alternative

Alternative 3 would require the realignment of Faith Lane westwards to connect with Silver Drive consistent with Option B, as described in Chapter 3 of this EIR, *Project Description*. The existing Faith Lane alignment would be abandoned, and realigned to connect with Silver Drive, where it would intersect with SR-49. A three-way traffic signal would be placed at this intersection, and an additional three-way signalized intersection would be placed approximately 400 feet to the east at China Garden Road and SR-49. No building demolitions would be required. All other project components would be the same as described in Chapter 3, *Project Description*, under this alternative.

Impacts

Aesthetics

The SR-49 Signalized Intersection Alternative would result in less-than-significant (no mitigation required) aesthetics impacts, the same as that identified for Alternative 2. Development under this alternative would be similar to Alternative 3. Differences in aesthetic impacts under this alternative would only occur in the SR-49 Intersection Area, where two signalized intersections would be substituted for the four-way roundabout proposed under Alternative 2. Alternative 3 would result in a lesser degree of change to existing visual conditions on the project site than would occur with the demolition of several buildings within the existing strip mall on the southeast corner of SR-49 and Faith Lane under Alternative 2. As with the proposed project, new development on the site would be subject to County Design Review, which would ensure continuity of quality design. Based on these considerations, this alternative would result in a less-than-significant impact, the same as that identified with the Alternative 2, but with

a reduction in the less-than-significant impact that would result from the retention of several existing buildings on the southeast corner of SR-49 and Faith Lane.

Air Quality and Climate Change

The SR-49 Signalized Intersection Alternative would result in a reduction of less-than-significant (with mitigation) construction impacts as compared to Alternative 2, and less-than-significant (with mitigation) operational impacts similar to that identified for Alternative 2.

Development under this alternative would be similar to Alternative 2. Slightly less construction effort would be required under this alternative as opposed to Alternative 2, since the four-way roundabout under Alternative 2 would be replaced by the placement of two signalized intersections along SR-49. However, the overall intensity of use on the site would be similar to that of Alternative 2. Accordingly, the quantities of construction and operational pollutant and greenhouse gas emissions associated with Alternatives 2 and 3 would also be roughly the same. Based on these considerations, this alternative would result in a less-than-significant impact, similar to Alternative 2.

Biological Resources

The SR-49 Signalized Intersection Alternative would result in less-than-significant (with mitigation) biological resources impacts, similar to that identified for Alternative 2.

Development under this alternative would be similar to Alternative 3. Similar levels of construction would occur, and the overall intensity of use on the site would be similar to that of Alternative 3. While the SR-49 improvement area is a thoroughly disturbed area comprised of pavement and buildings that adjoin other highly disturbed areas, the reduced magnitude of construction activities that would occur in this area under this alternative could slightly reduce the potential for impacts to sensitive natural resources under Alternative 2, including impacts to protected trees and roadside ditches that may have biological value. Mitigations for the proposed project to avoid or minimize impacts to western pond turtle, special-status bat species, nesting birds, sensitive plant species, oak woodland, and aquatic resources would also be applicable to this alternative. In summary, impacts to biological resources under this alternative would be marginally less than Alternative 2, but not substantially so.

Cultural and Tribal Cultural Resources

The SR-49 Signalized Intersection Alternative would eliminate the significant and unavoidable (with mitigation) impact to the historic building at 484 Pleasant Valley Road identified with Alternative 2 and result in less-than-significant (with mitigation) impacts to unknown historical, archaeological, and tribal resources, similar to that identified for Alternative 2.

Development under this alternative would be similar to Alternative 2, with the exception of the subdivision project's connection to SR-49 (roundabout versus two signalized intersection). Under this alternative the roundabout would not be constructed, and the demolition of the historic building at 484 Pleasant Valley Road would not be required. All other project components would be the same as described in Chapter 3, *Project Description*, under this alternative. Consequently, this alternative would eliminate the significant-and-unavoidable (with mitigation) impact to the historic building at 484 Pleasant Valley Road that would occur under Alternative 2. Under this alternative, Mitigation Measure 4.4-1 in Section 4.4, *Cultural Resources*, of this EIR, which requires the project applicant to prepare a Historic American Building Survey (HABS)-like

recordation package for 484 Pleasant Valley Road as an individual historical resource prior to demolition and construction, would no longer be required since there would be no impact to that resource. Because all other project components would be the same as described in Chapter 3, *Project Description*, under this alternative, mitigation measures to address potential impacts to unknown historical, archaeological, and tribal resources that could be inadvertently encountered during construction would still be required under this alternative. In summary, impacts to cultural and tribal cultural resources under this alternative would be substantially less than Alternative 2.

Energy

The SR-49 Signalized Intersection Alternative would result in reduced less-than-significant (no mitigation required) construction impacts as compared to Alternative 2, and less-than-significant (no mitigation required) operational impacts, similar to that identified for Alternative 2. Less construction demolition activities would occur in the SR-49 improvement area under this alternative, but all other elements of site construction and operation would remain as described in Chapter 3, *Project Description*. In summary, impacts related to energy resources under this alternative would be marginally less than Alternative 2, but not substantially so.

Geology, Soils, Seismicity, Paleontological Resources, and Mineral Resources

The SR-49 Signalized Intersection Alternative would result in less-than-significant (no mitigation required) impacts related to geology, soils, seismicity, paleontological resources, and mineral resources, similar to that identified for Alternative 2. Less construction demolition activities would occur in the SR-49 improvement area under this alternative, but all other elements of site construction and operation would remain as described in Chapter 3, *Project Description*. In summary, impacts related to geology, soils, seismicity, paleontological resources, and mineral resources under this alternative would be marginally less than Alternative 2, but not substantially so.

Hazards and Hazardous Materials

The SR-49 Signalized Intersection Alternative would result in reduced less-than-significant (no mitigation required) construction impacts as compared to Alternative 2, and less-than-significant (no mitigation required) operational impacts, similar to that identified for Alternative 2. Less construction demolition activities would occur in the SR-49 improvement area under this alternative, but all other elements of site construction and operation would remain as described in Chapter 3, *Project Description*. Extensive construction would occur on the project site, and as a result, disturbance of potentially contaminated soils would be similar to that of Alternative 2. Regardless, this alternative would be subject to the same regulatory requirements and mitigation measures as Alternative 2. As with Alternative 2, with mitigation, this alternative would avoid significant hazards and hazardous materials impacts. In summary, impacts related to hazards and hazardous materials under this alternative would be marginally less than Alternative 2, but not substantially so.

Hydrology and Water Quality

The SR-49 Signalized Intersection Alternative would result in reduced less-than-significant (with mitigation) impacts, similar to that identified with for Alternative 2. Less construction and

demolition activities would occur in the SR-49 improvement area under this alternative, but all other elements of site construction and operation would remain as described in Chapter 3, *Project Description*. This alternative would involve construction and earthmoving activities that could affect water quality and alter drainage patterns in a similar fashion as Alternative 2. Adherence to the same project design features, mitigations, and regulatory requirements would ensure the alternative would have less-than-significant impacts to hydrology and water quality. In summary, impacts related to hydrology and water quality under this alternative would be marginally less than Alternative 2, but not substantially so.

Land Use and Planning

The SR-49 Signalized Intersection Alternative would result in less-than-significant (no mitigation required) land use and planning impacts, similar to that identified with for Alternative 2. As with Alternative 2, this alternative would be consistent with existing land use and zoning designations for the project site. Overall, the alternative would result in less-than-significant land use and planning impacts like those identified for Alternative 2.

Noise and Vibration

The SR-49 Signalized intersection Alternative would result in the same significant and unavoidable (with mitigation) temporary construction noise impacts identified with Alternative 3. Operational impacts would be less than significant, the same as Alternative 2. Less construction demolition activities would occur in the SR-49 Improvement Area under this alternative, but all other elements of site development would remain as described in Chapter 3, *Project Description*. The overall intensity of use on the site would be similar to that of Alternative 2. Under both alternatives, temporary construction noise impacts at sensitive residential receptors surrounding the project site would be significant and unavoidable, with mitigation.

Population and Housing

The SR-49 Signalized Intersection Alternative would result in less-than-significant (no mitigation required) population and housing impacts, the same as that identified for Alternative 2. Less construction demolition activities would occur in the SR-49 Improvement Area under this alternative, but all other elements of site development would remain as described in Chapter 3, *Project Description*. Residential development and associated population growth under this alternative would be the same as that would occur under Alternative 2. Consequently, the SR-49 Signalized Intersection Alternative would result in less-than-significant (no mitigation required) population and housing impacts that would be the same as that identified for Alternative 2.

Public Services and Recreation

The SR-49 Signalized Intersection Alternative would result in less-than-significant (no mitigation required) impacts to public services and recreation, the same as that identified for Alternative 2. Less construction demolition activities would occur in the SR-49 improvement area under this alternative, but all other elements of site development would remain as described in Chapter 3, *Project Description*. Residential development, population growth, and associated demand for police, fire and emergency services, schools, and parks and recreation would be the

same as that would occur under Alternative 2. Consequently, the SR-49 Signalized Intersection Alternative would result in less-than-significant (no mitigation required) public services and recreation impacts that would be the same as that identified with Alternative 2.

Transportation and Traffic

The SR-49 Signalized Intersection Alternative would result in less-than-significant (with mitigation) Transportation and Traffic impacts, the same as that identified for Alternative 2.

Under this alternative, residential development, population growth, and associated VMT per Capita would be the same as that would occur under Alternative 2. As with Alternative 2, the VMT per Capita under this alternative would not exceed the County's VMT threshold under existing or cumulative conditions, and the impact would be less than significant. As with Alternative 2, this alternative would provide adequate emergency access to and from the project site and would be located in an area that is adequately served by existing emergency services. This alternative would also not conflict with a program, plan, ordinance or policy addressing transit, bicycle, and pedestrian facilities. With regard to Non-CEQA traffic operations analysis, vehicle trips under this alternative would result in the same the less-than-significant impacts on the roadway system (e.g., effects on intersections and intersection turn pocket queues), as compared to Alternative 2.

Utilities and Service Systems

The SR-49 Signalized Intersection Alternative would result in less-than-significant (no mitigation required) impacts to utilities and service systems, the same as that identified for Alternative 2. Less construction demolition activities would occur in the SR-49 improvement area under this alternative, but all other elements of site development would remain as described in Chapter 3, *Project Description*. Residential development, population growth, and associated demand for utilities and service systems would be the same as that would occur under Alternative 2. Consequently, the SR-49 Signalized Intersection Alternative would result in less-than-significant (no mitigation required) utilities and service systems impacts that would be the same as that identified for Alternative 2.

Wildfire

The SR-49 Signalized Intersection Alternative would result in less-than-significant (no mitigation required) impacts related to wildfire, the same as that identified for Alternative 2. Less construction demolition activities would occur in the SR-49 Improvement Area under this alternative, but all other elements of site development would remain as described in Chapter 3, *Project Description*. As with Alternative 2, required fuel reductions and operational features (e.g., emergency vehicle access that meets County Fire Department requirements) would be implemented under this alternative to ensure less-than-significant (no mitigation required) impacts related to wildfire, the same as that identified with Alternative 2.

5.4.2 Overall Comparison of the Alternatives

The analysis of the alternatives is summarized and compared in two tables: **Table 5-2** provides a summary of impact levels within all environmental topic areas. Overall, this table shows that some alternatives perform better than others in reducing or avoiding the project’s impacts.

**TABLE 5-2
ALTERNATIVE IMPACT SUMMARY AND COMPARISON**

Impact	Alternative 1: No Project/No Development	Alternative 2: SR-49 Roundabout	Alternative 3: SR-49 Signalized Intersection
Aesthetics	No Impact ↓	Less than Significant ⇆	Less than Significant ⇆
Air Quality and Greenhouse Gas Emissions	No Impact ↓	Less than Significant ⇆	Less than Significant ⇆
Biological Resources	No Impact ↓	Less than Significant ⇆	Less than Significant ⇆
Cultural Resources and Tribal Cultural Resources	No Impact ↓	Significant and Unavoidable ↑	Less than Significant ↓
Energy	No Impact ↓	Less than Significant ⇆	Less than Significant ⇆
Geology, Soils, Paleontological Resources, and Mineral Resources	No Impact ↓	Less than Significant ⇆	Less than Significant ⇆
Hazards and Hazardous Materials	No Impact ↓	Less than Significant ⇆	Less than Significant ⇆
Hydrology and Water Quality	No Impact ↓	Less than Significant ⇆	Less than Significant ⇆
Land Use and Planning	Potentially Significant ↑	Less than Significant ⇆	Less than Significant ⇆
Noise	No Impact ↓	Significant and Unavoidable ⇆	Significant and Unavoidable ⇆
Population and Housing	Potentially Significant ↑	Less than Significant ⇆	Less than Significant ⇆
Public Services and Recreation	No Impact ↓	Less than Significant ⇆	Less than Significant ⇆
Transportation	No Impact ↓	Less than Significant ⇆	Less than Significant ⇆
Utilities and Service Systems	No Impact ↓	Less than Significant ⇆	Less than Significant ⇆
Wildfire	Potentially Significant ↑	Less than Significant ⇆	Less than Significant ⇆

NOTES:

↓ - The impact is less than the proposed project.

↑ - The impact is greater than the proposed project.

⇆ - The impact is about the same as the proposed project.

Table 5-3 summarizes the ability of each alternative to meet the project sponsor's objectives for the proposed project. The tables provide a ready means for the reader to review and compare the alternatives with each other.

**TABLE 5-3
ABILITY OF ALTERNATIVES TO SATISFY PROJECT OBJECTIVES**

Project Objectives	Alternative 1: No Project/No Development	Alternative 2: SR-49 Roundabout	Alternative 3: SR-49 Signalized Intersection
Develop a residential project that is in compliance with existing County land use and zoning requirements for the property, as defined in the General Plan and Zoning Code.	Does not meet objective	Meets objective \uparrow/\downarrow	Meets objective \uparrow/\downarrow
Provide housing of various types to fulfill the goals of the County's Housing Element and help meet the County's Regional Housing Need Allocation.	Does not meet objective	Meets objective \uparrow/\downarrow	Meets objective \uparrow/\downarrow
Provide options for housing that meet the needs of a wide demographic.	Does not meet objective	Meets objective \uparrow/\downarrow	Meets objective \uparrow/\downarrow
Develop an economically sustainable and financially sound new development that can fund the construction of the facilities and services that are needed to serve the plan area and achieve General Plan objectives, while avoiding any financial impact on the County's ability to provide services to the rest of the County.	Does not meet objective	Meets objective \downarrow	Meets objective \uparrow

NOTES:

 \uparrow/\downarrow - The alternative is more/less aligned with the objective.

5.5 Environmentally Superior Alternative

Based on the evaluation described in this section, the No Project/No Development Alternative would be the most environmentally superior alternative with the fewest environmental impacts. However, the No Project/No Development Alternative would not meet any of the basic objectives of the project.

CEQA requires that a second alternative be identified when the “No Project” alternative is the environmentally superior alternative (CEQA *Guidelines*, Section 15126.6(e)). Therefore, the **SR-49 Signalized Intersection Alternative** would be the Environmentally Superior Alternative for the purpose of this analysis.

Under the SR-49 Signalized Intersection Alternative, the following significant impacts project would no longer occur:

Impact 4.4-1: The project could cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.

Impact 4.4-4a: The project could cause a cumulative impact to a historical resource as defined in CEQA Guidelines Section 15064.5.

Under the SR-49 Signalized Intersection Alternative, the following significant impacts would remain:

Impact 4.10-1c: Construction of the proposed project would result in temporary increases in ambient noise levels in the vicinity of the project in excess of standards established in the local General Plan or Noise Ordinance, or applicable standards of other agencies.

Impact 4.10-4: Construction activities for the proposed project combined with cumulative construction noise in the project area would result in a substantial temporary or periodic increase in ambient noise levels in excess of standards established in the General Plan or Noise Ordinance.

Even though the SR-49 Signalized Intersection Alternative would still result in significant-and-unavoidable (with mitigation) temporary construction noise impacts associated with the proposed project, it would eliminate the significant-and-unavoidable (with mitigation) impact to the historic building at 484 Pleasant Valley Road identified with the proposed project while still meeting all the objectives of the proposed project.

Further lessening of the project's impacts and improvements to the Environmentally Superior Alternative could also be realized by elimination of the Optional Fowler Lane Improvement component of the project. This optional project component, as described in Chapter 3, *Project Description*, would provide a redundant means of Emergency Vehicle Access (EVA) to/from the southern portion of the subdivision site. Should this component be eliminated, Antares Drive would serve as the sole point of dedicated emergency access to the southern portion of the site, though a gated emergency access connection to Fowler Lane from "H" Court would still be provided. However, the required widening of approximately 2,600 linear feet of Fowler Lane and the easement adjustments needed to fully implement the Optional Fowler Lane Improvement component of the project as a primary EVA would not occur. As such, the impacts associated with the widening of Fowler Lane would be avoided. These impacts would include effects to biological resources (trees, vegetation, and nesting bird habitat) and hydrology and water quality (from ground disturbance and erosion). While the analysis in the various subsections in Chapter 4 of this EIR found that none of these impacts would be significant and unavoidable, these impacts would not occur at all if the option were eliminated. Accordingly, elimination of the Optional Fowler Lane Improvement component of the project could also be considered a part of an Environmentally Superior Alternative for the project.

To summarize, the alternative and option combination that would offer the fewest environmental impacts would be the SR-49 Signalized Intersection Alternative (with Option B selected for the SR-49 Improvements) and elimination of the Optional Fowler Lane Improvement component of the project. This alternative and option combination would still result in significant and unavoidable impacts related to construction noise, but other significant and unavoidable impacts related to the loss of historic resources would be avoided, along with a general lessening of project impacts overall.

CHAPTER 6

Other Statutory Considerations

Consistent with CEQA *Guidelines* Section 15126.2, this section discusses significant and unavoidable impacts, significant irreversible environmental changes, growth-inducing impacts, cumulative impacts, and impacts found to be less than significant.

6.1 Significant and Unavoidable Adverse Impacts

Potentially significant environmental impacts that would result from the proposed project are evaluated in Chapter 4.0, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR. With implementation of the project design features, standard conditions and requirements, and mitigation measures identified for each resource area significantly impacted, many of the potentially significant impacts resulting from the proposed project would be reduced to a less than significant level. The proposed project impacts listed below would remain significant and unavoidable even after mitigation.

Impact 4.4-1: The project could cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. (*Significant and Unavoidable Impact, with Mitigation*) (For State Route 49 Intersection Improvement Option A only)

Impact 4.4-4a: The project could cause a cumulative impact to a historical resource as defined in CEQA Guidelines Section 15064.5. (*Significant and Unavoidable Impact, with Mitigation*) (For State Route 49 Intersection Improvement Option A only)

Impact 4.10-1c: Construction of the proposed project would result in temporary increases in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Significant and Unavoidable Impact, with Mitigation*)

Impact 4.10-4: Construction activities for the proposed project combined with cumulative construction noise in the project area would result in a substantial temporary or periodic increase in ambient noise levels in excess of standards established in the General Plan or Noise Ordinance. (*Significant and Unavoidable Impact, with Mitigation*).

Pursuant to Section 15126.2(c) of the CEQA *Guidelines*, an EIR must consider any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. Section 15126.2(c) states:

“Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes

removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.”

Resources that would be permanently and continually consumed by implementation of the proposed project include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources. Construction activities related to the proposed project, though analyzed in the applicable technical section of this EIR, would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels, natural gas, and gasoline for automobiles and construction equipment. With respect to the operational activities of the proposed project, compliance with all applicable building codes, as well as EIR mitigation measures, would ensure that all natural resources are conserved to the maximum extent practicable. It is also possible that new technologies or systems would emerge, or would become more cost-effective or user-friendly, and would further reduce the project reliance upon nonrenewable energy resources.

The CEQA *Guidelines* also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the proposed project. During the construction phase of the proposed project, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. Once constructed, the project’s residences would use and store small quantities of chemicals typical in residences, such as household cleaning solutions, paints and thinners, and motor fuel (e.g., motor vehicles and lawn mowers). As stated in Section 4.7, *Hazards and Hazardous Materials*, of this EIR, these materials are regulated through a series of federal, state, and local laws and regulations. Compliance with these existing requirements would ensure that the potential for the proposed project to cause significant irreversible environmental damage from an accident or upset of hazardous materials would be less than significant.

6.2 Growth-Inducing Impacts

The CEQA *Guidelines* require that an EIR evaluate the growth-inducing impacts of a proposed action (Section 15126.2[d]). A growth-inducing impact is defined by the CEQA *Guidelines* as:

[T]he ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth.... It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement could result if a project involved construction of new housing. A project can have indirect growth-

inducement potential if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Increases in population could tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. The CEQA *Guidelines* also require analysis of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The timing, magnitude, and location of land development and population growth is based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Because general plans define the location, type, and intensity of growth within a given jurisdiction, they are the primary means of regulating development and growth in California.

The growth inducing impacts analysis addresses the potential of the project for growth inducement in the project vicinity or broader area. Under CEQA, a project is generally considered to be growth-inducing if it results in any one of the following:

1. Extension of urban services or infrastructure into a previously unserved area;
2. Extension of a transportation corridor into an area that may be subsequently developed; or
3. Removal of obstacles to population growth (such as provision of major new public services to an area where those services are not currently available).

6.2.1 Extension of Urban Services or Infrastructure

Although on-site infrastructure improvements would occur as part of the proposed project, the project would connect to existing infrastructure. The project does not include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand. Consequently, the project would not induce growth in the project vicinity or broader area due to extension of urban services or infrastructure.

6.2.2 Extension of Transportation Corridors

The project site is largely surrounded by urban development and an adjacent street system. An established transportation network exists in the project area that offers local and regional access to the project site. Onsite circulation would be facilitated by construction of internal streets. Consequently, the project would not induce growth in the project vicinity or broader area due to extension of transportation corridors.

6.2.3 Removal of Obstacles to Population Growth

Section 15126.2(d) of the CEQA *Guidelines* states that an EIR should discuss “the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” Growth can be induced in a number of ways, including through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through precedent-setting action. CEQA requires a discussion of how a project could increase population, employment, or housing in the areas surrounding the project as well as an analysis of the infrastructure and planning changes that would be necessary to implement the project.

Projects that are characterized as having significant impacts associated with the inducement of growth are frequently those that would remove obstacles to additional growth, such as the expansion of sewer or water facilities that would permit construction of more development in the service area covered by the new facilities. The proposed project would not remove obstacles to additional growth in this manner, as it would be undertaken in an area that currently is served by all utilities and services. Similarly, if a project would overburden existing infrastructure so as to require construction of new facilities that could result in significant impacts, then the project may be deemed to have a significant growth-inducing impact. As discussed in the Section 4.15, *Utilities and Service Systems*, the project would not require such additional public service facilities.

Section 4.11, *Population and Housing*, analyzes the project’s overall effect on population and housing, including growth-inducing considerations. In terms of housing, the Dorado Oaks Subdivision would provide for the development of 382 residential lots. It could be assumed that the proposed project would result in a project population of approximately 978 persons. This population growth on the site was assumed when the County established the site’s current land use and zoning designations. These additional residential uses would accommodate population growth in the unincorporated community of Diamond Springs that is consistent with the growth projections in the El Dorado County General Plan and related planning documents, and would help the County meet its regional housing allocation requirements in unincorporated portions of the County. Consequently, the project would not induce substantial population growth that was not previously anticipated.

6.2.4 Conclusions

The project would develop residential land uses on a site that is designated for residential uses in the County General Plan and Zoning Ordinance. Of the entitlement requests being made for the project site, there would be no amendments to the General Plan land use designations nor any changes to zoning-allowed residential densities at the project site. Although on-site infrastructure improvements would occur as part of the proposed project, the project would connect to existing infrastructure. The project does not include extensions or expansions of infrastructure systems or roads beyond what is needed to serve project-specific demand. Consequently, the project would not induce growth in the project vicinity or broader area due to extension of urban services or infrastructure. For the above-described reasons, the project would not cause a new impact related

to a substantial increase in population growth, and would be in line with the projected growth planned for the area as defined in the El Dorado County General Plan.

6.3 Cumulative Impacts

CEQA defines cumulative impacts as two or more individual impacts which, when considered together, are substantial or which compound or increase other environmental impacts. The cumulative analysis is intended to describe the “incremental impact of the project when added to other, closely related past, present, or reasonably foreseeable future projects” that can result from “individually minor but collectively significant projects taking place over a period of time.” (CEQA Guidelines Section 15355) The analysis of cumulative impacts is a two-phase process that first involves the determination of whether the project, together with existing and reasonably foreseeable projects, would result in a significant impact. If there would be a significant cumulative impact of all such projects, the EIR must determine whether the project’s incremental “contribution” is cumulatively considerable, in which case, the cumulative impact would be significant (CEQA Guidelines Section 15130).

The analysis of each environmental topic included in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR considers possible cumulative impacts and identifies circumstances in which the project would contribute to significant cumulative impacts.

Cumulative significant and unavoidable impacts to historical resources (under State Route 49 Intersection Improvements Option A only) and from construction noise were identified in the analysis. These cumulative analyses assumed that the project-required mitigation measures identified in this EIR would be implemented. Nonetheless, these identified impacts would be cumulatively considerable and not fully mitigable. No other cumulative impacts were determined to be significant after mitigation.

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CHAPTER 7

Report Preparation

7.1 Lead Agency

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